Nothing in this catalog is exempt from change. Tuition, fees, room rent, academic programs, scholarship information, etc. are all subject to modification.

The college’s programs are registered by the New York State Education Department and have been approved by the NYS Education Department for the training of veterans. The State Education Department can be contacted by writing or calling: NYS Education Department, Office of Higher Education and the Professions, Cultural Education Center, Room 5B28, Albany, NY 12230; 518-474-5851.

The college is accredited by the Middle States Commission on Higher Education, 3624 Market St., Philadelphia, PA 19104, 215-662-5606.

Alfred State® College of Technology
State University of New York (SUNY)
10 Upper College Drive
Alfred, NY 14802
CAMPUS CONTACT LIST
10 Upper College Drive, Alfred, NY 14802
Admissions@AlfredState.edu

1-800-4-ALFRED (800-425-3733)
ACES
Admissions
- admissions@alfredstate.edu - 1-800-4-ALFRED or 607-587-4215
Alumni
- alumni@alfredstate.edu - 607-587-3931
Athletics
- athletics@alfredstate.edu - 1-800-4-ALFRED or 607-587-4361
Braddon Hall
- 607-587-3237
Burdick Hall
- 607-587-3213
Campus Store (Alfred Campus)
- aces@alfredstate.edu - 607-587-4020
Campus Store (Wellsville Campus)
- aces@alfredstate.edu - 585-593-6270, ext. 3159 or 607-587-3159
Career Development
- ccel@alfredstate.edu - 1-800-4-ALFRED or 607-587-4015
College Housing
- reslife@alfredstate.edu - 607-587-4371
Dean of Applied Technology
- 607-587-3101
Dean of Architecture, Management & Engineering Technology
- 607-587-4611
Dean of Arts and Sciences
- 607-587-3621
Dining Services
- aces@alfredstate.edu - 1-800-4-ALFRED or 607-587-4064
Executive Director, Institutional Advancement
- 607-587-4531
Getman Hall
- healthandwellness@alfredstate.edu - 607-587-4200
IT Help Desk
- helpdesk@alfredstate.edu - 607-587-4357
Library
- library@alfredstate.edu - 607-587-4313 Alfred 607-587-3115 Wellsville
- ombudsman@alfredstate.edu
Ombuds Office
- 607-587-3217
- 607-587-3214
- 607-587-3268
- 607-587-3280
- 607-587-3263
- 607-587-3272
- 607-587-4228
- 607-587-3245
- presidentsoffice@alfredstate.edu - 607-587-4010
- reslife@alfredstate.edu - 607-587-4371
- 607-587-4531
- 607-587-3222
- 607-587-4253
- sfs@alfredstate.edu - 1-800-4-ALFRED or 607-587-4253
- 607-587-4122 Alfred 607-587-3115 Wellsville
- 607-587-3981
- universitypolice@alfredstate.edu - 607-587-3999
- 607-587-3913
- 607-587-3911
- 585-593-6270 or 607-587-3105

ACADEMIC DEPARTMENT DIRECTORY
Agriculture and Veterinary Technology
- 607-587-4714
Allied Health
- 607-587-4714
Architecture and Design
- 607-587-4696
Automotive Trades
- 607-587-3117
Building Trades
- 607-587-4130
Business
- 607-587-3413
Civil Engineering Technology
- 607-587-4617
Computer and Information Technology
- 607-587-4617 or 607-587-4696
Culinary Arts
- 607-587-3170
Digital Media and Animation
- 607-587-4696
Electrical, Machine Tool, and Welding Technology
- 607-587-3115
English and Humanities
- 607-587-4270
Mathematics and Physics
- 607-587-4617
Mechanical and Electrical Engineering Technology
- 607-587-4672 or 607-587-3680
Nursing
- 607-587-4282
Physical and Life Sciences
- 607-587-3680
Social and Behavioral Sciences
- 607-587-4282
THE COLLEGE
Located in Western New York, Alfred State College of Technology - State University of New York (SUNY) is in a vibrant community surrounded by scenic countryside. In the charming Village of Alfred, college students greatly outnumber permanent residents. This quintessential college town is 15 miles north of the Pennsylvania border, 70 miles south of Rochester, and 90 miles southeast of Buffalo.

Alfred State started as a state school of agriculture in 1908. Then in 1948 it was incorporated into the newly organized SUNY system. The college was authorized by SUNY to award the degree of Associate in Applied Science in 1951, the Associate in Arts and Associate in Science degrees in 1967, and the Associate in Occupational Studies in 1973. Bachelor’s degrees were added in 1991.

The college enrolls more than 3,500 undergraduate students annually. There are approximately 400 teaching faculty and staff members supporting the college’s more than 80 programs in agriculture, allied health, applied technology, architecture, business, engineering technology, liberal arts, nursing, and sciences.

At Alfred State, we call ourselves pioneers, individuals who prove their fundamental drive, dogged determination, and ability to overcome obstacles. These admirable traits help pioneers put their skills to work to build a brighter future. The college is proud that 98 percent of our recent graduates have jobs or are continuing their education in their chosen field. Employers tell us that Alfred State students:

Hit the ground running...

COLLEGE VISION
Alfred State will be THE premier regional college of technology, creating opportunity for our students to achieve successful careers and purposeful lives.

COLLEGE MISSION
Alfred State delivers outstanding associate and baccalaureate degree programs through hands-on learning, preparing in-demand and involved students in a caring community.

CORE VALUES
Respect - Showing that something is important, serious, etc., and should be treated appropriately.

Integrity - The quality of being honest, fair, and adhering to a code of moral values.

Service - Donating time, skills, and energy as a way to contribute to the welfare of others.

Dedication - A very strong feeling of support, loyalty, and devotion to someone or something.

PRINCIPLES OF COMMUNITY
As members of Alfred State, we choose to be part of an academic community dedicated to those principles that foster personal and professional integrity, civility, and inclusion.

We strive toward lives of personal integrity and academic excellence – We will encourage in ourselves, and in one another, those responsible actions which lead to lives of productive work, personal enrichment, and useful citizenship in an increasingly interdependent world.

We commit to treat one another with civility – Recognizing that there will be differences of opinion, we will explore these differences in a courteous and forthright manner, always acknowledging individual rights to freedom of expression and association.

We support inclusion – We encourage those of all cultures, orientations, and backgrounds to understand and respect one another in a safe and supporting educational environment.

This set of principles set forth by the college is supported by policies including the Student Code of Conduct and the Policy on Academic Integrity.

STATE UNIVERSITY OF NEW YORK (SUNY)
SUNY’s 64 geographically dispersed campuses bring educational opportunity within commuting distance of virtually all New York citizens and comprise the nation’s largest, centrally managed system of public higher education.

Nearly 400,000 students are pursuing traditional study in classrooms or are working at home, at their own pace, utilizing distance education. SUNY is governed by a board of trustees, appointed by the governor, which directly determines the policies to be followed by the state-operated campuses.

DEGREES AND ACCREDITATIONS
I. Degrees Granted by New York State Department of Education.

Authorization is granted by the Division of Higher Education of the NYS Department of Education to confer the degree of Associate in Applied Science (AAS), Associate in Science (AS), and Associate in Arts (AA). Section 5 of the Commissioner of Education’s Regulations, Paragraph 7, reads as follows:

“Courses of Study. The course of study shall cover two years of standard college work, and shall be so organized and conducted and shall be of such scope and content as to warrant acceptance with full credit upon advanced standing by degree-conferring institutions. Such terminal courses as it offers shall be distinctly of collegiate grade. All courses of study shall contain the subject matter implied by the announced objectives of the institution.”

Authorization is also granted by the Division of Higher Education to confer the degree of Bachelor of Science (BS) in engineering technology, the degree of Bachelor of Technology (BTech), and the degree of Bachelor in Business Administration (BBA).

Authorization is also granted by the Division of Higher Education to confer the degree of Associate in Occupational Studies (AOS) under Section 52.2 of the Regulations of the Commissioner of Education (Chapter II of Title 8 of the Official Compilation of Codes, Rules, and Regulations of the State of New York).

State University criteria state that “a course of study leading to the AOS degree should be an organized postsecondary lower-division program leading to occupational competence. It should have a distinct identity, independent of established Associate in Applied Science degree or certificate offered by an institution.
The program must require a minimum of 60 semester credit hours or the equivalent of completion and may consist solely of specialized course work and related subjects.

II. The college is an accredited institution by the Middle States Commission on Higher Education (MSCHE), 1007 North Orange Street, 4th Floor, MB #166, Wilmington, DE 19801, 267-284-5011, [http://www.msche.org]. The Commission on Higher Education is an institutional accrediting agency recognized by the US Secretary of Education and the Council for Higher Education Accreditation (CHEA).

III. The following Associate in Applied Science degree programs in engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET, [http://www.abet.org]:

<table>
<thead>
<tr>
<th>Program</th>
<th>Accreditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Engineering Technology</td>
<td>Mechanical Engineering Technology</td>
</tr>
<tr>
<td>Construction Engineering Technology</td>
<td>Surveying Engineering Technology</td>
</tr>
<tr>
<td>Electrical Engineering Technology</td>
<td></td>
</tr>
</tbody>
</table>

IV. The following Bachelor of Science degree programs in engineering technology are accredited by the Engineering Technology Accreditation Commission of ABET, [http://www.abet.org]:

<table>
<thead>
<tr>
<th>Program</th>
<th>Accreditation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Computer Engineering Technology</td>
<td>Mechanical Engineering Technology</td>
</tr>
<tr>
<td>Electrical Engineering Technology</td>
<td>Surveying and Geomatics Engineering Technology</td>
</tr>
</tbody>
</table>

V. The court and realtime reporting program is approved by the National Court Reporters Association. This approval indicates that this program has met the general requirements and minimum standards established by the Board on Approved Reporter Training of the National Court Reporters Association [8224 Old Courthouse Rd., Vienna, VA 22182-3808; 800-272-6272].

VI. The associate nursing program at Alfred State College, SUNY College of Technology, located in Alfred, NY is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 (404) 975-5000, www.acenursing.org. The most recent accreditation decision made by the ACEN Board of Commissioners for the associate nursing program is Continuing Accreditation. View the public information disclosed by the ACEN regarding this program at [http://www.acenursing.com/accreditedprograms/programsearch.htm]. The Baccalaureate nursing program at Alfred State College, SUNY College of Technology, located in Alfred, NY is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 (404) 975-5000, www.acenursing.org. The most recent accreditation decision made by the ACEN Board of Commissioners for the baccalaureate nursing program is Initial Accreditation. View the public information disclosed by the ACEN regarding this program at [http://www.acenursing.com/accreditedprograms/programsearch.htm]. Both the AAS and BS in Nursing Programs are registered by the New York State Education Department.

VII. The health information technology program is accredited by the Commission on the Accreditation for Health Informatics and Information Management (CAHIIM) [233 N. Michigan Ave., 21st Floor, Chicago, IL 60601-5800, 312-233-1100, www.cahiim.org]. CAHIIM is an independent accrediting organization that enforces quality accreditation standards for health informatics and health information management (HIM) educational programs through accreditation. CAHIIM accredits associate and baccalaureate degree programs in health information management, and master’s degree programs in the health informatics and health information management professions. CAHIIM is recognized by the Council for Higher Education and Accreditation (CHEA) [One Dupont Circle NW, Suite 510, Washington, DC 20036, 202-955-6126, chea@chea.org]. CHEA is a nationally recognized non-governmental higher education organization that undertakes recognition of accrediting bodies.

VIII. The following programs in applied technology are ASE Master Certified by the National Institute of Automotive Service Excellence (ASE) [13505 Dullies Technology Dr., Suite 2, Herndon, VA 20171-3421; 703-713-3800; [https://www.ase.com]:

- Autobody Repair
- Heavy Equipment, Truck and Diesel Technician
- Automotive Service Technician
- Automotive Technician

IX. The following technology programs in applied technology are certified by the Automotive Service Excellence Education Foundation (ASE Education Foundation) [1503 Edwards Ferry Rd, Leesburg, VA 20176; 703-669-6650, fax 703-669-6677; [https://www.aseeducationfoundation.org]:

- Automotive Service Technician

X. The automotive service technician program in applied technology is certified by the National Alternative Fuels Training Consortium (NAFTC) [West Virginia University, 1100 Frederick Lane, Morgantown, WV 26508; 304-293-7882, fax 304-293-6944; [http://www.naftc.wvu.edu].

XI. The heavy equipment, truck and diesel technician program is one of nine national Association of Diesel Specialists (ADS) TechSmart programs. The heavy equipment, truck and diesel technician program is the only program in New York and New England that is approved by the ADS [International Headquarters, 9140 Ward Parkway, Kansas City, MO 64114; 816-444-3500, fax 816-444-0330].

XII. The welding technology program in applied technology is certified by the American Welding Society (AWS) [8669 NW 36 St., #130, Miami, FL 33166-6672; 800-443-9353; [http://www.adda.org].

XIII. The veterinary technology program is accredited by the American Veterinary Medical Association’s (AVMA) Committee on Veterinary Technician Education and Activities (CVTEA) [1931 N. Meacham Rd., Suite 100, Schaumburg, IL 60173-4360; 800-248-2862]. The AVMA CVTEA is responsible for the specialized accreditation of all veterinary technician education programs in the United States. It has also extended its accreditation to Canadian veterinary technician education programs.

XIV. The construction management (BS) program is accredited by the American Council for Construction Education (ACCE), 1717 North Loop Road 1604 East, Suite 320, San Antonio, TX 78232.

XV. The BBA financial planning program is registered with the Certified Financial Planner Board of Standards, Inc. (CFP®).

XVI. In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit US professional degree programs in architecture, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted a six-year, three-year, or two-year term of accreditation, depending on the extent of its conformance with established educational standards.

Doctor of Architecture and Master of Architecture degree programs may consist of a pre-professional undergraduate degree and a professional graduate degree that, when earned sequentially, constitute an accredited professional education. However, the pre-professional degree is not, by itself, recognized as an accredited degree.

Alfred State, School of Architecture, Management and Engineering Technology, Department of Architecture and Design offers the following NAAB accredited degree program: BArch (157 undergraduate credits).
The Department of Architecture and Design at Alfred State College is authorized by the New York State Office of the Professions and the New York State Department of Education to award the BArch degree.

XVII. The forensic science technology program is fully accredited by the Forensic Science Education Programs Accreditation Commission (FEPAC) [410 North 21st Street, Colorado Springs, Colorado 80904; http://www.fepac.edu.org].

XVIII. The Business Department at the State University of New York – Alfred State College has received specialized accreditation for the following business programs through the International Accreditation Council for Business Education (IACBE) located at 11374 Strang Line Road in Lenexa, Kansas, USA: Business Administration (BBA and AS), Financial Planning (BBA), Sports Management (BBA and AS), Accounting (AAS) and Marketing (AAS).

Student Right-To-Know and Campus Security Act

On July 1, 1992, the Student Right-to-Know and Campus Security Act went into effect, requiring institutions receiving federal student aid funds to make available to prospective students information regarding graduation, retention, and attrition rates beginning in July 1993. Successful outcomes of students’ academic performance are measured by graduates, transfers, persisters, and those receiving a certificate.

Information is available for review on the Alfred State website: www.alfredstate.edu/student-consumer-information or by contacting the Student Records and Financial Services Office. You may also view this information by visiting the College Navigator website: http://nces.ed.gov/collegenavigator/.

The most recent Annual Security and Fire Safety Report includes Alfred State’s summaries of the college’s personal safety and security procedures in addition to the three-year summary for the Campus Crime Report which is excerpted on the following pages. The information is available in its entirety for review and/or duplication on the college’s website at www.alfredstate.edu, on the University Police website at www.alfredstate.edu/university-police/annual-security-and-fire-safety-report, on reserve in both the Hinkle and Applied Technology campus libraries, and from the following campus offices: Admissions, Student Life, University Police, and the Vice President for Student Affairs.

The Campus Safety Advisory Committee will provide, upon request, all campus crime statistics as reported to the US Department of Education.

You may also visit the US Department of Education’s website, which contains all campus crime statistics, at http://ope.ed.gov/security/ to obtain more information.

Campus Crime Statistics

The Advisory Committee on Campus Safety and/or the University Police department will provide, upon request, all campus crime statistics as reported to the US Department of Education. The US Department of Education maintains campus crime statistic information on its website at http://www.ope.ed.gov/security. You may also obtain the full annual security report, which includes all campus crime statistics, through the University Police Department at 607-587-3999 or access it through the college website at www.alfredstate.edu/university-police/annual-security-and-fire-safety-report.

FAMILY EDUCATION RIGHTS AND PRIVACY ACT (FERPA)

STUDENT RECORDS

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. FERPA gives parents certain rights with respect to their children’s education records. These rights transfer to the student when he or she reaches the age of 18 or attends a school beyond the high school level.

Student Rights

1. The right to inspect and review the student’s education records within 45 days after the day the College receives a request for access;
2. The right to request the amendment of the student’s education records that the student believes is inaccurate, misleading, or otherwise in violation of the student’s privacy rights under FERPA;
3. The right to provide written consent before the College discloses personally identifiable information (PII) from the student’s education records, except to the extent that FERPA authorizes disclosure without consent. Schools may disclose records, without consent, to the following parties or under the following conditions:

- School officials with a legitimate educational interest as defined in detail within the FERPA Annual Notification (policy);
- To officials of another school where the student seeks or intends to enroll, or where the student is already enrolled if the disclosure is for purposes related to the student’s enrollment or transfer;
- To authorized representatives of the U. S. Comptroller General, the U.S. Attorney General, the U.S. Secretary of Education, or State and local educational authorities;
- In connection with financial aid for which the student has applied or which the student has received, if the information is necessary to determine eligibility for the aid, determine the amount of the aid, determine the conditions of the aid, or enforce the terms and conditions of the aid;
- To organizations conducting certain studies for or on behalf of the school;
- To accrediting organizations;
- To parents of an eligible student if the student is a dependent for IRS tax purposes;
- To comply with a judicial order or lawfully issued subpoena;
- To appropriate officials in connection with a health or safety emergency;
- Information the school has designated as “directory information”;
- To a victim of an alleged perpetrator of a crime of violence or a non-forcible sex offense;
- To the general public, the final results of a disciplinary proceeding; and
- To parents of a student regarding the student’s violation of any Federal, State, or local law, or of any rule or policy of the school, governing the use or possession of alcohol or a controlled substance if the school determines the student committed a disciplinary violation and the student is under the age of 21.

1. The right to file a complaint with the U.S. Department of Education concerning alleged failures by the College to comply with the requirements of FERPA. Written complaints may be addressed to the Family Policy Compliance Office, US Department of Education, 400 Maryland Ave. SW, Washington, DC 20202-8520.

A complete copy of this policy is available at my.AlfredState.edu/registration under “Student Privacy” or by visiting www.alfredstate.edu/financial-aid/forms and selecting the link for “FERPA Annual Notification”.

5
Directory Information
As defined by Alfred State, directory information includes name, addresses, telephone numbers, dates of attendance, Alfred State e-mail addresses, date and place of birth, college major, expected date of graduation, degrees, awards received, photographs, enrollment status, participation in officially recognized sports activities, weights and heights of athletes, and most recent previous educational institution attended. The college can release this information without the student’s written request. However, under the Family Educational Rights and Privacy Act (FERPA), students have the right to refuse to permit disclosure of any or all of those items without their prior written consent. Students who prefer not to have their directory information disclosed must sign a statement so attesting. This can be done in the Student Records and Financial Services Office before 11 a.m. of the semester census date and to continue in effect, must be done each and every semester of the student’s attendance. Under FERPA, if the Student Records and Financial Services Office does not hear from a student by that time, the student’s directory information may be released.

Directory Information may be released at the discretion of Alfred State. Distribution of student directories (including labels) to third parties for commercial use or solicitation purposes is prohibited. This is in compliance with the provisions of FERPA. Further, the Student Records and Financial Services Office will provide directory information to the military upon written request as mandated by the Solomon Amendment.

Civil Rights Policy

Questions may be directed to the chief diversity officer/Title IX coordinator, or director of Human Resources, Alfred State, Alfred, NY 14802.

Non-Discrimination Notice
Alfred State College hereby advises students, parents, employees, and the general public that it offers employment and educational opportunities, including career and technical educational opportunities, without regard to sex, race, color, age, national origin, sexual orientation, gender identity and expression, and disability. For admission, applicants must possess a recognized high school diploma or its equivalent and meet standards of academic achievement such as a minimum high school average and transfer grade point average.

Applications are evaluated individually using a holistic review considering a variety of factors such as individual program requirements, standardized test scores, letters of recommendation, strength of academic program, and co-curricular activities.

Grievance procedures are available to interested persons by contacting either of the compliance officers/coordinators listed below. Inquiries regarding this nondiscrimination policy may be directed to:

Angela Koskoff
Chief Diversity Officer and Title IX Coordinator
Alfred State College
10 Upper College Drive
Alfred, NY 14802
koskofam@alfredstate.edu
Phone – 607-587-4026
Admission to Alfred State

Admission into one of Alfred State's academic programs is based on the academic qualifications of the applicant without regard to age, sex, marital or military status, race, color, creed, religion, national origin, disability, or sexual orientation. Admission will be offered to qualified applicants whose academic preparation has prepared them for success in their chosen field.

APPLICATION PROCESS

All applicants must complete an application that may be submitted online at:

www.alfredstate.edu  www.sunny.edu  www.commonapp.org

High school graduates who have not attended a postsecondary institution are encouraged to submit an essay directly to the Alfred State College Admissions Office.

A high school transcript must be supplied to the Admissions Office. Students attending high school in one of the five boroughs of New York City may submit their transcript by entering their NYC DOE OSIS number on the SUNY application. This is a nine-digit number issued to all students who attend a New York City public school and can be found on the student ID card or transcript.

Applicants with previous college experience must submit an official college transcript from all institutions attended.

Additional information to explain special or extenuating circumstances is encouraged.

Applications for the next calendar year are available beginning Aug. 1. Fall semester application decisions are mailed starting mid-October and continue on a rolling basis according to space availability. Spring and summer semester applications for those programs open for admission (contact the Alfred State College Admissions Office) are also considered on a rolling basis according to availability of space.

Students with disabilities should contact the Admissions Office to inquire about special accommodations to assist them with the application process and paperwork.

Consistent with college policy, any deliberate falsification or omission of data on any admissions document may result in denial of admission, revocation of acceptance decision, or administrative dismissal from the college.

INTERNATIONAL STUDENTS

Alfred State welcomes applications for admission from international students and is authorized under federal law to enroll nonimmigrant students.

In addition to the admission application (www.sunny.edu or www.commonapp.org), international students must also submit official academic and financial records. For students whose native language is not English, and whose medium of education was not English, evidence of English proficiency must be shown by taking one of the following:

- Test of English as a Foreign Language (TOEFL)
- International English Language Testing System (IELTS) exam
- Duolingo English test
- Pearson Test of English Academic (PTE Academic) examination
- Scholastic Aptitude Test (SAT)

All application materials must be submitted well in advance of the intended first semester at Alfred State.

Students who have completed college/university-level course work and would like to have their courses evaluated for possible transfer credit must submit to Alfred State an official college transcript and course descriptions (written in English) for courses to be evaluated. In addition, students must also provide a course-by-course credential evaluation completed by an approved credential evaluation service. The information available from World Education Service (WES), located at www.wes.org, provides information on the service we feel best meets the needs of the applicant and Alfred State. However, we will accept a course-by-course credential evaluation from an approved member of the National Association of Credential Evaluation Services (NACES) [www.naces.org]. Please note that course descriptions and the course-by-course evaluation are not necessary if an articulation agreement exists between your previous college/university and Alfred State.

TRANSFER STUDENTS

Students who have attended other colleges following high school graduation, either full- or part-time, are classified as transfer students and may receive advanced standing. In addition to completing the SUNY application and providing an official high school transcript, transfer students must submit official transcripts from all institutions. These transcripts should be sent to the Alfred State College Admissions Office at the time of application. It is recommended that students who have completed college-level course work during high school submit official transcripts so that appropriate transfer credit may be awarded.

Parallel and equivalent courses will be reviewed and transferred in accordance with academic regulation 305. Only credit hours and honor points earned at this college will be considered when computing a student's index.

HOME-SCHOOLED STUDENTS

Alfred State College admits as matriculated students only persons who have a high school diploma or its recognized equivalent. Because of this requirement, Alfred State has established a specific admission policy with respect to home-schooled students. The purpose of the policy is to ensure that home-schooled students are treated fairly yet in accordance with the requirements set forth by the college. The policy deals exclusively with the criteria for eligibility to be considered as an applicant for admission. Once eligibility for consideration is established, the applicant must also meet both campus and curriculum-specific admissions requirements.

Applicants 16 years of age or over (i.e. beyond the age of compulsory attendance)

These home-schooled students will be eligible for further consideration as an applicant to matriculated status if they can provide one of the following: (1) a passing score on the general comprehensive examination for the state high school equivalency diploma (TASC/SED) and the diploma itself if the student is eligible to receive one; (2) a statement from the superintendent of the school district in which the student resides, attesting to the student's completion of a program of home instruction that is substantially equivalent to a four-year high school program meeting the requirements of Section 100.10 of the Regulations of the Commissioner of Education - please note that this option cannot be used if the student completed an online high school program of instruction, unless the online high
school curriculum was used solely to support the IHIP (Individualized Home Instruction Plan); (3) official verification of successful completion (a grade of "C" or better) of 24 college credit hours in the distribution of 6 credits in English language arts, 3 credits in natural science, 3 credits in humanities, 3 credits in mathematics, 3 credits in social science, and 6 credits in approved general education courses - please note that students admitted through this option are not eligible for federal financial aid unless the TASC/GED diploma has been earned; (4) official verification of having earned a degree from an accredited college or university; (5) evidence of having passed with a grade of 65 or better the New York State regents exams for English language arts, mathematics, U.S. history, a science, and global history - please note that students admitted through this option are not eligible for state or federal financial aid.

Applicants under the age of compulsory attendance (i.e. below 16 years of age) These home-schooled students will be eligible for consideration as applicants for admission to a matriculated status only if the student can provide a statement from the superintendent of the school district in which the student resides, attesting to the student's completion of a program of home instruction that is substantially equivalent to a four-year high school program meeting the requirements of Section 100.10 of the Regulations of the Commissioner of Education - please note that this option cannot be used if the student completed an online high school program of instruction, unless the online high school was used solely to support the IHIP (Individualized Home Instruction Plan).

TRANSFER AGREEMENTS
Agreements have been established between Alfred State College and two-year colleges, which permit a student to complete an associate degree at the two-year college and transfer to Alfred State College to complete a baccalaureate degree. Transfer is guaranteed if the student successfully completes, in accordance with the specific articulation agreement, the prescribed schedule of courses. Any questions regarding transfer of courses should be directed to the transfer adviser within the Student Records and Financial Services Office at Alfred State College. The student must provide an official transcript from the two-year college to Alfred State. Refer to www.alfredstate.edu/transfer-students/articulation-agreements for a listing of articulation agreements.

JOINT ADMISSIONS
Alfred State has established Joint Admission Agreements from several of our associate degree programs into our baccalaureate degree programs. Alfred State students interested in pursuing a sequential advanced degree should complete a SUNY Joint Admissions/Intent to Enroll form, available at the Alfred State College Admissions Office. This form should be filed during the final semester of the student’s associate degree.

ACCES-VR
Students who may be working through ACCES-VR should contact their ACCES-VR counselor prior to beginning the application process at Alfred State.

CONCURRENT ADMISSIONS PROGRAM (CON AP)
The Concurrent Admissions Program (CON AP) is conducted by colleges and universities that are members of the Service Members Opportunity Colleges (SOC). Concurrent with their enlistment in the Army, new soldiers are encouraged to express an interest in attending Alfred State following completion of their military obligation.

After completing a two-, three-, or four-year enlistment, the new veteran will be encouraged to enroll at Alfred State. This program also applies to soldiers enlisting in the Army Reserve.

Those interested in the CON AP program are encouraged to contact their military recruiter.

READMISSION
Students who have not yet graduated from the college and wish to apply for readmission must complete a readmission application available from the Alfred State College website. The completed application, as well as official transcripts from any colleges attended since enrollment at Alfred State College, must be submitted to the Admissions Office. Applicants who are or will be graduates of the college and wish to apply to return for a non-sequential major must complete either the SUNY Application or the Common Application, and process it through the SUNY Application Services Center for a new program of study. The new program must be significantly different from the program from which the student graduated. Please contact the Admissions Office for further information on this requirement.

DISCIPLINARY APPLICANTS
Applicants must affirm a prior disciplinary dismissal from another institution of higher education on their application for admission. Individuals who have been previously dismissed for disciplinary reasons will have their application reviewed under college policy established through the Admissions Office and the Office of Judicial Affairs. Copies of this policy are available from the Admissions Office.

ADMISSION REQUIREMENTS
1. Applicants must possess a recognized high school diploma or its equivalent (please note that distance learning degrees/diplomas do not satisfy this requirement for New York State residents). Verification must be supplied to the Admissions Office. Applicants with a CDOS commencement credential or IEP certificate/diploma will not be accepted. These students are advised to take the GED exam. A score of 660 or better on the GED exam (if taken after January 2022) is recommended for consideration.
2. Applications are evaluated individually using a "holistic review" to make the best decision for both the applicant and the college. A variety of factors are considered (e.g., individual program requirements, standardized test scores, letters of recommendation, strength of academic program, and extracurricular activities).
3. To be considered for admission into programs taught on the Alfred campus, the recommended minimum overall high school average is a 75. For programs taught in the School of Applied Technology (Wellsville campus) or at the Northland Workforce Training Center, the recommended minimum overall average is a 72. Applicants for programs taught on the Alfred campus who do not meet specified program requirements but who show potential for success may be considered for admission through the Alfred State Opportunity Program (ASOP) or the Educational Opportunity Program (EOP).
4. In addition to meeting individual program requirements, it is recommended that transfer applicants have a 2.0 cumulative grade point average as well as a grade of "C" or better in each course taken during the most recent semester of attendance.
5. Financial need is not considered as part of the admission process.

Note: Alfred State is test optional.

PROGRAMS OF STUDY
Applications are filed for admission into one of the following programs rather than a general freshman-year program. Enrollment in other than registered or otherwise approved programs may jeopardize a student's eligibility for student aid awards. In addition to course entrance requirements listed, it is recommended that students have a minimum overall high school average of 75 for Alfred campus programs and a 72 for Wellsville campus or Northland Workforce Training
Center programs to be considered for admission. It is recommended that transfer students have a 2.0 cumulative grade point average as well as a grade of "C" or better in each course taken during the most recent semester of attendance.

Students graduating from any two-year associate degree program (AAS, AA, AS, and AOS) may enter directly into the corresponding baccalaureate degree program(s) or the technology management Bachelor of Business Administration degree program.

**Notes for the Programs of Study Chart:**

* Portfolio is required to enter junior-year studio courses.

**It is recommended that students have knowledge of basic math skills.

***Letters of recommendation, an essay, and a resume indicating related work experience and/or knowledge of field are required.

****Interview with academic department is required.
<table>
<thead>
<tr>
<th>Program</th>
<th>Application Code No.</th>
<th>Required Courses</th>
<th>Recommended Courses</th>
<th>Degree</th>
<th>Hegis Code</th>
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<tr>
<td>Accounting</td>
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<td>Court and Realtime Reporting</td>
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<td>Court Reporting and Captioning</td>
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<td>Culinary Arts: Baking, Production and Management</td>
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<td>Diagnostic Medical Sonography</td>
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<td>Recommended Courses</td>
<td>Degree</td>
<td>Hegis Code</td>
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<td>Individual Studies</td>
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<td>Interdisciplinary Studies</td>
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<td>History/Social Studies &amp; English concentrations: Algebra</td>
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<td>Technology Management</td>
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<td>Successful completion of an associate degree or 60 transferable credits.</td>
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The Alfred State Athletic Department is an NCAA Division III member. With the move to the NCAA, incoming freshmen students who wish to participate in intercollegiate athletics must be admitted into a four-year program OR have a 75 or 2.1/4.0 high school average to be immediately eligible their first semester. Incoming transfer students should consult the Alfred State Athletic Department for information on athletic eligibility requirements.

Educational Opportunity Program (EOP)
The Educational Opportunity Program (EOP) is a state-funded program for New York State Residents (12 months before enrollment) who graduated with a high school diploma or have a high school equivalency diploma. The purpose of this program is to help students who face additional obstacles in higher education succeed academically and graduate. Prospective students must also meet family income guidelines.

EOP assists with mentorship, academic programs, financial assistance, counseling/advising, and other campus support services for college students from low-income and educationally disadvantaged backgrounds. The primary objective is to provide access and additional resources to postsecondary education. The EOP program identifies, evaluates, and recruits eligible students and empowers them to complete a higher education experience. EOP is typically an extended program (bachelors in ten semesters or associates in six semesters) to enhance student success. Students study full-time, enrolling in at least 12 credit hours per semester. Students MUST participate in a 4–6-week summer prep program as part of their entrance process. They are expected to be tutored and advised throughout their studies at Alfred State.

Essential to EOP is direct financial aid. For each student, a financial aid package is planned, which may include grants from EOP, Pell, and Tuition Assistance Program (TAP). All EOP students must submit the Free Application for Federal Student Aid (FAFSA) application at fafsa.gov

* The EOP program does not guarantee full coverage of a student’s college financial obligation.

Advanced Standing

Previous Credit
A student who has taken college-level courses after high school is considered a transfer student (See Transfer Students section).

Students who are taking college courses while in high school must submit official transcript(s) in order to receive transfer credit.

Course Challenges
Any student wishing to challenge a course is responsible for furnishing material, approved by faculty administering the exam, to be used in the challenge examination. The challenge exam fee includes a $15 recording fee and $10 per contact hour compensation fee. The challenge must be approved by the department chair or designee in which the course is offered. A student may not challenge a course for which they have already earned a final grade at the college.

Credit From U.S. Armed Forces
The college may grant credit, upon the recommendation of a department chair, for courses of study satisfactorily completed under this program in those cases where such courses have application to a student’s program. Credit is treated as transfer credit.

Alfred State Opportunity Program (ASOP)
The Alfred State Opportunity Program (ASOP) is a special admissions program that offers higher education opportunities to high school graduates or holders of high school equivalency diplomas who do not meet traditional admission criteria but who possess the potential for college success. Unlike the Educational Opportunity Program (EOP), students are not required to meet financial need criteria. The program is designed to help students reach their educational goals by providing additional academic support and/or time to reach these goals. Academic success coaching, tutoring, supplemental instruction, and subject and academic skills development courses are offered.

ASOP is typically an extended program with course work is paced to enhance student success. The first semester schedule is composed of 12 to 15 credit hours, which might include courses in English; math; reading and/or college skills; social, physical, or life science; and/or program course(s). Assistance is available for tutoring, counseling, and academic advising. To comply with program requirements, students may be required to repeat courses in which they have earned a grade of “D” or “D+.”

Registration Process
In order to finalize enrollment at Alfred State, students should refer to the following information:

Orientation
Orientation programs are designed to assist new students in adapting to the college. Orientation aims to increase a student’s success by fostering positive relationships among students and faculty/staff. Orientation is a college-wide initiative, inclusive of academics, co-curricular engagement, and student support services.

Student Health Forms/Immunizations
Prior to registration, students must provide the required information to Alfred State Health and Wellness Services as noted on the Student Health Portal. Accepted students receive directions for accessing the Student Health Portal in their acceptance materials.

Academic Advisement
Each student is assigned a faculty adviser within their primary program of study. The adviser helps students plan their program of course work, reviews academic grades and progress with students, and answers questions about personal academic goals, requirements, and academic regulations.
Class Schedule/Course Registration

A class schedule will be prepared for first year students prior to orientation. Final class schedules will be available for new and transfer students at orientation and readmitted students by final registration day. These final class schedules will indicate when students need to process their bills with the Student Records and Financial Services Office. Students are not considered registered until they have picked up their final class schedule and paid/processed their bill.

Continuing students will meet with their academic adviser during a designated time each semester to discuss course selection for the next semester and to receive their alternate registration PIN. Continuing students will print their own schedules from BannerWeb and adjustments to this schedule may be made during Add/Drop.

Note: Courses are dropped for students who do not process their bills by the due date.

The Honors Program at Alfred State

The Honors Program at Alfred State was created to encourage motivated, curious, academically superior students to explore some aspect of their program in greater depth and to broaden and deepen their awareness of themselves as responsible, contributing members of a larger community. Honors Program participants complete a series of seminars, as well as a substantial honors project and 10 hours of volunteer community service. The permanent college transcript of students completing program requirements will read “Honors Program Graduate.”

Application

The Honors Program coordinator reviews academic records of current and incoming freshmen and invites students with a record of strong academic achievement to apply for Honors Program status. The coordinator makes the final decision based on the application, including the required student essay, letters of recommendation from two educators, and meeting with the student. Any current Alfred State student with a GPA of 3.5 (of a possible 4.0) or better and at least one year remaining at the college is welcome to apply to the program. Students accepted into the Honors Program remain in the program of their choice for degree purposes.

Program Requirements

Honors Program participants are required to

- earn an overall 3.25 GPA by graduation, with no more than one semester’s GPA falling below 3.0;
- enroll in honors courses offered by various departments, schedules permitting;
- work with a faculty or staff member to complete an honors project, usually a technical or research project related to the student’s personal or career plans;
- participate in at least two honors seminars per semester - short, informal opportunities to interact with some of the college’s most respected teachers;
- attend and participate in the college’s speakers series, especially those sponsored by the Honors Program;
- complete 10 hours of volunteer, unpaid service of genuine benefit to the community or individuals in the community.

Program Benefits

The Honors Program coordinator will

- offer interesting, challenging, credit-bearing honors courses, informal honors seminars, and speakers of interest from the professional world;
- facilitate arrangements for the honors project and community service requirements, if requested;
- negotiate special Honors Program privileges: one-week laptop loans, “faculty” library borrowing privileges, and first-day course registration privileges;
- write letters to transfer colleges explaining the Alfred State Honors Program and recommending students to the honors program at those colleges;
- indicate “Honors Program Graduate” on the students’ permanent college transcripts.

Interested students should contact:

Assistant Professor Janice Stafford, Honors Program Coordinator
607-587-4799 staffo@alfredstate.edu

Credit by Advanced Placement Examination (AP) and College Level Examination Program (CLEP)

Students who successfully complete either Advanced Placement (AP) or College Level Examination Program (CLEP) examinations shall be granted transfer credit, as predetermined by the respective department chairs. Students must request that an official transcript of their grades (a copy of a grade report is not acceptable) be sent to this college. Students contemplating taking an AP or CLEP examination should be aware that Alfred State requires the student to take the “Subject” examination and, if applicable, the optional essay section. Alfred State is a testing center for CLEP. For further information regarding the testing center, please contact the Center for Community Education & Training.
COMMUNITY EDUCATION & TRAINING (CCET)

Community Education & Training (CCET)

Email - ccet@alfredstate.edu
607-587-4015

CONTINUING EDUCATION/PART-TIME STUDENTS
Credit courses are open to all who might benefit from study and are qualified by previous education or work experience. High school graduation is not required. Financial aid is not available.

The college’s refund policy is followed for all credit courses.

Students may enroll in regular day and evening courses, online, summer school, winter session, or a combination of all. Advising and referral services are available.

SUMMER SCHOOL/WINTER SESSION
Summer sessions provide students with the opportunity to take courses in preparation for entering their freshman semester, getting ahead in their program, or lightening their semester load. Courses are conducted on an accelerated schedule, allowing the student to take multiple courses.

Summer housing is available for those students from out of the area who are attending on-campus summer sessions.

Winter session provides students with the opportunity to take online courses to get ahead in their program or to lighten their semester load. Courses are conducted on an accelerated schedule.

COOPERATIVE COLLEGE-LEVEL PROGRAM FOR HIGH SCHOOL STUDENTS
This program offers high school juniors and seniors the opportunity to take college-level courses on the Alfred campus with college students. This is a collaborative program and is open only to participating high schools. Financial aid is not available.

Course availability is based on classroom seat availability.

NONCREDIT ON/OFF CAMPUS COURSES
CCET coordinates and oversees all noncredit academic, personal development, and contract programs offered by the college. These programs are open to all with no requirements of previous education or work experience.

ONLINE NONCREDIT COURSES
CCET offers noncredit online courses in RHIT/coding exam prep, essentials of anatomy and physiology, computer, writing, personal enrichment, test preparation, small business, paralegal, health care professional, large business/management, project management, and more through a Web-based delivery system. Internet access, email address, and web browser are needed.

CLEP
CCET administers College Level Examination Program (CLEP) examinations, which allow students to receive transfer credit for specific courses upon attaining the required scores.

BUSINESS/INDUSTRY PROGRAMS
The CCET provides training and consulting services to support economic and personal development throughout the Southern Tier. CCET contracts with small to large business, industry, and government agencies to provide pre-employment skills training, job skills upgrade, and programs to increase competitiveness and retain employees.

The New York State Department of Transportation (NYSDOT) and the Quality Control/Quality Assurance (QC/QA) Task Force of New York Construction Materials Association collaborate with the college through CCET to conduct the QC/QA Technician Certification Program for Hot Mix Asphalt in New York State. This program is held every spring on the Alfred State campus.

Alfred State and the Associated General Contractors of America collaborate through the CCET to conduct the New York State Hot Mix Asphalt (NYS HMA) Density Inspector Certification program. This program is scheduled multiple times per year around New York State.

Alfred State and the NYSDOT collaborate through the CCET to conduct the NYSDOT welding certification program. This program is scheduled multiple times per year in Wellsville, NY; other sessions are also scheduled around Western New York.

The college, through CCET, is a training provider for the NYS Office of Alcoholism and Substance Abuse Services. The program provides training for those who wish to maintain or begin a career in the field of alcohol and chemical dependency counseling, including the Credentialed Alcoholism and Substance Abuse Counselor (CASAC), the Credentialed Prevention Professional (CPP), and Credentialed Prevention Specialist (CPS) designations. For more information on CASAC, visit http://oasas.ny.gov/.
# Financial Information

## COLLEGE COSTS

Alfred State strives to keep tuition and fees at reasonable rates. Charges may vary due to different room and meal choices, program costs, and fees selected. The following chart is designed to give you an idea of the average student's charges and expenses.

### 2023-24 BILLED CHARGES*

#### NEW YORK STATE RESIDENT

<table>
<thead>
<tr>
<th></th>
<th>On Campus</th>
<th></th>
<th>Part-time</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Full-time</strong></td>
<td></td>
<td><strong>Full-time</strong></td>
<td></td>
</tr>
<tr>
<td>Tuition Costs</td>
<td>$7,070</td>
<td></td>
<td>Tuition Cost Per Credit Hour</td>
<td>$295</td>
</tr>
<tr>
<td>Comprehensive Fees</td>
<td>$1,792</td>
<td></td>
<td>Comprehensive Fees - pro-rated per credit hour</td>
<td>$497</td>
</tr>
<tr>
<td>Housing (Double Occupancy)</td>
<td>$8,070</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meal Plan (14 meal plan)</td>
<td>$5,800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total On Campus Costs</strong></td>
<td><strong>$22,732</strong></td>
<td></td>
<td><strong>Total Online Costs</strong></td>
<td><strong>$7,567</strong></td>
</tr>
</tbody>
</table>

**New York State Residency:** The Student Records and Financial Services Office will determine New York State residency per SUNY guidelines. If NYS residency status is in question, the student will be charged out-of-state tuition until the student provides proof of NYS residency. Forms are available in the Student Records and Financial Services Office and online.

Certain nonresident students may be eligible for the resident tuition rate if they meet the following requirements:

1. Are not non-immigrant aliens within the meaning of 8 USC §1101(a)(15), and
2. Attended an approved New York State high school for two or more years, graduated from an approved New York State high school and applied for admission to the university within five years of receiving a New York State high school diploma; or
3. Attended an approved New York State program for a General Equivalency Diploma (GED) exam preparation, received a GED and applied for admission to the university within five years of receiving the GED; and
4. If the student is without lawful immigration status, the student submits to the campus a notarized affidavit stating that the student has filed an application to legalize his or her immigration status, or will file such an application as soon as he or she is eligible to do so (See NYS Education Law §355(h) (8)).
5. Members of the U.S. Armed Forces while on full-time active duty and stationed within New York State, as well as their dependents and spouse.
6. Dependents of full-time active duty personnel who are stationed outside New York State qualify for resident tuition if the service member's "Home of Record" is New York.
7. Individuals who meet the eligibility requirements for educational assistance under federal GI bills, even if the individual is not actually receiving or using such benefits, as well as their dependents and spouse.
   a. In order to prove veteran status, a student must provide U.S. Department of Defense Form DD214 or a Certificate of Eligibility from the U.S. Department of Defense or the Veterans Administration.
8. Individuals using education assistance under the U.S. Department of Veterans Affairs for the "Vocational Rehabilitation and Employment Program" (VR&E Program) (See 38 USC §3679(c)).

*Costs are based on information at the time of publication and are subject to change.

***Students who register or pay/process their bill after the initial due date are subject to this fee per term.
## NON-NEW YORK STATE RESIDENT

<table>
<thead>
<tr>
<th></th>
<th>On Campus</th>
<th>Associate</th>
<th>Baccalaureate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition Costs</td>
<td>$11,320</td>
<td>$16,980</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fees</td>
<td>$1,792</td>
<td>$1,792</td>
<td></td>
</tr>
<tr>
<td>Housing (Double Occupancy)</td>
<td>$6,070</td>
<td>$8,070</td>
<td></td>
</tr>
<tr>
<td>Meal Plan (14 meal plan)</td>
<td>$5,800</td>
<td>$5,800</td>
<td></td>
</tr>
<tr>
<td>Total On Campus Costs</td>
<td>$26,982</td>
<td>$32,642</td>
<td></td>
</tr>
<tr>
<td><strong>Part-time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition Cost Per Credit Hour</td>
<td>$472</td>
<td>$708</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fees - prorated per credit hour</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Online **</th>
<th>Associate</th>
<th>Baccalaureate</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Full-time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition Costs</td>
<td>$8,480</td>
<td>$8,480</td>
<td></td>
</tr>
<tr>
<td>Mandatory Fees</td>
<td>$497</td>
<td>$497</td>
<td></td>
</tr>
<tr>
<td>Total Online Costs</td>
<td>$8,977</td>
<td>$8,977</td>
<td></td>
</tr>
<tr>
<td><strong>Part-time</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tuition Cost Per Credit Hour</td>
<td>$295</td>
<td>$353</td>
<td></td>
</tr>
<tr>
<td>Comprehensive Fees - prorated per credit hour</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### LATE REGISTRATION FEE***

- **Costs are based on information at the time of publication and are subject to change.**

**Online costs are for a student enrolled at a State University of New York (SUNY) State-operated campus who a) for a given term is enrolled exclusively in online distance learning course(s) and b) has not had an address within the borders of New York State at any point within July 1st and June 30th of a given State-operated campus fiscal year.**

***Students who register or pay/process their bill after the initial due date are subject to this fee per term.**

### COURSE-SPECIFIC FEES: Vary based on curriculum and requirements.

### POSSIBLE ADDITIONAL EXPENSES (Not included in college's billed costs):

<table>
<thead>
<tr>
<th>Expenses</th>
<th>Books and Supplies</th>
<th>Laptop and Software</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Expenses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transportation</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### PART-TIME STUDENTS

NYS residents enrolled in day or evening programs carrying fewer than 12 credit hours are charged $295 per credit hour. Tuition for non-residents enrolled on campus is $472 per credit hour for associate degree programs or $708 per credit hour for bachelor degree programs. Tuition for non-residents enrolled in exclusively online courses who have not resided in New York State during the current fiscal year is $295 per credit hour for associate degree programs or $353 per credit hour for bachelor's degree programs. Part-time students are also charged mandatory fees (prorated per credit hour).

- **Costs are based on information at the time of printing and are subject to change.**

### EXPLANATION OF FEES & PAYMENT OPTIONS

**Student Comprehensive Fee** - This fee is paid by all students in order to provide quality services to everyone. The services are available to students whether or not the student chooses to take advantage of them. The fee comprises:

- **Activities Fee** - Established by students through their incorporated Student Government Association (Student Senate). This fee supports club and organization programming, the student newspaper, peer tutoring, Homecoming/Family Weekend, cultural life, intramurals, civic engagement, and much more.
- **Athletic Fee** - Supports the college’s intercollegiate sports teams and entitles students to free admission to all campus sporting events.
- **College Fee** - Established by the SUNY Board of Trustees.
- **Fitness Center Fee** - For use of the fitness centers (located on the ground floor of Orvis and the second floor of Pioneer). They offer top-of-the-line selectorized weight machines, computerized fitness and aerobic equipment, and an expanded free-weight area.
- **Health Fee** - Allows students to receive medications, physician consultations, and all available health services for no additional fee.
- **Technology Fee** - Supports computer technology operations, upgrades, and improvements.
- **Transcript Fee** - Guarantees students unlimited copies of their transcripts.
- **Transportation Fee** - Supports student transportation services.

**Orientation Fee** - A mandatory one-time orientation fee is billed to all full- and part-time new and transfer students to cover the cost of programs, food, and registration requirements. Internet and readmission students are not required to attend and will not be charged the orientation fee.

### Optional Fees:

**Graduation Fee** - Commencement Policy - All students must pay the Graduation fee in order to participate in the Commencement Ceremony. This charge is removed only if the student withdraws during first four weeks of classes. No charges will be removed after the fourth week. This fee will be imposed per ceremony attended. Students receiving more than one degree may also be charged for additional accoutrements at the Campus Store. All students graduating from a
bachelor program must pay an additional cost for the bachelor hoods. Students must attend the ceremony to receive diploma cover and/or honor cord. Please note: bachelor graduates will be required to pay $30 at the Campus Store for their bachelor hoods when they pick up their regalia.

Vehicle Registration Fee - Mandatory on all vehicles parked on campus. Vehicles must be registered online at my.AlfredState.edu/studentlife or by visiting the University Police Department (located in the Theta Gamma House) where vehicle hang tags are issued.

Foreign Medical Insurance - Enrolls student in an accident and health insurance program. If you have questions about this plan, you may call the Student Records and Financial Services Office at 607-587-4253. Enrolling in the Foreign Insurance Program is mandatory when studying internationally.

Meal Plans - Students living on campus MUST have a meal plan unless living in a Townhouse or MacKenzie Quad apartment. Meal plans are also available for commuters. Carefully review your plan choice on BannerWeb and change the amount if necessary. If you have specific meal plan questions, you may call the ACES Office at 607-587-4064.

PAYMENT OPTIONS
Fall semester bills are available online July 1 (or the first business day if the 1st falls on a weekend); spring bills are available online in November. Both are given a due date well before classes begin. Payment is due on this date for the students to be pre-registered and avoid a $50 late registration fee and cancellation of their course registration.

Temporary deferment of payment may be granted at bill-processing time for students who have proof of financial aid or scholarships that will cover the billed amounts. Balances can be paid by cash, check, MasterCard, VISA, Discover, or wire transfer. As financial payments are received by the college, they will first be applied to any outstanding balance. Refunds will be issued only when the bill is paid in full. In a continuing effort to assist our customers, Alfred State also offers monthly payment plan options. Information regarding payment plan options is available online at www.alfredstate.edu/monthly-pay.

Students Receiving Title IV aid need to know: Students need to authorize the use of Title IV financial aid (federal grants and loans) to pay non-institutional charges (optional fees and vehicle registration). If you choose not to provide this authorization, you will be responsible for paying your optional fees even if you have a credit balance from Title IV financial aid. You will be asked your preference for this authorization during bill processing at my.AlfredState.edu/finances.

Temporary deferment of payment may be granted at bill-processing time for students who have proof of financial aid or scholarships that will cover the billed amounts. Balances can be paid by cash, check, MasterCard, VISA, Discover, or wire transfer. As financial payments are received by the college, they will first be applied to any outstanding balance. Refunds will be issued only when the bill is paid in full. In a continuing effort to assist our customers, Alfred State also offers monthly payment plan options. Information regarding payment plan options is available online at www.alfredstate.edu/monthly-pay.

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Note: Parent Borrowers (PLUS) must complete a separate authorization in order for PLUS loan funds to pay non-institutional charges.

STUDENT CONSUMER INFORMATION
REGISTRATION
Importance of Proper Registration - Students must properly register and pay by the appropriate deadline for all courses for which they expect to receive credit. Students are cautioned that simply attending classes and completing course requirements does not entitle anyone to register after the deadline has passed or to claim credit for a course in which they participated as an unregistered or a deregistered student. Students must resolve all problems regarding registration with the Student Records and Financial Services Office.

De-registration - Students who do not comply with published tuition payment deadlines or who have other major obligations to the college may be de-registered, or automatically dropped, from the courses for which they have registered prior to the new academic period. They may also be blocked from receiving college services such as diploma and enrollment verification.

Deadlines - Courses may be added and dropped according to academic regulations. Please refer to www.alfredstate.edu/academics/academic-regulations. Courses dropped on or after the first day of classes shall be liable for charges based on the Liability Schedule below.

LIABILITY POLICY
All tuition and fee liabilities are calculated based on the date of separation as recorded in the Student Records and Financial Services Office. Students who will be separating from the college must file the appropriate paperwork with the Student Records and Financial Services Office. The last date of academic attendance will be used for students who unofficially withdraw by ceasing to attend classes. The period midpoint will be used if the last date of academic attendance cannot be determined through our attendance monitoring process. Following is a liability schedule based upon the "official" withdrawal date or date the class is dropped.

A student who is dismissed from Alfred State for academic or disciplinary reasons prior to the end of the academic term shall be liable for all costs for that term and shall not be eligible for a reduction of charges or a refund of payment made.

TUITION, STUDENT ACTIVITY FEE, ATHLETICS FEE, TECHNOLOGY FEE, HEALTH FEE, TRANSPORTATION FEE, FITNESS CENTER FEE, COURSE FEES LIABILITY DURING INDICATED WEEK:

<table>
<thead>
<tr>
<th>Length of Term</th>
<th>1st Week</th>
<th>2nd week</th>
<th>3rd week</th>
<th>4th week</th>
<th>5th week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Semester</td>
<td>0%</td>
<td>30%</td>
<td>50%</td>
<td>70%</td>
<td>100%</td>
</tr>
<tr>
<td>12 week term</td>
<td>0%</td>
<td>40%</td>
<td>60%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>9 week term</td>
<td>0%</td>
<td>50%</td>
<td>70%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>8 week term</td>
<td>0%</td>
<td>60%</td>
<td>80%</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td>7 week term</td>
<td>0%</td>
<td>65%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 week term</td>
<td>0%</td>
<td>70%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 week term</td>
<td>0%</td>
<td>75%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Through 2nd Day of Classes</td>
<td>0%</td>
<td>50%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Through Remainder of 1st Week</td>
<td>0%</td>
<td>65%</td>
<td>100%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*For liability purposes, the first day that classes are offered, as scheduled by the campus, shall be considered the first day of the semester, quarter or other term, and the first week of classes for purposes of this section, shall be deemed to have ended when seven calendar days, including the first day of scheduled classes, have elapsed.

Orientation Fee and College Fee: 100% liable as of the first day of class.

Late Registration Fee: 100% liable after the first week.
Contribution

Financial need is calculated using the following formula:

\[ \text{Cost of Attendance} = (\text{tuition, room, meals, fees, books and supplies, transportation}) - \text{Expected Family Contribution} \]

All students are considered for all types of aid, and financial aid plans are made according to a student’s eligibility in each program as determined by federal and state guidelines. Students should contact the NYS Higher Education Services Corp. for information on scholarships for Excelsior, STEM, volunteer

ROOM RENT:

1st week 0 percent liability
2nd - 8th week 50 percent liability
After 8th week 100 percent liability

*Students holding Residential Student Staff positions will receive credit from their start date in the position through their termination date as determined by the Office of Residential Life.

Meal Plan; Campus Spending Account: Unused portions are refunded by the ACES Office or credited to the student’s bill.

RETURN OF TITLE IV FUNDS

If a student withdraws, is dismissed, or takes a leave of absence prior to the 60 percent point of the semester, Title IV funds must be returned to the source based on federal regulations unless a student meets one of the withdrawal exemptions for programs offered in modules. For the purpose of the return of Title IV funds, Federal Title IV aid is PELL, SEOG, subsidized and unsubsidized Federal Direct Loans, and PLUS loans. Students who do not complete at least 60 percent of the semester and are receiving Title IV aid may owe a bill after funds are returned to the source. A student will be reviewed to determine if they are an unofficial withdrawal at the end of the semester due to receiving failing grades in all of their course work. If no last date of academic attendance can be determined through our attendance monitoring process, the period midpoint will be used. The student must repay funds credited to their account as determined by the Federal Return of Title IV Aid Calculation.

ADJUSTMENTS TO BILL

Any appeal of a fee must be in writing, with justification, and submitted to the Student Records and Financial Services Office by the end of the first week of the semester.

Late Registration Fee: Any students who have not registered for classes, paid their bill, or processed their bill by the bill due date, will be assessed a $50 late registration fee. This fee is nonrefundable.

Penalties for Nonpayment: Nonpayment of charges may result in current semester registration being dropped, late fees assessed, the holding of diplomas and possible denial of future registration. Unpaid accounts will be forwarded to a collection agency or to the Office of the Attorney General.

Late Payment Fee: A monthly late payment fee of up to $50 is assessed to any account with an outstanding balance. This fee will be added to any account turned over for collection purposes.

Returned Payments: A fee of $20 will be charged for payments returned unpaid.

Disbursement of Loans, Grants, Scholarships: The college may receive funds for a student from various sources. All monies are applied to the student’s account as received until the bill is satisfied. If the college receives funds that result in a refund for the student, a direct deposit will be initiated for those enrolled in E-Refund. Those not enrolled will be issued a refund check. For Alfred campus students, the refund check will be available for pickup in the Student Records and Financial Services Office for one week. Wellsville campus students can pick up their refund checks at the Zero Energy House. Checks for students studying on-line or at the Northland Campus will be mailed. Any remaining refund checks not picked up after one week will be mailed to the student’s home address.

FINANCIAL AID

Financial aid comes from a variety of sources. Students must file a Free Application for Federal Student Aid (FAFSA) as soon as possible after the application opens for each academic year in which they want to receive federal Title IV financial aid. The FAFSA can be completed online at https://studentaid.gov/. While on the FAFSA confirmation page, New York State residents who plan to enroll full time can apply for the NYS Tap Grant. TAP can also be applied for online at www.tap.hesc.ny.gov. Eligible New York State residents can apply for additional NYS Scholarships such as the Excelsior Scholarship online at www.hesc.ny.gov.

Alfred State’s school codes for financial aid are:

002854 for the FAFSA
3005 for TAP associate degree programs
6005 for TAP baccalaureate degree programs

FINANCIAL AID PLAN

All students are considered for all types of aid, and financial aid plans are made according to a student’s eligibility in each program as determined by federal and state regulations. Offers are determined by financial need based on data provided by the student on the FAFSA. Financial aid is conditional based upon continuation of legislative authority and availability of appropriated funds.

Financial need is calculated using the following formula: Cost of Attendance (tuition, room, meals, fees, books and supplies, transportation) - Expected Family Contribution (EFC determined by FAFSA) = Financial Need.

Generally, financial aid can be categorized into three types:

1. Scholarship and grant aid are considered gifts and generally do not need to be repaid. These include the Federal Pell Grant, Federal Supplemental Educational Opportunity Grant (SEOG), NYS Tuition Assistance Program (TAP) for NYS residents enrolled full-time, Aid for Part-time Study (APTS) and part-time TAP for NYS residents enrolled part-time, and the Educational Opportunity Program (EOP) for NYS residents who meet established academic and economic guidelines. Students should contact the NYS Higher Education Services Corp. for information on scholarships for Excelsior, STEM, volunteer
Campus scholarships are primarily given out by the Admissions Office. Scholarship opportunities and requirements can be viewed on at www.alfredstate.edu/financial-aid/scholarships. Links to free outside scholarship search services are also provided. Students are encouraged to also seek scholarships and grants through their local high schools, civic organizations, and employers.

2. **Loans do need to be repaid** and should be considered as serious commitments. These include the Federal Subsidized and Unsubsidized Direct Loans, and Federal Nursing Loan. These loans are in the student’s name and eligibility is determined by financial need based on the FAFSA. Students are directed by the college to complete an electronic Master Promissory Note (MPN). Under an MPN, students can receive subsequent loan disbursements at the same school for up to 10 years without having to complete another promissory note. Interest rates and terms are set by the federal government, on an annual basis and students must be enrolled a minimum of six credit hours per semester in a matriculated degree-granting program. These loans have a grace period before repayment begins once the student is no longer enrolled or drops below half-time enrollment.

3. **Federal College Work-Study** is a way for students to earn money through part-time employment in order to contribute toward their college costs. Work-study is offered to students with demonstrated financial need based on the FAFSA. Students are paid at an hourly rate every two weeks for the hours worked.

**METHODS OF NOTIFICATION**

Financial Aid Plans are sent via mail to accepted students with a valid FAFSA on file with the college. Students can also view their Financial Aid Plan at my.AlfredState.edu/finances. Detailed instructions are provided to students on how to accept and process their aid.

Accepted students are provided with an active Alfred State email account. Financial Aid Plan availability, requests for information, and notification of changes to the Financial Aid Plan are sent to students’ Alfred State email accounts. Students should also be aware that they can view the status of their financial aid and requests for information anytime using the my.AlfredState.edu student portal. It is the students’ responsibility to regularly check their campus email and my.AlfredState.edu/finances for such updates and requests.

**STUDENT LOAN COUNSELING**

Entrance counseling—First-time borrowers under the Federal Direct Loan Program are required to complete an online loan counseling session before loan funds can be disbursed. The session is designed to inform students about their rights and responsibilities under the Federal Direct Loan program. Nursing Student Loan borrowers must also complete online student loan counseling.

Exit counseling—Students separating from the college due to graduation, withdrawal, leave of absence, dismissal, or less-than-half-time enrollment are required to complete an online loan exit counseling session. The session is designed to help students avoid the pitfalls of default by informing them of their repayment obligations as well as their deferment and forbearance rights under the loan programs from which they borrowed.

**INCOME VERIFICATION AND OTHER REQUESTS FOR INFORMATION**

Under US Department of Education guidelines, a portion of students who apply for Federal Title IV aid will be selected for verification. This may include verification of household size and income. Title IV aid will not be processed until all requested documents have been received and reviewed by the Student Records and Financial Services Office.

**OVERAWARD POLICY**

Overawards occur when students receive financial aid resources in excess of their cost of attendance. In this instance, the Student Records and Financial Services Office is required under federal student aid regulations to reduce or cancel any resources affected by the overaward.

Students receive written notification by the Student Records and Financial Services Office when an overaward is identified and are advised which funds need to be adjusted. In some cases, this could leave a student owing a balance on the semester bill. Students are encouraged to notify the Student Records and Financial Services Office in writing immediately if they receive additional funds that were not included in their original Financial Aid Plan.

**ACADEMIC CRITERIA FOR FINANCIAL AID**

Alfred State is required to monitor the academic progress of students receiving federal and state financial aid. Students who are not maintaining satisfactory academic progress (SAP) and pursuit of program (POP) according to established guidelines are not eligible for federal Title IV and/or state financial aid. In addition, students cannot receive federal and/or state financial aid for courses not applicable to the major in which they are matriculated. More information is available at www.AlfredState.edu/grades-financial.

**Appeal Procedures**

Students who experienced extenuating circumstances that affected their academic progress resulting in the loss of their financial aid eligibility may file an appeal of SAP-POP and/or Title IV requirements. Students interested in filing an appeal are encouraged to contact the Student Records and Financial Services Office for more information. Appeal procedures are also provided to students in writing when they receive their notice of ineligibility. Information is also available online at www.alfredstate.edu/financial-aid/appeals.

**New York State Criteria/Requirements for Tuition Assistance Program (TAP):** Reviewed at end of each semester.

The chart below applies to non-remedial students first receiving NYS Aid in 2010-11 and thereafter.
Students Receiving Federal Title IV Aid Need to Know:

Repeating Courses – Students must enroll in a minimum of 12 new credit hours each semester to qualify for TAP. Repeating a course that previously received a passing grade cannot be included as part of the required credit hours for that semester when determining TAP eligibility. However, the following exceptions apply: (1) when a failed course is repeated; (2) when a grade received is passing at the institution, but is unacceptable in a particular program as stated in the college catalog by the academic department; and (3) when a course may be repeated and credit is earned each time. The Student Records and Financial Services Office determines if students are out of SAP-POP compliance as part of the TAP certification process. Students are notified of their ineligibility by the Student Records and Financial Services Office.

Withdrawal or Leave of Absence – Students who received TAP for a semester from which they withdrew or took a leave of absence and did not earn any academic credit are not considered to be fulfilling the pursuit of program requirements and would be made ineligible for TAP for the next enrollment period.

2.0 GPA – Students having received four semesters of TAP (24 payment points) must have a 2.0 cumulative GPA (out of a possible 4.0) to continue receiving TAP. This includes students who may have received TAP payments at another college prior to enrolling at Alfred State.

Sit-Out – Students who become ineligible to receive state financial aid for a semester due to poor academic performance or failure to meet pursuit of program requirements may sit out for one year. Students would then be eligible to receive the state financial aid for which they qualify upon their return. Sit-out does not apply to the TAP 2.0 requirement.

Aid to Part-Time Study (APTS) – Students studying part-time may be eligible for APTS. APTS is deducted from a student’s available TAP payments. Two APTS payments (three points each) equal one TAP payment (six points).

Part-Time TAP – Similar to APTS, part-time TAP is also deducted from a student’s total available TAP payments. However, instead of using three points for each semester of part-time enrollment, points are used according to the actual number of part-time credit hours taken against the percentage of a full TAP award.

Federal Criteria/Requirements: Reviewed at the end of each semester.

<table>
<thead>
<tr>
<th>Credit Hours Attempted</th>
<th>Completion of Credit</th>
<th>Minimum GPA</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 19</td>
<td>67 percent</td>
<td>1.30</td>
</tr>
<tr>
<td>20 - 36</td>
<td>67 percent</td>
<td>1.75</td>
</tr>
<tr>
<td>37 - 50</td>
<td>67 percent</td>
<td>1.90</td>
</tr>
<tr>
<td>over 50</td>
<td>67 percent</td>
<td>2.00</td>
</tr>
</tbody>
</table>

Students Receiving Federal Title IV Aid Need to Know:

Degree Completion – Students must complete their degree or certificate within 150 percent of the normal credits required for completion. Students who change programs and are in good academic standing are considered to be at the semester level based on the number of transfer credits accepted by the new program. For any subsequent program changes or program changes due to poor academic standing all attempted hours will be considered. Example: If an AAS student needs 60 credit hours to complete a degree, they cannot receive aid after 90 credit hours have been attempted.

Federal Warning – Students found to be below the academic standards for federal aid eligibility will be placed on federal aid warning for one semester. Students who have not regained eligibility by the end of the warning semester will be ineligible for federal aid.

Remedial Courses

Alfred State offers credit and noncredit remedial courses which will be counted toward the number of credit hours attempted and taken for the purpose of financial aid. However, if a passing grade is not received remedial course work will not be counted in the number of credit hours earned.
Incomplete Course Work, Withdrawals, and Repeated Course Work

Course work that has not had a grade issued will not count in credit hours earned and may impact financial aid eligibility. Withdrawal from courses that will have a grade of withdrew passing/failing will be counted in hours attempted and/or earned. Courses repeated due to a failing grade will have the highest earned grade count in hours attempted and/or earned.

CROSS REGISTRATION/CONSORTIUM AGREEMENTS

Alfred State will process financial aid for its matriculated students who are also attempting course work as a ‘visiting’ student at another college or university. Prior approval is required by the Alfred State Transfer Advisor to ensure that the course work will transfer into Alfred State and meet the student’s graduation requirements. Complete procedures are available at www.alfredstate.edu/transfer-students/cross-registration.

Questions

Questions in regard to any of the above information can be directed to: Alfred State Student Records and Financial Services Office, 10 Upper College Drive, Alfred, NY 14802; phone 1-800-4-ALFRED; or email sfs@alfredstate.edu.

SCHOLARSHIPS AVAILABLE AT ALFRED STATE

Alfred State is proud of its commitment to recognize outstanding students by offering numerous scholarships. Since it is the desire of Alfred State to award scholarships to as many students as possible, typically students do not receive more than one scholarship. If a student qualifies for more than one award, the higher-value scholarship will be awarded. Enrollment deposits must be paid by the due date in order to maintain any scholarship awards.

The Alfred State Athletic Department is an NCAA Division III member. Therefore, athletic ability or athletic accomplishments will not be considered in determining students’ scholarship eligibility or financial aid packages.

The following scholarships are available to incoming students who have been accepted and will enroll for the fall semester into a regular program and will be studying full time on either the Alfred or Wellsville campus. Please note: students studying online are not eligible for scholarships; scholarship funding is limited and meeting qualifications is not a guarantee of an award; the financial aid package, including scholarship awards, cannot exceed the cost of attendance.

Douglas & Carol Shay Acomb Endowed Scholarship² - Awarded to an academically talented incoming student; applied to non-tuition expenses.

Agricultural Endowed Scholarship² - Awarded to student enrolling in an agriculture program.

Alfred State Merit Scholarship Program:

Alfred State Scholars¹ - up to $5,000 per year awarded to academically talented first-time, freshmen entering a baccalaureate-degree program; must be a New York State resident; specific value will be determined by strength of academic background and funding availability; applied to non-tuition expenses (e.g., books and supplies, fees, on-campus housing, transportation); preference given to students accepted by March 1; no scholarship application necessary.

Alfred State Pioneer Award¹ - up to $2,500 per year awarded to academically talented first-time, freshmen entering an associate-degree program; must be a New York State resident; specific value will be determined by strength of academic background and funding availability; applied to non-tuition expenses (e.g., books and supplies, fees, on-campus housing, transportation); preference given to students accepted by March 1; no scholarship application necessary.

Alfred State Scholars--Out-of-State¹ - up to $12,000 per year awarded to academically talented first-time, freshmen entering a baccalaureate-degree program; must reside and attend high school outside of New York State; specific value will be determined by strength of academic background and funding availability; preference given to students accepted by March 1; no scholarship application necessary.

Alfred State Pioneer Award-Out-of-State¹ - up to $4,590 per year awarded to academically talented first-time, freshmen entering an associate-degree program; must reside and attend high school outside of New York State; specific value will be determined by strength of academic background and funding availability; preference given to students accepted by March 1; no scholarship application necessary.

Allegany County Counselors’ Association Annual Scholarship³ - Awarded to a student attending high school in Allegany County; applications available in high school guidance offices in early spring.

Allegany County School Food Service Association Scholarship2 - $200 awarded to a student with a financial need from an Allegany County school district who is entering the culinary arts program; applied to non-tuition expenses.

Alpha Sigma Sorority Annual Scholarship⁴ - Awarded to an incoming female student who demonstrates civic engagement activity and participation; letter of interest should be sent to the Admissions Office by March 30.

Alumni Scholarship - Awarded to new first-year and transfer students who are the children or grandchildren of an Alfred State alumnus; applied to non-tuition expenses; multiple scholarships available; first-years must have at least an 83 high school average (through end of junior year) and transfers must have above a 2.0 cumulative GPA; a letter must be sent to Admissions Office indicating student’s name as well as the alumnus’ name at the time of graduation, the year graduated from Alfred State, and the student’s relationship to the alumnus; one-time award granted to eligible students until funding runs out.

Alumnus 1939 Endowed Scholarship² - Awarded to academically talented incoming students.

Anderson Family Endowed Scholarship² - Awarded to academically talented incoming student.

Culinary & Baking Production Management Annual Scholarship³ - $500-$1,500 awarded to incoming students enrolling in culinary arts or culinary arts: baking, production and management program; scholarship application available on the Alfred State website.

Evelyn C. and Rumsey C. Billings Memorial Endowed Scholarship² - Awarded to academically talented incoming students from Steuben and Otsego counties.

Lee Brasted Engineering Technologies Endowed Scholarship² - Awarded to a student enrolling in an engineering technology program.
Anthony C. Cappadonia Endowed Scholarship
- Awarded to an incoming student with a musical background who was in high school choir and will participate in the Alfred State choir; must have an 80 or better high school average through the end of the junior year; letter of interest should be sent to Admissions by March 30.

Daniel DiFrancesco Memorial Endowed Scholarship
- Awarded to an incoming student enrolling in an agriculture program who exhibits service to school and/or the community, exhibits a strong sense of responsibility to self and dedication to family, and possesses a love of the outdoors and demonstrates an appreciation of nature; letter of interest should be sent to the Admissions office by March 30.

The Drago Family Endowed Fund
- Awarded to academically-talented incoming student; preference given to minority student who is first in family to attend college; applied to non-tuition expenses.

Dresser-Rand Endowed Scholarship
- Awarded to an academically talented incoming student who resides in Allegany, Cattaraugus, Chautauqua, or Steuben counties in New York or from McKean, Potter, or Tioga counties in Pennsylvania.

East High School Partnership Scholarship
- $500 awarded to graduates of East High School, Rochester, who are accepted to Alfred State by May 1 of their senior year; maximum of five awards each year; scholarship award begins second year of enrollment at Alfred State.

Max & Marian Farash Annual Scholarship
- Awarded to student enrolling in mechanical engineering technology or the heating, ventilation, and air conditioning program.

Friendship Designated Scholarship
- $500 awarded to graduates of Friendship Central School accepted into a regular program at Alfred State.

Geneseo Valley Balloon Association Endowed Scholarship
- Awarded to student from Western New York enrolling in an agriculture program.

Vernon Gleasman SAE Endowed Scholarship
- Awarded to academically talented incoming student enrolling in mechanical engineering technology.

Michael K. Gowdy Memorial Endowed Scholarship
- Awarded to academically talented students from Wellsville High School.

W.R. Grace & Company Endowed Scholarship
- Awarded to a student enrolling in the biological science or forensic science technology program.

M.A. and C.A. Graham Nursing Memorial Endowed Scholarship
- Awarded to incoming nursing students; preference given to students from LeRoy Central or Warsaw Central School districts, then to students from Wyoming County, then to students from the rest of New York State.

International Cultural Scholarship
- Awards up to $3,000 to accepted international students with an overall high school or college grade point average of 2.5 or better.

International Excellence Scholarship
- Awards up to $7,000 to international students who meet two of the following four criteria: 213 TOEFL exam score (79-80 on Internet-based exam, 550 on paper exam), 3.25 college cumulative grade point average (a 90 overall high school average may be substituted), 1270 combined reading/writing and math SAT, and/or are a current member of Phi Theta Kappa in good standing.

International Merit Scholarship
- Awards up to $3,000 to international students who meet two of the following four criteria: 195 TOEFL exam score (71 on Internet-based exam, 525 on paper exam), 3.0 college cumulative grade point average (an 88 overall high school average may be substituted), 1170 combined reading/writing and math SAT, and/or are a member of Phi Theta Kappa in good standing.

Eugene Jacobs Memorial Educational Foundation Endowed Scholarship
- $1,000 awarded to student enrolling in a baccalaureate degree program; student must have at least an 85 overall high school average through the junior year or a 3.0 cumulative grade point average to be considered.

Barbara & John Larsen Annual Scholarship for Excellence in Theater
- Awarded to an incoming student who has an interest or has participated in theater or drama while in high school and will participate in the Drama Club while attending Alfred State; must have an 80 or better high school average through the end of the junior year; letter of interest should be sent to the Admissions Office by March 30.

Suzanne Malachesky Memorial Endowed Scholarship
- Awarded to a commuter student enrolling in the nursing program.

Rudolf "Rudy" Mazurek Memorial Annual Scholarship
- Awarded to incoming student enrolling in the autobody repair program; preference given to student from Newfield High School or another high school in Tompkins County.

Lawrence “Bud” McCarthy Educational Foundation Endowed Scholarship
- Awarded to an incoming student with demonstrated skills in a related technology area; students must have at least an 80 high school average through the end of their junior year to be considered.

Miller-Neverett Memorial Endowed Scholarship
- Awarded to an academically talented student who demonstrates potential for campus service as evidenced by previous involvement in organizations and activities; letter of interest should be sent to the Admissions Office by March 30.

Ortho-Clinical Diagnostics Endowed Scholarship
- Awarded to an academically talented student entering the forensic science technology program.

Phi Theta Kappa External Transfer Scholarship
- $4,000 total value ($2,000 per year) applied to non-tuition expenses; awarded to transfer students who are members in good standing of Phi Theta Kappa and are entering a baccalaureate degree program; must provide proof of membership in Phi Theta Kappa; students who have or will earn a baccalaureate degree prior to enrolling at Alfred State are not eligible; must be accepted and provide official documentation of meeting the necessary criteria by May 1.

John Plail Work Ethic Endowed Scholarship
- Awarded to student enrolling in a business program; student must have an 80 or better high school average through the end of their junior year and exhibit achievements in high school; letter of interest as well as a written document identifying student’s goals for pursuing business as a career and the importance of having a strong work ethic should be submitted to the Admissions Office by March 30.
Regional Annual and Endowed Scholarships\(^2\) - Awarded to academically talented incoming freshmen who reside in school districts defined as the residences of Alfred State faculty and staff.

Floyd and Eleanor Rose Endowed Scholarship\(^2\) - Awarded to academically talented students from Western New York and Northern Pennsylvania enrolling in either the agricultural technology or building trades: building construction programs; students must have an 85 or better high school average through their junior year to be considered.

Russo Family Endowed Scholarship\(^2\) - Awarded to academically talented incoming students.

Shaw Family Endowed Scholarship\(^2\) - Awarded to an incoming freshman enrolling in an agriculture program.

Richard D. Stillman Memorial Endowed Scholarship\(^4\) - Awarded to an incoming student who was a member of their high school band or choir and will participate in the Alfred State band or choir; must have an 80 or better high school average through the end of junior year; letter of interest should be sent to the Admissions Office by March 30.

Albert and Judith Styrcula Endowed Scholarship\(^2\) - Awarded to academically talented students from Dundee High School or Yates County.

Robert A. Sweeney Memorial Endowed Scholarship\(^2\) - Awarded to a student from Steuben County enrolling in a business program.

Transfer Scholarship\(^1\) - $2,000 total value ($1,000 per year) applied to non-tuition expenses; awarded to transfer students entering a baccalaureate degree program; students must have completed at least one full-time semester with a 3.25 cumulative GPA; students who have or will earn a baccalaureate degree prior to enrolling at Alfred State are not eligible; must be accepted and provide official documentation of meeting the necessary criteria by May 1.

Hank & Evelyn Turner Recruitment Annual Scholarship for Culinary Arts\(^2\) - Awarded to incoming students enrolling in the culinary arts and culinary arts: baking, production and management programs; applied to non-tuition expenses.

Vocational Excellence Scholarship\(^4\) - $2,000 total value ($1,000 per year) awarded to first-time freshman students entering a program taught at the School of Applied Technology on the Wellsville campus; applied to non-tuition expenses; multiple scholarships available on a selective basis; to be considered, students must have at least an 83 high school average through the end of their junior year and demonstrate vocational excellence through a combination of education, employment/internships, competition, C-CAP participation, military experience, and other verifiable activities; students should submit a letter to the Admissions Office indicating how they have excelled in the vocational area, as well as two letters of recommendation from qualified individuals verifying skill level by May 1.

William & Dennis Weimer Endowed Scholarship\(^2\) - Awarded to student enrolling in a science-based program including engineering science and/or natural sciences.

Bea L. Williams Memorial Endowed Scholarship\(^3\) - Awarded to students attending high school in Western Steuben County; applications available in high school guidance offices in early spring; academics as well as school and community activities will be considered in the evaluation process; applied to non-tuition expenses.

O’Brien Family Scholarship\(^1\) - Awarded to a student enrolling in an online program. May be applied only toward non-tuition expenses.

Palko Recruitment Annual Scholarship\(^2\) - Awarded to academically talented students enrolling in the Marketing AAS program.

\(^1\)No scholarship application necessary.

\(^2\)No scholarship application necessary. Awarded by specific criteria. Students must have minimum high school average of 80 through end of junior year unless otherwise noted. Scholarships awarded in March.

\(^3\)Scholarship application necessary.

\(^4\)Send letter of interest and any other information as indicated to the Admissions Office. Decisions ongoing while funding exists unless otherwise indicated.

The following scholarships are awarded by the appropriate academic department to continuing Alfred State students based on performance while at Alfred State:
Allegany County School Food Service Assoc. Annual Scholarship
Anderson Family Endowed Scholarship
Anna & Merrill McCormick Memorial Endowed Scholarship
Will Arlow Memorial Motorsports Annual Scholarship
Dr. Khalid Ashraf Memorial Endowed Scholarship
Automotive Service Excellence (ASE) Endowed Scholarship
BP Electrical Trades Endowed Scholarship
Bob Pahl Sorrento Annual Sketchbook Scholarship
Buffalo Promise Annual Scholarship
Douglas J. Barber Construction Management Endowment
Kathy Barnes Honorary Guardian of Nursing Annual Award
Thomas H. Brawdy Memorial Masonry Annual Scholarship
Brockway Truck Preservation Association (BTPA) Annual Scholarship
EJ Brown Memorial Endowed Scholarship
Paul L. Buckman Memorial Annual Award
Matthew Burzycki Memorial Endowed Scholarship
Anthony Carino Memorial Endowed Scholarship
James Comstock Memorial Annual Scholarship
Paul Constantine, Jr. Memorial Endowed Scholarship
Culinary and Baking Production Management Annual Scholarship
Dairympile Companies Annual Scholarship
Norman A. Dietrich Memorial Endowed Scholarship
Distinguished Professors’ Annual Award for Veteran’s Academic Achievement
English & Humanities Prose Writing Annual Award
Carol VanNote Burch Nursing Scholarship
Carpenter Family Applied Technology Endowed Scholarship
Joel French Memorial Endowed Scholarship
Henry and Rosa Gabriel Endowed Scholarship
Donald Gaddy Memorial Endowed Scholarship
Gamma Theta Gamma Fraternity Annual Scholarship
Professor Brian Gillespie Memorial Endowed Scholarship
Eleanor Graves Memorial Endowed Scholarship
Ralph B. Harmon Memorial Endowed Scholarship
Mary Heider Memorial Endowed Scholarship
HistoryCorps Annual Scholarship
Shirley Helwig Memorial Annual Scholarship
Donald B. Holzer Endowed Scholarship
Alan 79 & Mary Ellen 90 Hunt Endowed Scholarship
Hunter Family Memorial Endowed Scholarship
Phyllis S. Jones Memorial Annual Award
Kappa Sigma Epsilon Annual Student Leadership Achievement Award
Alfred State Retirees Annual Scholarship
Barry Brown 64 Annual Scholarship
Educational Foundation of Alfred, Inc. Endowed Fund
James G. and Marilyn A. Ferry Endowed Scholarship
Roland D. Hale Need-Based Endowed Scholarship
Hornell Association Endowed Scholarship
Charles A. Orlando Memorial Endowed Scholarship
Kappa Sigma Epsilon Endowed Scholarship
Marilyn Luke Annual Award for Clinical Excellence in Nursing
Wallace "Pete" and Kathleen MacDonald Annual Scholarship
Suzanne Malachesky Memorial Endowed Scholarship
Harold & Jane Mapes Memorial Annual Award
Brian Marasciullo Memorial Annual Scholarship
Anna & Merrill McCormick Memorial Endowed Scholarship
Dale Menzinger Creative Writing Annual Award
Michael Miller Memorial Annual Scholarship
Milton/CAT Annual Scholarship
Deborah (Wallace) and Timothy Moore Nursing Endowed Scholarship
Outstanding Student Annual Award - English & Humanities
Nicholas Reitter III Mechanical Technology Annual Scholarship
Dorothy & Lester Reynolds Memorial Endowed Scholarship
Joseph and Carmella Saccone Memorial Endowed Scholarship
Harold A. & Tim ’71 Shay Memorial Annual Scholarship
Sigma Tau Epsilon Endowed Scholarship - Wellsville Campus
Donald Simons Annual Scholarship
Bob Pahl Sorrento Sketchbook Annual Scholarship
Southern Tier Builders Association Annual Scholarship
Stephens Mills Grange Endowed Scholarship
Evelyn Turner Excellence in Culinary Arts Annual Fund
Western NY Veterinary Medical Association Annual Scholarship
Robert Wood Freshman English & Humanities Annual Scholarship
Francis Woythal Memorial Scholarship
The Patrick Lee Foundation Annual Scholarship
Paul and Lori Guillaro Annual Scholarship
Clarence "Pat" Carson Annual Scholarship
Cuba School of Applied Technology Chamber of Commerce Culinary Arts Scholarship
Deborah (Wallace) & Timothy Moore Nursing Endowed Scholarship
Robert E. Wood Jr. Memorial Endowed Scholarship
Scholarships are made possible by the generosity of the Alfred State Development Fund, Inc., the Educational Foundation of Alfred, Inc., the Alumni Council, private donors, and Alfred State faculty and staff. The following scholarships are awarded by the Student Records and Financial Services Office based on financial need. There is no application process other than completing the FAFSA.

Alfred State Retirees Annual Scholarship
Barry Brown 64 Annual Scholarship
Educational Foundation of Alfred, Inc. Endowed Fund
James G. and Marilyn A. Ferry Endowed Scholarship
Roland D. Hale Need-Based Endowed Scholarship
Hornell Association Endowed Scholarship
Charles A. Orlando Memorial Endowed Scholarship
Hai Howard Electrical Engineering Technology Gamma Theta Gamma Endowed Scholarship
Dr. David H. Huntington Memorial Endowed Scholarship
Dr. James Koller Student Service Endowed Scholarship
William H. MacKenzie Memorial Endowed Scholarship
Northern Lights Endowed Scholarship
Charles A. Orlando Memorial Endowed Scholarship
Radia Khouz Rezak Family Endowed Scholarship
Mike Taylor Memorial Endowed Scholarship
George Whitney Memorial Endowed Scholarship
Robert E. Wood Jr. Memorial Endowed Scholarship
Hornell Association Endowed Scholarship
Student Affairs

Student experiences at Alfred State are a mix of challenging academic coursework and involvement in a spectrum of diverse social, recreational, and cultural activities. With an emphasis on Well-being, Inclusion, Development, and Engagement (WIDE) model, students will complement their classroom experience by developing support systems and career-focused competency skills. An array of clubs, activities, and opportunities is available, including 17 men’s and women’s intercollegiate athletic programs, leadership positions, career-connected employment and intramural and competitive club sports.

At Alfred State students have access to more than 80 clubs and organizations, daily on-campus experience such as movies, live music and comedy, concerts, cultural events, access to fitness centers, swimming pool, Esports and gaming spaces and much more! There’s always something to do. In fact, there are so many options, the difficulty may be deciding what to do first.

CAREER DEVELOPMENT

Career Development offers a wide variety of services for students and alumni. These services include assistance with developing career plans and goals, resume development and critique, job/internship networking, access to a professional clothing closet, interview preparation, mock interviewing, and a variety of classroom workshops. Career Development provides and maintains four major online branded services: JobLink (job postings for on-campus jobs, work study, internships and FT career positions, on-campus recruitment/career fairs), SkillsFirst (online resume, portfolio, and interview prep), PathwayU (clarify your career path by learning your values, interests, and personality traits), and CandidCareer (thousands of videos to help learn about different career paths and also videos to prepare for a successful job search and career). In addition to maintaining thousands of job/internship postings for full-time, part-time, and summer employment, Career Development also organizes and facilitates six career fairs each year.

STUDENT DISABILITY SERVICES

Academic and nonacademic assistance is provided to students with self-identified disabilities (permanent or temporary) who have provided appropriate documentation to the Office of Student Disabilities Services (Hunter Student Development Center, Alfred campus; Pioneer Student Union, Wellsville campus).

Academic services may include faculty conferencing, tutoring referrals, technology, note takers, and testing accommodations. Non-academic services may include residence hall accommodations and agency referrals. Attendant care and personal assistive devices are not provided. Accommodations are decided by the counselors from Student Disabilities Services after reviewing the appropriate documentation and talking with the individual student. Please remember that self-advocacy is essential to receiving assistance.

CENTER FOR INTERCULTURAL UNIITY

The Center for Intercultural Unity strives to provide an open-minded, welcoming, and safe environment for all of our Alfred State students. Through educational workshops/programs, professional trainings, advocacy, and outreach, the Center for Intercultural Unity facilitates students’ self-awareness, learning, and growth regarding different cultures, viewpoints, and experiences. The center supports students in matters of academic, social, cultural, and personal well-being, and promotes all students’ understanding and appreciation of differences as well as similarities.

The Center for Intercultural Unity is committed to creating opportunities for Alfred State students to empower and educate themselves, their peers, and the community in which they live. We support and promote under-represented student organizations, including, but not limited to LGBTQ+, students of color, women, veterans, and military services, international students, and faith-based groups. We are also deeply invested in the prevention, awareness, and eradication of sexual assault on college campuses and proactively provide programs, workshops, and campaigns that aim at keeping Alfred State safe from sexual violence. The Center for Intercultural Unity works closely with academic departments and Student Affairs offices on campus to create an empowering and enriching college experience here at Alfred State.

HEALTH AND WELLNESS SERVICES

Health and Wellness Services Office has locations on both Alfred and Wellsville campuses. The office provides treatment of student illness, and injury, in addition to counseling services. The office is staffed by a Licensed Nurse Practitioner, Licensed Mental Health Counselors, and Registered Nurses.

A mandatory health fee allows the student to receive treatment, including both medical and counseling appointments, medications available through our office, and medical supplies provided by Health and Wellness Services at no additional cost. Student records at Health and Wellness Services are kept strictly confidential via our electronic medical record system and health portal. Appointments can be made by calling 607-587-4200, or emailing healthandwellness@alfredstate.edu.

Further information can also be found at: www.alfredstate.edu/student-life/health-and-wellness-services.

THE OASIS

Located in the Student Leadership Center, The Oasis is an alternative therapy space aimed at promoting self-care, stress management, and health and wellness programming. The Oasis offers massage chairs, aromatherapy, a self-help audio library, and access to events like yoga and meditation. The Oasis’ hours of operation and services offered vary each semester. More information can be found on our website www.alfredstate.edu/oasis.

CAMPUS SHUTTLE SERVICE

The college provides a bus service that circles the main campus continuously throughout each class day 10 minutes to the hour from 8 a.m. - 5 p.m. including traveling to the farm and Vet Tech building. The college also provides a shuttle service back and forth each day to the Wellsville campus. These buses have various morning departure times from the Alfred campus and afternoon departures from the Wellsville campus. A daily shuttle schedule is posted online for quick and easy access.

STUDENT/VISITOR MOTOR VEHICLES

All licensed motor vehicles, including automobiles, trucks, motorbikes, motorcycles, and other motor vehicles to be operated or parked on college property, must be registered at the University Police Department in the Theta Gamma house on the Alfred campus. If you are on the Wellsville campus, you must register at Student Services. Visitors must register their vehicles immediately to avoid enforcement violations. Information and assistance regarding vehicle registration can be found 24 hours a day, seven days a week at the University Police Department.

UNIVERSITY POLICE

The University Police Office is located on Lower College Drive in the Theta Gamma House on the Alfred campus. University Police is open 24-hours a day, seven days a week. University Police maintains an office on the Wellsville campus. The Wellsville office is staffed during the academic year Monday - Friday, 8 a.m. - 4 p.m.
Alfred State's University Police Department is a fully sworn and accredited, community-oriented and service-based police department that provides law enforcement and emergency services to all members of the Alfred State community. The University Police Department is responsible for enforcing all federal, state, and local laws on both the Alfred and Wellsville campuses.

The department prides itself on a level of professionalism, courtesy, and respect that meets the specialized needs of a college setting. With a 24-hour dispatch center, University Police serves as the primary point of contact for off-hours services such as electrical, plumbing, or other facility-based issues. In keeping with the educational mission of our setting, the department also encourages its members to continue their development through additional education and training.

University Police can be contacted at 607-587-3999 or simply 3999 from any campus phone. In an emergency dial 911 or use any of the emergency blue light phones located throughout campus.

ALUMNI COUNCIL
The Alumni Council exists to enhance the engagement of the college's alumni for their enjoyment through programs and services which build relationships and to support the institution's efforts in student recruitment, career placement, and friend/fund-raising.

The major objectives of the Alumni Council are to:
1. Promote and increase fellowship of students and alumni of Alfred State.
2. Serve as a liaison among Alfred State, its alumni, and students in order to foster and maintain close and mutually beneficial ties.
3. Maintain and promote loyalty of the alumni of Alfred State.
4. Assist and promote the interest of Alfred State, its students, and alumni.
5. Develop programs that support the goals and objectives of the campus, including campus fundraising, in conjunction with the Office of Institutional Advancement.

The Alumni Council provides a variety of programs and services to both alumni and students. Some of these include:

- Bi-annual alumni magazine
- Alumni records update service
- Annual alumni reunion – Homecoming
- Assistance with program-specific events
- Regional alumni events
- Scholarship program
- Career development assistance - posting job openings, seeking position, etc.

The Office of Alumni Relations is located on the Alfred campus in the Van Hall Alumni House. For additional information related to the above programs, please stop in, call 607-587-3931, or forward an email message to alumni@alfredstate.edu.

LIBRARIES
The libraries on the Alfred and Wellsville campuses are strongly committed to serving the information and research needs of students and faculty. The collections on both campuses encompass materials in a variety of formats - electronic, print, and visual media. To access the libraries’ holdings, visit the library website at www.alfredstate.edu/hinkle-library. Materials not available locally may be requested through the interlibrary loan service.

The Walter C. Hinkle Memorial Library on the Alfred campus houses a collection of approximately 52,200 book volumes and 3,300 video titles and has print subscriptions to 12 newspapers and some 140 journals and magazines. The Wellsville campus library holds about 3,000 volumes, 30 current journal titles, and four daily newspapers. The library contains an extensive collection of automotive manuals in print and microfiche, as well as materials in a variety of audiovisual formats. Students and faculty on both campuses have access to more than 73,200 electronic journals and magazines available from 110 online databases. A good number of these are provided through SUNYConnet, an initiative to share library collections and services across most of the 64 SUNY campuses.

Also located in the Hinkle Library is the Jean B. Lang Western New York Historical Collection, a unique repository of historical and genealogical materials that focuses on Alfred, Allegany County, and western New York State. Both the Alfred and Wellsville campus libraries provide public access computers and printers. Laptop users in Alfred may take advantage of the wireless connectivity in the library, using their own laptops or those available for loan. Both the Alfred and Wellsville campus libraries are accessible to those with disabilities, and are open to the general public at no charge.

ATHLETICS, RECREATION, AND PHYSICAL EDUCATION
Alfred State Athletics offers intercollegiate sports and has great facilities for exercise or a quick game of pick-up. Whether you want to compete or just stay in shape, Alfred State has something for all Pioneers.

The Athletic Department sponsors 20 NCAA Division III intercollegiate varsity sports:

Women's sports: Basketball, Cross Country, Soccer, Lacrosse, Softball, Swimming & Diving, Track & Field (Indoor/Outdoor), and Volleyball, and Wrestling

Men's sports: Baseball, Basketball, Cross Country, Football, Lacrosse, Soccer, Swimming & Diving, Track & Field (Indoor & Outdoor), and Wrestling

Alfred State is an NCAA Division III member; therefore, no consideration of athletic ability or athletic accomplishments will be considered in determining students’ scholarship eligibility or financial aid packages. With the move to NCAA, incoming first-year students who wish to participate in intercollegiate athletics must be admitted into a four-year program OR have a 75 or 2.1/4.0 high school average to be immediately eligible their first semester. Incoming transfer students should consult the Alfred State Athletic Department for information on athletic eligibility requirements.

Alfred State has options for students of the college, faculty/staff, and members of the community to reach their fitness goals. The Pioneer Fitness Center located in the Pioneer Center houses cardiovascular equipment, resistive weight equipment, and a free weight area while the Orvis Strength and Conditioning Room houses free weights and power racks. The MacKenzie Fitness Center also houses cardiovascular equipment. The Orvis Strength and Conditioning Room houses a student athlete fitness facility. Managed by a full-time certified director, the centers are staffed at all times to ensure a safe and effective workout for all participants regardless of fitness level.

The Orvis Activities Center is also home to the swimming pool. Open swimming hours are also available daily for student or community use.
Physical education classes are also offered by the Athletic Department. Each semester, a variety of physical fitness, sport classes, and health and wellness classes are taught.

**AUXILIARY CAMPUS ENTERPRISES AND SERVICES**

Auxiliary Campus Enterprises and Services (ACES) is a not-for-profit corporation responsible for many services on campus. A board of directors consisting of faculty, students, and administrators governs activities of the corporation. ACES manages campus food service, special events and catering, snack bars, campus stores, food/beverage and laundry vending services, Lake Lodge, cable TV services, transportation services, and accounting and bookkeeping services.

**DINING SERVICES**

Students living in residence halls are required to have a meal plan. Students living in the Townhouses or a MacKenzie apartment have the option to waive that requirement. Individuals may elect a program based on their specific needs from a variety of meal plan options as described in promotional material appearing on college websites and the student billing. Participants are allowed considerable flexibility, as they may eat at either dining hall, the food truck, or any other retail dining location by using a meal swipe, dining dollars, or campus spending account funds. All accounts are maintained and managed by ACES through their student campus ID.

**CIVIC ENGAGEMENT & STUDENT LEADERSHIP PROGRAMS**

The Center for Civic Leadership is here to inspire involvement, facilitate learning, and help students make a positive difference in their community within and beyond campus. We work together with community partners to create opportunities to identify and address community challenges together - here in Alfred, regionally, and beyond. Regardless of your major, interests, and background, you will find opportunity to bring your learning to life by serving others. Our vision is for you to develop into a leader equipped to make a positive difference in the world.

We are located within the Student Leadership Center - a building dedicated to inspiring involvement in community and leadership opportunities. Students can plug into alternative fall/spring break trips, disaster relief trips, community service days, and other special events on and off campus. Most student clubs and organizations are involved in civic engagement which can be a great way to get involved.

Civic Leadership also supports students wishing to enhance their leadership skills through special events, programming, and honor societies. Leadership development can enhance your student experience and build the skills and experience that employers are seeking. Highlighted below are opportunities to get involved:

- National Society of Leadership and Success: NSLS is the nation’s largest leadership honor society and provides a step-by-step program for members to build their leadership skills. Upon completion of the program, members receive their leadership certificate and take their place among the top student leaders at their campus and across the country.
- SUNY Leadership Academy: Competitive program offered annually to several students to engage in learning alongside other SUNY students.
- Leadership Suites: Competitive space available for clubs/organizations that demonstrate a high level of civic leadership focused on a specific community cause.
- Leadership Micro-credential: This self-paced, non-credit online program is offered without cost. Successful completion results in a digital badge that can be displayed online.
- Leadership Series: Regularly scheduled speaker series highlights alumni, employers, and faculty/staff who focus on relevant topics.

Our commitment to civic engagement is deeply embedded in a hands-on approach to education through project-based learning experiences. By combining real-world learning situations with community engagement, Alfred State students make significant contributions to people and communities around the world. Annually, students contribute tens of thousands of service hours through volunteering, civic leadership, and workforce-ready knowledge to communities in need. Join others in being part of the solution. Contact civicengagement@alfredstate.edu to learn more.

**OFFICE OF STUDENT ENGAGEMENT**

The Office of Student Engagement cultivates well-rounded students by preparing them to stand apart in a competitive workforce upon graduation. Consistent with the college’s mission of preparing involved students in a caring community, the Office of Student Engagement supports, encourages, and challenges students by providing opportunities for hands-on growth through activities in the following areas:

- Curriculum-based event opportunities
- A diverse offering of student clubs and organizations
- Indoor and outdoor recreational activities such as our rock-climbing wall, tubing hill, and recreational trips
- Social programming and intercampus event support
- Maintenance of a vibrant Student Leadership Center

Through these opportunities, the Office of Student Engagement enhances the student experience, while contributing to enrollment, student retention, and student success.

**NEW STUDENT ORIENTATION**

New Student Orientation is an important part of each incoming student’s experience here at Alfred State.

Orientation consists of interactive, engaging presentations and activities that help acclimate all incoming students to our campus community. New students and their families will hear from campus departments such as Admissions, Academics, Health and Wellness, Residential Life, Athletics, and more. Students will also receive their first-semester class schedule during each Orientation session.

**PERFORMING ARTS**

Performing Arts at Alfred State has a long and successful history. Students have the opportunity to engage their talents in drama, instrumental music, and vocal music organizations. Each student brings unique experiences and ideas to the club, building an exciting and ever-evolving creative atmosphere. As student-run organizations, there are many opportunities to contribute to each group and to experience first-hand the rewards of your involvement and contributions.

Within each group you can find multiple ways to participate in college and community events. Members of Drama Club may participate as actors, actresses, stage managers, and technical theatre designers and operators, to name a few. Vocalists have the opportunity to participate in a large choral group setting or in a smaller individual setting, as well as an a capella ensemble. Instrumental music allows instrumentalists to perform in concert, jazz, brass, woodwind, percussion, and pep ensembles.
PIONEER STUDENT UNION - WELLSVILLE

The Pioneer Student Union (PSU) is a space that allows for recreation, socialization, and an opportunity for students to benefit from professional resources located within the building. Activity options available to students include: billiards, ping pong, shuffleboard, foosball, horseshoes, and many other games. There are also opportunities to improve physical and mental well-being, as the building houses a full gymnasium with six basketball hoops, a racquetball court, and weight room.

The MindSpa in PSU is a space solely dedicated to stress reduction. The spa allows for quiet relaxation in a room equipped with massage chairs and other calming amenities. Also at the PSU, students may seek out medical attention or be connected with counseling services, as the Health and Wellness Services Office is located on the first floor of the building. In addition to services housed within the PSU, professional staff there are able to provide students with linkage and referral to any of the other offices located in Wellsville or Alfred based on the needs of the student.

Students may also use the PSU as a quiet study space, as there is a separate computer lab with network-connected computer stations. The Pioneer Student Union is utilized by students across all majors on the Wellsville campus and serves as a space dedicated to providing experiences guided by Alfred State Student Affairs initiatives.

RESIDENTIAL LIFE

Residential Life believes that a student’s residence hall experience should be as individually suited to the student’s needs and interests as possible. On this basis, Alfred State offers a lifestyle approach to residence hall living. Within the limits of college policy, various lifestyle areas are offered, and students may choose the area which best suits them. The following styles are located in designated areas of certain residence halls:

No Smoking – All of our residential facilities are smoke-free.

24 and Over Lifestyle – This lifestyle option was created to address the special needs of nontraditional students. Available in select areas throughout campus.

Bachelor’s Degree Lifestyle – Available in MacKenzie South only. This lifestyle option provides an opportunity for students in the bachelor programs to reside together.

First-Year Housing – Burdick Hall, Braddon Hall, Shults Hall and Peet Hall only house first-year students. Limited space available in MacKenzie South and Main Gate A.

Gender Inclusive Housing – This option allows individuals who are not the same gender, who may identify outside the gender binary (male or female), who may be questioning aspects of their sexuality/gender, or who may be in the process of (or completed) a gender transition, to live in an environment that is safe and supportive. This living space, open to the entire campus community, is requested through an application process, and selected on a yearly basis by a committee dedicated to the oversight of that community.

Substance-free Lifestyle – This lifestyle is designed for the student interested in living within a tobacco-free and alcohol-free area. All guests and visitors are also required to abide by the substance-free lifestyle while visiting the area. Each student signs a contract pledging to remain substance free while living in this area. If you are not committed to the restrictions, this lifestyle is not for you.

Quiet Study – Members of this lifestyle all agree to uphold mandatory 24-hour quiet hours. Television and music are allowed in this area, but must be kept at a minimal and respectful volume. This lifestyle is available in certain suite-style and corridor-style residence halls.

Pet Friendly – Students may bring a family pet to live with them in selected areas on campus; dogs (under 40 pounds when fully grown), domestic cats, and rabbits. Pet registration takes place at the start of the fall and spring semester.

Townhouse and MacKenzie Commons Apartments – Apartment-style living for sophomores, juniors, and seniors. Services available in the residence halls include laundry and vending machines, kitchenette, study areas, and computer labs.

Our Four Living Learning Communities:

Architectural Living and Learning Community (ALLC) – Baccalaureate architecture students can study, live, work, and engage with their faculty, all in their own residence hall (MacKenzie South). The ALLC provides access to architecture work labs, study space, and a gallery.

Creative House, LLC (DLC) – Designed specifically for students in the digital media and animation or graphic and media design programs, this Living Learning Community (LLC) features studio work spaces for its residents. Students live and learn with like-minded colleagues in a space made for productive and creative collaboration. With large screen monitors, a production studio, a space to screen work, and other extras, students who live in the Creative House LLC are prepared to hit the ground running on their creative projects.

Nursing Living Learning Community (NLLC) – First-year nursing students have the opportunity to become part of a community within Burdick Hall dedicated to helping new students transition into the nursing curriculum. In addition to participating in a cohort seminar led by nursing faculty within their residence hall, the NLLC provides an atmosphere with enhanced opportunities to learn from and connect with their faculty.

Summer Prep Academy Living and Learning Community (SPA) – Students accepted into the EOP program will attend Summer Prep Academy four weeks throughout July and August. These first-year students will have the option of remaining in their summer housing building without the stress of relocating to another residence hall room for the fall semester. The SPA Living Learning Community will allow SPA students to continue to live with their EOP cohort and maintain regular contact with their summer SPA mentors throughout the academic year.

ON-CAMPUS HOUSING REQUIREMENTS/CAMPUS WAIVER PROCEDURES

Be advised that a prior felony conviction may impede a student’s ability to reside in campus-administrated housing. Felony conviction will be considered on an individual basis. Students may be required to submit court records and other information as required by SUNY Board of Trustees Policy to be used in assessing their eligibility for on-campus housing.

SUNY – Board of Trustees’ Policy

Every student in full-time attendance at a state-operated unit of the university, other than married students or students residing with a parent(s), shall be required to live in a residence hall maintained and operated by such a unit or to have the permission under such provisions as may be made therefore by the chief administrative officer of such unit to live off campus.

Local Campus Policies
I. Waivers

Any full-time student who wishes to live off campus must request a waiver of the Board of Trustees’ Policy. This waiver form is available from the Office of Residential Services and/or online. All waiver requests will be considered in accordance with the SUNY policy and the Board of Trustees’ intent to maximize the educational process. Certain conditions, if met, assure an individual of permission to live off campus. These specific exceptions are as follows:

General Eligibility:

• Married students
• Students providing direct care for a legal dependent
• Students 23 years of age or older
• Students already possessing a baccalaureate degree (reviewed for verification)
• A student residing with a parent, grandparent, or court-appointed legal guardian at that person’s permanent home address who is commuting fewer than 50 miles one way (notarized statement and supplemental statement required).
• Honorably Discharged Veterans of the US Armed Forces: DD-214 must be provided as documentation.
• Meet Academic Eligibility criteria as outlined in the policies governing waiver eligibility. *Blackboard video required
• Internship – Academic adviser confirmation required. Send email to reslife@alfredstate.edu. *Blackboard video required

Academic Eligibility: Fourth-year students in baccalaureate programs are eligible for off-campus status subject to the following minimum requirements: good academic standing with at least 90 credits and minimum cumulative grade point average of 3.0 and no current disciplinary status through the time of off-campus occupancy. Or, fifth-year students in a five-year program must be in good academic standing with at least 120 credits.

II. Determination of full-time student status

• A full-time student is an individual enrolled for 12 or more credit hours (including credit hours added after registration day).
• Students initially registered in a part-time status who add sufficient courses to attain full-time status are subject to campus housing policies unless a waiver is approved.

III. Waiver procedure

• Waiver processing will begin April 1 or as soon as predictable thereafter for fall semester consideration. Waiver processing will begin Nov. 1 or as soon as predictable thereafter for spring semester consideration.
• The License for Residence is a full academic year agreement and takes precedence over any waiver application. Interim requests for release are processed according to current campus policy.
• At the time a housing waiver application is submitted and approved, any predetermined housing assignment is released.
• Initial Request: Any individual who wishes to live off campus must submit their request in writing to the Office of Residential Services. The request should note the basis for requesting a waiver. If the reason is not one of the exceptions, a detailed explanation of the reason(s) must be included.
• Decisions based upon health or psychological grounds will be reviewed through Accommodative Housing. Any student who is requesting off-campus housing based on these grounds should provide corroborating documentation through either Health and Wellness Services or email documents to accommodate@housing@alfredstate.edu for review.
• Review: The assistant director of college housing or their designee will review all requests and, with the intent of the Policy of the Board of Trustees and the stated purpose of the college policy, render a decision. This decision will be given within five (5) business days, when possible. Note: Missing documentation will delay processing.
• Appeal: A denied waiver may be appealed to the senior director of residential services. The appeal must be in writing and address the reason(s) given for the denial of the initial request. The appeal must be sent within five (5) business days of receipt of the initial decision.
• Appeal Decision: All appeals will be reviewed in accordance with the intent of the Policy of the Board of Trustees and the stated purpose of the college policy. A written decision will be given within five (5) business days, when possible. There is no appeal of the senior director’s decision.

Greek Organization Eligibility: Information relative to organization eligibility is available from Residential Services and Student Engagement. Individual members of eligible Greek organizations may apply for a housing waiver if all criteria are met:

• Individual members must possess a 2.50 cumulative grade point average and a 2.50 semester grade point average (prior semester) at the time a housing waiver is requested.
• Individual members may not be on any disciplinary sanction and must have completed any special conditions as a result of a past sanction (i.e., alcohol assessment, formal waivers, community restitution projects, etc.) at the time a housing waiver is requested.
• The organization in which they are a member maintains continuing authorization for off-campus, communal residency.
• All other reasons will be reviewed according to the Reasons for Waiver stated on the form and will be considered according to uniformity and intent of the Board of Trustees’ policy. Submission of false or intentionally misleading statements may result in waiver revocation, campus disciplinary sanctions, and other penalties. All waivers are granted for the academic year or the remaining portion thereof. Each student must resubmit a waiver application each year they are in attendance.

STUDENT LEADERSHIP CENTER

The Student Leadership Center serves as a comprehensive, centralized connection point for students, staff, and faculty to access leadership opportunities on campus and in the greater Alfred community. The Student Leadership Center, located in the center of campus, is the premier place for students to gather throughout the day in a "one-of-a-kind" designed space. The Student Leadership Center places every student who enters the facility in the middle of a hub of activity that allows students from different majors, ages, and different levels of community involvement to be in direct contact with each other; an "in your face" flavor of student engagement. The Alfred State leadership experience is an interactive process that develops students who are committed to lifelong learning, community engagement, and having a positive impact on the Alfred State campus and in the greater community and beyond. We believe that every student has the potential and the capacity to serve their community through civic engagement.
WEEK OF WELCOME

Each August, new students arrive on campus up to a week before classes begin. Here at Alfred State, we can’t wait to welcome them to campus with a week just for them! WOW is a week designed with new students in mind; we want this time to be fun and engaging, and more than anything, we want to help students feel at home. For more information on New Student Orientation, please visit www.alfredstate.edu/orientation.
Academic Information

Alfred State offers over 80 majors in programs based in the arts and sciences, applied technology, and management and engineering technology.

Administratively, the college is broken down into three schools:

- School of Arts & Sciences
- School of Architecture, Management & Engineering Technology
- School of Applied Technology

Faculty and staff focus on programs within their areas of expertise. Depending on the major, each student will find the majority of courses taught within a particular area of study. However, most students will also be required to take some courses within other disciplines.

INTERNSHIPS AND CAREER DEVELOPMENT

The time to begin thinking about your career is in your first year! Career development assistance begins with the identification of career goals and the development of a plan to meet those goals. Plans frequently include résumé assistance, identification of available experiential education opportunities, individual employment/career counseling, interview preparation, and workshops.

Students have the opportunity to meet with employers at fall and spring career fairs, information sessions, and on-campus interviews.

Job/Internship opportunities are posted daily for current students and alumni on the Career Development webpage.

ACADEMIC MINORS

An academic minor at Alfred State is an optional program of study available to matriculated baccalaureate students. A minor may be used to complement the major course of study, broaden and enhance career opportunities, gain expertise in an area of interdisciplinary studies, or provide an in-depth study in a subject of special interest.

A minor is described as a thematically related set of academic courses, consisting of no fewer than 15 credit hours. A minor will be officially recorded on the transcript when a student has satisfied all requirements for the major baccalaureate program and the minor, and has attained a 2.50 grade point average in the courses approved for the minor.

General Considerations: Minors will likely require courses taken in sequence, and may necessitate student planning within their first year. Financial Aid Considerations: Courses that only apply to a minor do not meet financial aid eligibility requirements for Federal or New York State Aid. If a course applies both to the minor and meets a degree requirement (such as an elective), financial aid can be used. Minor courses can fill General Education, LAS and elective requirements within a degree program.

Field of Study Minors

Field of Study minors allow students to complete a course of study in an additional content area of specialization. The course of study is primarily within a single department but may include closely related courses from another department. Field of Study minors include:


Interdisciplinary Minors

These minors are developed to focus on contemporary areas of interest that will enhance students’ understanding of the world and their effectiveness in their future professional lives. These minors are usually designed by a committee of interested faculty and are often multi/interdisciplinary in scope combining courses from multiple departments. The courses in these minors may be General Education and LAS courses. Athletic Coaching, Building Technology, Crime Scene Investigation Specialist, Global Studies, Interior Design, Sustainability, and Urban Design are interdisciplinary minors.

Students wishing to pursue minors should first discuss options with their advisers and meet with the department chair where the minor resides to determine specific course requirements. Students must complete a Minor Declaration Form to declare a minor. To be awarded the minor, students must apply for the minor on the degree application form.

EMPLOYMENT AND CONTINUING EDUCATION

The Career Development Office surveyed the 910 members of the May 2022 graduating class. A 72 percent college-wide response was realized from the survey. Alfred State Technology Services generated the statistical information utilized in the preparation of this report in May 2023:

- 78 percent employed after graduation
- 93 percent employed in their field of study
- 20 percent continued their education
- Combined employment and continuing education rate of 98 percent

CROSS-REGISTRATION

Alfred State students may cross-register with other SUNY or Rochester Area Consortium Colleges. Cross-registration is available for undergraduate courses during the Fall or Spring terms only. Students may cross-register for a maximum of six credit hours per semester and may not exceed 19 credits total between the host and home institutions. More information on how to apply is available at [www.alfredstate.edu/transfer-students/cross-registration](http://www.alfredstate.edu/transfer-students/cross-registration).

COURSE CANCELLATION POLICY

Alfred State reserves the right to cancel any course without prior notice due to insufficient enrollment or unforeseen circumstances.
STUDENTS UNABLE TO ATTEND CLASSES
1. No person shall be expelled from or be refused admission as a student for the reason that he or she is unable, because of religious beliefs, to attend classes or to participate in any examination, study or work requirements on a particular day or days.
2. Any student who is unable, because of religious beliefs, to attend classes on a particular day or days shall, because of such absence on the particular day or days, be excused from any examination or study or work requirements.
3. It shall be the responsibility of the faculty and of the administrative officials to make available to each student who is absent from school, because of religious beliefs, an equivalent opportunity to make up any examination, study or work requirements which may have been missed because of such absence on any particular day or days. No fees of any kind shall be charged for making available to the said student such equivalent opportunity.
4. If classes, examinations, study, or work requirements are held on Friday after 4 p.m. or on Saturday, similar or makeup classes, examinations, study or work requirements shall be made available on other days, where it is possible and practicable to do so. No special fees shall be charged to the student for these classes, examinations, study, or work requirements held on other days.
5. In enforcing the provisions of this section, it shall be the duty of the faculty and administration to exercise the fullest measure of good faith. No adverse or prejudicial effects shall result to any students who avail themselves of the provisions of this section.
6. Any student who is aggrieved by the alleged failure of any faculty or administrative officials to comply in good faith with the provisions of this section shall be entitled to maintain an action or proceeding in the county Supreme Court.

LEAVE OF ABSENCE POLICIES
Students who need to interrupt their studies during a semester already in progress or for a future semester can protect their matriculated status by applying for a leave of absence for up to one year. Leaving without officially withdrawing from college may result in the student’s receiving a grade of "F" for all their course work and may result in an academic dismissal.

WITHDRAWALS
Students who need to withdraw from the college before the end of an academic term must officially withdraw from classes. Leaving without officially withdrawing from college will result in the student’s receiving a grade of "F" for all their course work and may result in an academic dismissal.

CURRICULUM CHANGES
Continuing students will use a Degree Program Change Form to switch from one program to another or to include or exclude previously earned credits into a new program. Once the decision has been made to change programs, students must notify both their present department chair and the department chair of the new program. Both department chairs will sign the request and the new department chair will specify which classes to exclude from the new program. Only courses not required in the new program may be excluded. The form must be received and processed by the Student Records and Financial Services Office. Students may not process a curriculum change after the fourth week of classes for the current semester. New students who wish to change their program after applying for admission but prior to enrollment must do so in writing to the Admissions Office.

COURSE AUDITING
Course auditors must secure permission to take a class from the instructor of the class. Approval forms are available from the Student Records and Financial Services Office or can be printed from the portal at my.AlfredState.edu/forms. The approved form must be returned to the Student Records and Financial Services Office before the last day to register.

Course auditors will be permitted to audit courses on a space-available basis. Enrolled students receiving credit will be given priority. Auditors will attend without credit or grade, will attend without formal recognitions, and will not be required to meet the course requirements. Audited courses are not eligible for financial aid. Auditors are responsible for all associated costs of the course. A student may retake such a course for credit in a subsequent semester.

Course auditors who are currently enrolled at the college will not be charged tuition. A nonrefundable $50 registration fee will be charged to auditors who are not enrolled at the college. Special auditors, individuals over the age of 60, are invited to audit classes with no registration fees. Texts and/or class materials are at the expense of the auditor. Contact the Student Records and Financial Services Office for more information.

ADD/DROP
Students wishing to add or drop a course after the start of classes must submit the appropriate Course Change Notice form with the required signatures to the Student Records and Financial Services Office. Courses will not be dropped by simply not attending classes. Additional information may be found on the Course Change Notice form available from the student’s adviser or department chair. If classes are not dropped appropriately, a grade of "F" will be received for the course. Dropping below full-time enrollment may affect current or future financial aid eligibility. Contact the Student Records and Financial Services Office for more information.

STUDENT PORTAL (MY.ALFREDSTATE.EDU)
Students will use the portal to view and update information, as well as perform a number of functions. Functions and information available on the student portal include:

- Register for classes
- View/print student schedules
- Apply to graduate
- Check for holds
- View interim and final grades and academic standing
- View unofficial academic transcript
- View financial aid eligibility and complete outstanding requirements
- View and update personal information
- View and process the bill

DEVELOPMENTAL/REMEDIAL COURSES
Per SUNY policy, courses designated developmental/remedial shall not be awarded academic credit (noncredit) and thus cannot be applied as credit toward a college degree. Developmental/remedial courses and grades in such courses are designated with an asterisk (*).
STUDENT DEMOGRAPHIC INFORMATION

Students must update their personal/demographic information electronically via my.AlfredState.edu/registration. This can be done by logging into the portal and selecting "Update Personal Information." Students should review their mailing address, telephone number, emergency contact information, and marital status. Students who wish to change their legal name or correct their social security number must present legal documentation to the Student Records and Financial Services Office. Students can add a preferred first name, personal pronoun, and gender identification.

GRADUATION REQUIREMENTS

Individual programs are listed in the college catalog and these listings include both the general and technical components necessary for completion of degree requirements. All programs must meet the Middle State Commission on Higher Education (MSCHE) General Education requirements and all, except the AOS degree programs, have Alfred State College minimum requirements that must be met in the Liberal Arts and Sciences. Furthermore, with the exception of AOS and AAS degree programs, all programs have specific SUNY General Education requirements. The Alfred State General Education program allows students to develop the competence and skills necessary to become civic minded, globally aware, ethical and productive employees and citizens in today’s world. The program focuses on the MSCHE general education expectations, SUNY General Education requirements, the ASC mission/ core values/principles of community, and Institutional Student Learning Outcomes embedded within each degree program. For more information regarding the specific graduation requirements for your program, contact your adviser or department chair. Further information regarding SUNY/ASC General Education requirements as well as the list of courses approved for General Education and a list of courses approved for Liberal Arts and Sciences can be found online.

In addition, all students who plan to graduate must apply for graduation online through BannerWeb or must submit a Degree Application Form to the Student Records and Financial Services Office. Online access and forms are available to all students during restricted times throughout the semester in which they expect to graduate.

Students are expected to meet regularly with their academic advisers who will assist with academic problems and monitor progress toward satisfaction of graduation requirements for the degree. Degree audits can be viewed at my.AlfredState.edu/registration.

It is important for students to know the current graduation requirements for their program. Per Academic Regulation 102, “Each individual student has ultimate responsibility for understanding and adhering to each of these regulations and for meeting the requirements for graduation as stated herein.” Please see Academic Regulation 200 Graduation Requirements for complete information. Further, students who readmit must comply with degree requirements at the time of readmission. Students should direct specific questions to their advisers/department chairs.

The graduation eligibility of expected graduates is checked and finalized by academic departments. Final graduation lists are submitted to the registrar by academic departments per the published End of the Semester Timetable.

ACADEMIC TRANSCRIPTS

Transcript ordering options are available at www.alfredstate.edu/transcript-ordering-options. Alfred State cannot release copies of a student’s transcript from other institutions. These must be requested from the schools previously attended.

VETERANS INFORMATION

If you are eligible for a GI Bill benefit, you should provide the Veteran Certifying Official in the Student Records and Financial Services Office with a copy of your Certificate of Eligibility or Discharge Form from Active Duty (DD214). An enrollment certification will be submitted to the U.S. Department of Veterans Affairs after you provide either of these documents and register for classes. If you have not applied for your GI Bill benefit you should apply on the VA.gov website. If you do not have web access, you can contact the U.S. Dept. of Veterans Affairs at 888-442-4551 for an application. You can also complete this step at VA regional office. Alfred State College is a participating member of the Yellow Ribbon Program.

National Guard students may be eligible for both state and federal benefits. Contact the Alfred State College Veteran Certifying Official for more information. ROTC should contact the Student Records and Financial Services Office to discuss transfer credits of courses and possible scholarships through their program.

The following procedures to monitor attendance have been approved by the State Education Department Bureau of Veterans’ Education:

Veterans are required to attend classes in order to receive educational benefits.

Veterans receiving benefits must complete the VA School Certification form each semester they wish to be certified for benefits. Furthermore, veterans must contact the certifying official in the Student Records and Financial Services Office to ensure paperwork is properly completed whenever they add or drop a course, change their major, withdraw from the college, and/or are enrolled in courses that have nonpunitive grades (“S” or “U”).

Alfred State permits any student receiving Chapter 33 or Chapter 31 benefits and participate in coursework during the period for which a Certificate of Eligibility, Statement of Benefits, or VAF 28-1905 is received.

Alfred State will not impose any penalty, including the assessment of late fees, the denial of access to classes, libraries, or other institutional facilities, or the requirements that a covered individual borrow additional funds because of the individual’s inability to meet his or her financial obligations to the institution due to the delayed distribution of funding from VA under Chapter 33 or 31.

TUTORING SERVICES

Alfred State offers free peer tutoring services for most courses. Peer tutors are students who have earned a grade of “A” or “B” in a course and have received special training.

Professional Writing Tutor

Professional tutoring is available in writing and grammar for any course offered at Alfred State.

Math Lab

Many student proctors and members of the Math and Physics Department volunteer in the math lab.

Professional ESL Tutor

A professional ESL tutor is available on a part-time basis.
ARTICULATION AGREEMENTS
An articulation agreement is a formal agreement between Alfred State and another institution documenting the transfer pathway for a specific degree program. A list of active articulation agreements can be found at [www.alfredstate.edu/transfer-students/articulation-agreements](http://www.alfredstate.edu/transfer-students/articulation-agreements).

Note: Alfred State graduates from any two-year associate degree program (AAS, AA, AS, and AOS) may enter directly into the corresponding baccalaureate degree program.

DEAN’S LIST
To be named to the semester dean’s list, a student must have taken a minimum of 12 credit hours of course work and have earned at least 3.5 semester index.

HONOR SOCIETIES

**CHI ALPHA EPSILON NATIONAL HONOR SOCIETY**
Chi Alpha Epsilon (XAE) is a national honor society with membership offered through local campus chapters to eligible students. Full-time students who hold a 3.0 cumulative GPA for two consecutive semesters and who were admitted to the college through developmental / opportunity programs are eligible for membership.

**MU ALPHA THETA NATIONAL HONOR SOCIETY**
Mu Alpha Theta is a National High School and Two-Year College Mathematics Honor Society dedicated to inspiring a keen interest in mathematics, developing strong scholarship in the subject, and promoting the enjoyment of mathematics in high school and two-year college students.

**PHI KAPPA PHI NATIONAL HONOR SOCIETY**
Phi Kappa Phi is the nation’s oldest and most selective multidisciplinary collegiate honor society initiating more than 30,000 members a year on 300 campuses in the United States and the Philippines. More than 1.25 million members have joined its ranks since Phi Kappa Phi’s founding in 1897 at the University of Maine. It is a global network of the best and brightest, a community of scholars and professionals building an enduring legacy for all generations. Phi Kappa Phi membership is earned. Admission is invitation-only and requires nomination approval by a chapter. Phi Kappa Phi recognizes and promotes academic excellence in all fields of higher education and engages the community of scholars in service to others.

**PHI THETA KAPPA INTERNATIONAL HONOR SOCIETY**
Phi Theta Kappa Society is the only international honor society serving two-year colleges. It was founded in 1918 and has more than 1,275 chapters worldwide. Alfred State’s chapter was chartered in spring 1991. The goal of Phi Theta Kappa is to recognize and encourage scholarship among associate degree students by providing opportunities for leadership, fellowship, and service. To qualify for membership in this international honor society, candidates must have earned at least 24 semester hours of credit at Alfred State maintaining a GPA of 3.5 or above, or a student must have earned at least 12 semester hours of credit at Alfred State maintaining a GPA of 3.75 or above.

**PSI BETA NATIONAL HONOR SOCIETY**
Since 1987, Alfred State has been a charter member of Psi Beta, the National Honor Society in Psychology for Community and Junior Colleges. Annually, the Alfred State Department of Social and Behavioral Sciences has inducted members into this society, which includes more than 140 chapters and 12,000 members nationwide. To be eligible, candidates must possess both an interest in and have completed nine credit hours in psychology (taken at Alfred State). They must also possess a 3.0 GPA in these courses and a 3.0 GPA overall. In addition, they must also have the recommendation of a Social and Behavioral Sciences faculty member. If the inductee is transferring to a four-year college that has a sister chapter of Psi Chi, the member is usually enrolled in that society with only a letter of introduction from the Psi Beta adviser.

**RHO ALPHA SIGMA NATIONAL HONOR SOCIETY**
The National Residence Assistant Honor Society exists to recognize the outstanding efforts and achievements of the student Resident Assistant staff that go above and beyond an institution’s expectations. The Greek letters for Rho Alpha Sigma were chosen to correspond to Residence Advisor/Assistant Service. Rho Alpha Sigma offers the opportunity to promote excellence, leadership, community and service within the Resident Advisor cadre, campus, and community. SALUTE Veterans National Honor Society

**SALUTE VETERANS NATIONAL HONOR SOCIETY**
SALUTE is the first national honor society established for student veterans and military members in 2-year and 4-year institutions of higher education. The SALUTE acronym stands for service, academics, leadership, unity, tribute and excellence. It creates the foundation for the SALUTE honor society. SALUTE recognizes the hard work and dedication of those students. Students inducted into SALUTE are from every branch of the armed forces, veterans and active, who are excelling in higher education.

**SIGMA ALPHA PI NATIONAL HONOR SOCIETY**
Founded with a passion for building leaders who make a better world, Sigma Alpha Pi — primarily known as the National Society of Leadership and Success (NSLS) — is the nation’s largest leadership honor society. The Greek letters of Sigma Alpha Pi (#A#) stand for Success, Action and Purpose — Success coming from continual Action towards one’s Purpose. While Sigma Alpha Pi (NSLS) uses Greek letters to represent itself, it’s not affiliated with Greek life. Students are selected by their college for membership based on either academic standing or leadership potential.

**SIGMA LAMBDA CHI INTERNATIONAL HONOR SOCIETY**
Sigma Lambda Chi International Honor Society provides recognition to outstanding students in 4-year and graduate construction management curricula. Membership is offered to students that have completed two years of college, who rank academically in the upper 20% of their program, have a minimum of one season of construction industry experience, and participate in extracurricular activities at their campus.

**SIGMA TAU EPSILON NATIONAL HONOR SOCIETY**
To qualify for membership in this scholastic honor society, a chapter of the National Vocational Technical Honor Society, a person must be a full-time student with a 3.5 cumulative index and be enrolled in an applied technology program. Students are elected by members of the society.
TAU ALPHA PI NATIONAL HONOR SOCIETY

The Tau Alpha Pi National Honor Society was founded in 1953 and is now chartered at 133 colleges and universities. Its purpose is to recognize desirable personal and intellectual qualities of engineering technology students. Student nominees must have 30 credit hours with at least a 3.5 quality point average index in an Engineering Technology Accreditation Commission of the Accreditation Board for Engineering and Technology (ETAC/ABET) accredited program.

ROTC

The US Army ROTC program at Alfred State is an affiliate of the Seneca Battalion program headquartered at nearby St. Bonaventure University.

TRANSFER CREDIT:

The transfer credit procedure is initiated in the Student Records and Financial Services Office under the coordination of the Transfer Advisor. Courses completed at an accredited institution recognized by the Department of Education and that can be applied toward graduation requirements at Alfred State will be reviewed for transfer approval by the department chair in which the course resides. Students are notified of their approved transfer credit through their Alfred State email account once they have been accepted for admission and an official college transcript is reviewed. More information on transfer credit is available at www.alfredstate.edu/transfer-students/transfer-credit.
ACADEMIC DEPARTMENTS BY SCHOOL

School of Arts and Sciences
- Agriculture and Veterinary Technology
- Allied Health
- English and Humanities
- Individual Studies
- Mathematics & Physics
- Nursing
- Physical and Life Sciences
- Social and Behavioral Sciences

School of Architecture, Management & Engineering Technology
- Architecture and Design
- Business
- Civil Engineering Technology
- Computer and Information Technology
- Digital Media and Animation
- Mechanical and Electrical Engineering Technology

School of Applied Technology
- Automotive Trades
- Building Trades
- Culinary Arts
- Electrical, Machine Tool, and Welding Technology

Feel free to contact the department chair, program coordinator, or the dean's office at any one of our three schools if you have additional questions regarding academic programs.
Agriculture students participate in hands-on experiences working with crops, plants, animals, facilities, and equipment. Graduates leave our programs with a true feel for the industry they plan to enter. Veterinary technology students are prepared to sit for the Veterinary Technology National Exam (VTNE) through intensive lecture and laboratory courses. Passage of this exam is required for licensure as a veterinary technician. Veterinary technology students are also required to complete a 240-hour preceptorship (work experience), which gives them real, practical experience between completing their first year and graduation. Students have many opportunities to help tell the story of agriculture at college-hosted events for elementary and high school students, educators, and the general public. Through the agricultural and veterinary technology clubs, students help organize dairy and livestock shows, consignment sales, judging competitions, agricultural skills contests, tours, and other educational events.

MISSION
The Department of Agriculture and Veterinary Technology will facilitate learning and engage communities in the practices of sustainable food production and animal welfare. We will develop graduates who will sustainably and profitably manage animals and natural resources for a secure society.

FACILITIES
- **Agriculture Science Building** – A construction project will begin shortly to renovate this building. This facility contains laboratories specializing in soils, botany, and animal anatomy and physiology. A 5,300-square-foot greenhouse produces hydroponic vegetables, and herbs and contains a tropical room, desert room, and plant propagation areas.

- **800-acre college farm** – The farm serves as a field laboratory to provide practical instruction in production agriculture and to produce feed for the college’s livestock. It is home to registered dairy and beef herds, horses, swine, poultry, sheep, and meat goats used for instruction in animal care and management. The farm is also used for soils, botany, feeds, and nutrition, and field and forage crops classes. Students have the opportunity to work on the farm as interns. Other facilities there focus on high-tunnel vegetable production, row crop production, and agroforestry practices.

- **Center for Organic and Sustainable Agriculture (COSA)** – The center, located at the college farm, features an organic dairy herd with which students gain experience in management intensive grazing and a robotic milking system. Other facilities include a 300-acre farm in Sonyea, where we produce forages.

- **Veterinary Technology Center** – This state-of-the-art facility includes surgical and radiography laboratories, a classroom area for Introduction to veterinary technology, animal health care and laboratory animal management laboratories, and animal housing facilities.

DEPARTMENT PROGRAMS
- Agribusiness Management (BTech)
- Agricultural Automation and Robotics (AAS)
- Agricultural Business (AAS)
- Agricultural Technology (AAS)
- Veterinary Technology (AAS)
The Allied Health Department at Alfred State provides students with a strong education in a wide range of allied health disciplines through online and on-campus curricular offerings. Allied Health consists of a diverse range of specialized occupations that fall outside the traditional medical and healthcare professions like doctors, nurses, and dentists. Some careers involve direct care of patients, usually as a member of a multidisciplinary healthcare team, and others involve office work and administration. The faculty and staff bring a plethora of industry experience from laboratories and healthcare settings to their work with students. They share the common goal of effectively delivering the practical and theoretical foundations of disciplines through a rich blend of interactive lectures, informal discussion, meaningful laboratory inquiries, and professional practice or clinical experiences. The department offers students direct use of modern laboratory/clinical equipment in real-world or simulated settings and provides the highest-level virtual laboratory experiences.

MISSION

Through rigorous course work, exposure to state-of-the-art equipment, and professional practice and clinical experiences, the Allied Health Department prepares students for employment or continuing education in the technical areas of healthcare.

FACILITIES

Physical & Health Sciences Building – The Allied Health Department is partially located in the recently renovated PHS Building. Four science-ready lecture rooms are on the first floor with eight laboratories found on the second and third floors. The laboratories are outfitted with state-of-the-art equipment and instrumentation, anatomic models, and the latest application software for teaching and learning.

Agriculture Science Building – (A construction project will begin shortly to renovate this building.) There are two programs located in the Bethesda Foundation Imaging Suite on the third floor. The radiologic technology program laboratories are equipped with a nonenergized X-ray unit for students to learn proper patient positioning and a digital energized X-ray unit for students to acquire proper imaging skills and shielding with skeletons and pixies. The diagnostic medical sonography program's laboratory has three ultrasound units for students to obtain competency in effective scanning. Students also have access to ultrasound pathology simulation utilizing SonoSym.

The healthcare management and health information technology curricula are completely online programs.

DEPARTMENT PROGRAMS

- Computed Tomography (Certificate)
- Diagnostic Medical Sonography (AAS)
- Health Information Technology (AAS)
- Healthcare Management (BTech)
- Imaging Science (BTech)
- Magnetic Resonance Imaging (Certificate)
- Radiologic Technology (AAS)
Architecture and Design
William Dean, Chair
Phone: 607-587-4628
Fax: 607-587-4620
Administrative Assistant Phone: 607-587-4696
Email: deanwc@alfredstate.edu

The Department of Architecture + Design offers a five-year first-professional Bachelor of Architecture degree (BArch) degree, a four-year Bachelor of Science degree in architectural technology, and a two-year Associate in Applied Science degree in architectural technology. These degrees are designed to serve various professional objectives for graduates entering the practice and profession of architecture. The BArch degree is the only fully accredited first professional undergraduate degree program available in the SUNY system.

The department also offers a two-year Associate of Applied Science degree in interior design which provides graduates with fundamental knowledge and skills for entry-level positions in interior design.

The department emphasizes socially responsible design for the social good. This mission is enthusiastically supported by the faculty and the students.

The primary focus of our faculty is teaching – personal instruction that makes meaningful life-long connection with students – that has a powerful professional impact. Instructors bring a diverse blend of advanced architectural education, theoretical inquiry, practical experience, and professional credentials into the studio, making our faculty uniquely qualified to mentor students in design thinking, development, and production.

All aspects of design, building technology, social responsibility, and sustainability are integrated into the program through design studios which focus on the critical examination of the built environment and the role of the architect and designer as an agent of positive change. Students engage tectonic explorations alongside Building Information Modeling software which is situated within a broader digital fabrication continuum. This multi-faceted approach encourages students to create inspiring designs that are grounded in the realities of professional practice, better preparing graduates for the demands of the profession and workplace.

An Alfred State architectural education is a powerful platform upon which to build a career. Our students participate in hands-on opportunities to examine the regional built environment and learn through civic engagement projects in each design studio, which is the cornerstone of the Alfred State experience. Students explore their social responsibility as emerging professionals – to make the world a better place through design and professional conduct – in real-world environments from rural communities in New York’s Southern Tier, across the region and the world including the department's signature study abroad program in Sorrento, Italy.

MISSION

The Alfred State architecture experience goes beyond the design studio - cultivating engaged and collaborative life-long learners who build meaningful connections with the dynamic regional, national and global communities that surround us. Students develop into emerging professionals through a carefully planned sequence of applied learning and civic engagement experiences, and apply sustainable solutions to address social and environmental challenges using integrated and innovative digital and building technologies.

FEATURES & FACILITIES

Most departmental facilities, workshops, the MakerSpace, and all design studios are accessible 24 hours a day by secure swipe card for student convenience. Each design studio is laptop-ready, and has customizable work stations. Studios also have networked printers, desktop scanners, white marker boards, floor-to-ceiling wallmounted pin-up/display panels, flat file storage, model storage, and high-resolution digital projectors. Students also have access to the department’s MakerSpace, digital fabrication lab, Center for Architecture and Remote Sensing, interior design product library, computer lab, and architecture library, in addition to the plotter room; HOPR, and soils, concrete, and material testing lab, which is maintained by another department within the school.

Please note: All students in both the architecture and interior design programs are required to purchase a computer before the beginning of the second year in addition to other equipment. Typically the costs of these purchases can be covered using financial aid. Please consult a financial aid counselor for further details. Laptop specifications are available at http://www.alfredstate.edu/required-laptops.

DEPARTMENT PROGRAMS

Architecture (BArch)
Architectural Technology (AAS)
Architectural Technology (BS)
Interior Design (AAS)
Automotive Trades
Jeffrey Stevens, Chair
Phone: 607-587-3278
Administrative Assistant Phone: 607-587-3117
Email: stevenjs@alfredstate.edu

Today, more than ever, the highly skilled automotive service technician has an increasingly important role in the efficient operation of our society. The four automotive trades areas offered by the Automotive Trades Department—automotive service technician; heavy equipment, truck & diesel technician; autobody repair; and motorsports technology—prepare technicians for the ever-expanding and highly specialized trade industry.

All programs meet stringent national standards. The automotive service technician program is master certified by the National Automotive Training Educational Foundation (NATEF); the autobody repair program is Inter-Industry Conference on Automotive Collision Repair (ICAR) certified; and the heavy equipment, truck & diesel technician program is ADS affiliated, and we are a National Alternative Fuels Training Consortium training center. Automotive Service Excellence (ASE) certification and NYS inspection exams are offered on campus as well.

MISSION
Provide instruction and practical, hands-on experience, to students interested in a variety of automotive trades, including automotive service, autobody repair, truck and diesel service, and motorsports. The education acquired will prepare the student for entry-level employment. Students will be provided opportunities to maximize their individual potential and achieve a level of competence adequate to enter the automotive field and maintain gainful employment. In addition to hands-on skills, attitudes will be developed that will help enforce sound judgment, good work habits, planning and foresight, ingenuity, efficiency, and safety as they apply to the duties and skills of the trade. We will nurture an appreciation of and a desire for craftsmanship and professionalism. We will strive to instill positive attitudes of community and leadership that will carry beyond the workplace and help our students to live productively and successfully in today’s society.

FACILITIES

- **Autobody facility** – This facility on the Wellsville campus contains down-draft bake-paint booths, paint mixing room, frame-straightening machines, computerized estimating, and computerized measuring systems.
- **Automotive service facilities** – These buildings, located on the Wellsville campus, contain the latest equipment, including computerized front-end aligners, brake equipment, computerized engine analyzers, automatic transmission dynamometer and computer specification and service information terminals in all shops.
- **Heavy equipment, truck & diesel facility** – This facility, located on the Wellsville campus, is equipped with: specialized fuel injection overhauling and test lab; engine rebuilding equipment; multispeed transmission and rear axle repair area; engine tune-up area containing computer-operated late model diesel engines; handheld diagnostic scanners; and computerized specifications and service information systems.
- **Motorsports facility** – Students perform extensive hands-on work in a newly remodeled, newly equipped facility located in the village of Alfred. First-year courses are taught at the School of Applied Technology campus in Wellsville.

TECHNICAL STANDARDS
It is essential that students in this degree program are able to participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory experiences required for completion of the program. Students in this degree program should be able to:

1. Lift 50 pounds to industry standard automotive lift height
2. Effectively communicate with a person six (6) to ten (10) feet away.
3. Visually decipher small images on a monitor or digital display.
4. Distinguish sounds associated with mechanical failures.
5. Comprehend written information found in service repair resources.
6. Possess a valid motor vehicle driver's license.
7. Function in a safe manner, not placing themselves, faculty, staff, other students, or property in jeopardy.
8. Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at: www.alfredstate.edu/tool-lists.

DEPARTMENT PROGRAMS
- Autobody Repair (AOS)
- Automotive Service Technician (AOS)
- Heavy Equipment, Truck & Diesel Technician (AOS)
- Motorsports Technology (AOS)
The Building Trades Department is composed of four programs: building construction; heavy equipment operations; masonry; and heating, ventilation, and air conditioning. Rewarding careers in the construction industry are open to students graduating from the building trades programs. With the continual development of new building methods and materials, the craftsperson finds it necessary to keep abreast of these developments. Construction, as in many other occupations, is becoming a field of specialists. Coupled with hands-on experience working at off-campus construction sites, the programs provide the necessary theory as well as instruction in blueprint reading, cost and materials, estimating, safety, and the use of newly developed equipment and materials.

MISSION
Educate students to meet the changing needs of the construction industry by using real-world projects and utilizing the most up-to-date equipment, systems, and materials. We strive to improve the lives of our graduates by incorporating work ethics, communication skills, and developing leadership as part of their training.

FACILITIES
The 30,000-square-foot Workforce Development Center serves as a resource for each of the four programs within the Building Trades Department and was built specifically to support the construction industry demand for Alfred State's skilled trade graduates. Enhancing the facility are student learning projects and hands-on applications of student work that have been integrated as part of the facility. These projects serve as a showpiece and testimonial to the high level of education students receive. The program serves students with nearly every power and hand construction tool available to instruct students in every phase of the construction trade. All students participate in off-campus construction of full-scale homes and building renovations each year. This experience provides graduates with significant real-world training to apply concepts learned in the classroom.

TECHNICAL STANDARDS
It is crucial that all student applicants in this degree program must be able to meet the following requirements, with or without reasonable accommodation. Students who are enrolled in this degree program should have the physical capabilities to be able to engage in all training, field, and laboratory environments in a safe and ethical manner. Students must be able to:

- Lift and carry up to or 50 pounds of building materials/equipment without accommodations.
- Perform and function in a safe manner in all laboratory and classroom environments and off campus job site locations.
- Effectively communicate with classmates and instructional staff using appropriate visual and/or auditory communication from a distance of 20 feet.
- Physically setup, move, or climb ladders, scaffolding, etc., unaided, using the designated safety method.
- Identify and react to safety alarms which include, but not limited to, fire alarms, back up alarms and those meant for emergencies.

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

DEPARTMENT PROGRAMS
Building Trades: Building Construction (AOS)
Heating, Ventilation, and Air Conditioning (AOS)
Heavy Equipment Operations (AOS)
Masonry (AOS)
The department offers eleven programs for students desiring immediate employment, wishing to pursue a four-year degree, or looking to continue on with graduate studies. Courses during the first year in virtually all business programs are almost identical. This core block of courses enables students, during their first year, to easily transfer from one business program to another with no loss of academic credit. Students may enter the programs in either the fall or spring semesters.

Technical accounting knowledge, communication and interpersonal skills, and career-related computer literacy are stressed throughout the programs. Many associate degree graduates go on to pursue bachelor’s degrees in business, business education, or marketing while graduates of the Bachelor of Business Administration (BBA) programs often go on to pursue master's degrees. Students completing virtually any Business Department two-year degree may easily transfer into one of our own bachelor's degree programs. Students in technology management, financial planning, or sport management (BBA) programs also have the advantage of participating in a semester-long, 12-credit internship during their last semester.

The Business Department at SUNY College of Technology at Alfred has received specialized accreditation for its business programs through the International Accreditation Council for Business Education (IACBE) located at 11374 Strang Line Road in Lenexa, KS, USA. [https://iacbe.org/memberpdf/SUNYAlfredStateCollege.pdf](https://iacbe.org/memberpdf/SUNYAlfredStateCollege.pdf).

**MISSION**

Our faculty employ their real-world experiences to lead, motivate, and empower students to succeed in all aspects of business and life, and to positively impact their communities, as well as their respective disciplines.

**FACILITIES**

- **High-tech classrooms** – These settings are equipped with up-to-date electronic equipment. Computer technology has been integrated into course content.
- **Court and realtime reporting laboratory** – This lab is equipped with computer-aided translation equipment at every student work station. All students receive hands-on instruction using computer-aided translation (CAT) equipment. This real-time translation skill enables the graduate to take advantage of closed-captioning employment opportunities.

**DEPARTMENT PROGRAMS**

- Accounting (AAS)
- Business Administration (AS)
- Business Administration (BBA)
- Court and Realtime Reporting (AAS)
- Court Reporting and Captioning (Certificate)
- Financial Planning (BBA)
- Marketing (AAS)
- Marketing (BBA)
- Sport Management (AS)
- Sport Management (BBA)
- Technology Management (BBA)
Civil Engineering Technology
Erin Vitale, Chair
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The Civil Engineering Technology Department offers a bachelor’s degree program in construction management, a Bachelor of Technology degree program in construction supervision, as well as an associate degree program in construction engineering technology. Additionally, it offers an associate in surveying engineering technology and a bachelor’s in surveying and geomatics engineering technology.

MISSION
Provide graduates with the skills necessary to have a successful career in their chosen field, have a better understanding of the world we live in, and improve their own lives.

FACILITIES

- **Joe Laraiso Construction & Geomatics Lab** – This state of the art software lab is equipped with 20 computer work stations arranged in a true team environment to enhance our project based learning. Construction students use estimating, scheduling and project administration software in conjunction with real plans and specifications, performing tasks required on jobsites. The lab is also conducive to Lean Last Planner System planning. Surveying & Geomatics students have access to full-scale Carlson software to perform industry standard mapping tasks. All civil engineering technology department students benefit from AutoCAD and Revit software to create 2D and 3D models of sites and the built environment.

- **Doc Bruce Construction Materials Lab** – This lab provides a meaningful experience in laboratory and field testing of various construction materials and structural systems. The equipment enables students to learn procedures that meet recognized field testing procedures of the American Concrete Institute (ACI), the American Society for Testing and Materials (ASTM), and NYS Asphalt Testing Certification.

- **The National Fuel Construction Management Student Conference Room** - Student conference room for group work on project based learning activities. This room is equipped with large format wall monitor, wi-fi, and whiteboard to facilitate group work. In addition, it is available for employers to conduct interviews and students participate in virtual interviews with employers.

- **Surveying Laboratory and Equipment Room** – The surveying lab serves as the basic laboratory/lecture area for surveying field/design projects. Adjacent to this lab is the room housing a myriad of equipment, including electronic total stations, global positioning satellite equipment, theodolites, transits, and levels.

Please note: Students are required to have laptops. The laptops allow students wireless access to the college network from any location on campus. [https://www.alfredstate.edu/required-laptops](https://www.alfredstate.edu/required-laptops)

DEPARTMENT PROGRAMS

- Civil Engineering Technology (BS)
- Construction Engineering Technology (AAS)
- Construction Management (BS)
- Construction Supervision (BTech)
- Surveying Engineering Technology (AAS)
- Surveying and Geomatics Engineering Technology (BS)
The Computer and Information Technology Department offers associate degrees and four Bachelor of Technology (BTech) degree programs. The department offers four Bachelor of Technology degree programs in network administration, applications software development, web development, and cyber security. Students may enter these programs as a first-year student or transfer in as juniors from related associate degree programs. Articulation agreements have been developed with several community colleges to facilitate transfers. All of our degree programs provide our students with a solid foundation in the four core areas of information technology: application programming, web programming, network administration, and information security. At the end of their sophomore year, students are then allowed to select the BTech degree that best matches their academic interests. Our degrees incorporate the latest technology, including mobile application development, secure software development, life cycle processes, cloud computing, wireless networking, and neural programming. Our programs also stress the soft skills necessary in the working environment by requiring students to take courses in business management, technical writing, speech, business communications, project management, and business accounting.

MISSION
To provide a technical and professional education is provided with dynamic, up-to-date topics and prepare graduates to meet the needs of an increasingly technological society. Our programs also stress the related skills necessary in the working environment by requiring students to take courses in business management, technical writing, speech, business communications, project management, and business accounting.

Brief Overview
The Computer and Information Technology Department offers two associate degrees and four Bachelor of Technology (BTech) degrees. The Computer Science AS program is designed to lead into one of the Electrical engineering technology programs or into one of the four Computer and Information Technology BTech programs with minimal additional courses. The Computer Information Systems AAS degree transfers flawlessly into our BTech degrees. The four Bachelor of Technology degree programs include Network Administration, Application Software Development, Web Development, and Cyber Security. Students who pursue a BTech degree are encouraged to earn a minor. The decision of what minor to take can include any that Alfred State offers or take one of the minors that the Computer and Information Technology Department has to offer: Network Administration, Application Software Development, Web Development, and Cyber Security.

FACILITIES
- **Laboratories** - Students are allowed 24-hour access to department laboratories.
  - The application software network and web development labs have 12 CISCO Routers and 12 CISCO Switches along with state-of-the-art computer workstations. Both labs have access to our server farm running a VMware operating system in which we can run hundreds of windows and Linux machines. Students also have access to the Netlab software which supports lab activities to learn many of the CompTIA disciplines, VMware software, Palo-Alto, Juniper, and open-source software.
  - The Cyber Security lab has a dedicated servers and a server farm of its own to practice hackers and admins and other cyber security disciplines, the room also features computer work stations and two high quality wall mounted monitors for use in practicing and researching cyber security
- **Software, certifications, licenses, etc.** - The college has academic licenses for VMWare software products, all Microsoft software, a blade server with 128 gigabytes of RAM and a 12-terabyte storage array, a Cisco Certified Academy, three Cisco-certified instructors, Cisco Adaptive Security firewalls, Juniper application firewalls, Juniper routers, Juniper SSL VPN concentrators and an Oracle blade server, a certified Juniper academy and VMWare IT academy, an academic license with Oracle, Adobe Creative Suite 6.0, a dedicated systems lab used for microcomputer configuration, and a Pearson VUE, Prometric and Certified Internet Web Professional certification testing center.

Academies and Other Academic Sources
The department has access to several academies that the students can explore including CISCO, Palo-Alto Security, Juniper, VMware, and open-source. Alfred State has the only student community for Palo-Alto: Fuel Palo-Alto networks.

The Computer and Information Technology Department maintains several professional affiliations including the Association of Computerized Machinery (ACM), the National Support Center for Systems Security and Information Assurance (CSSIA), the Center for Infrastructure Assurance and Security (CIAS), Northeast Collegiate Cyber Defense League (NECCDL), and more.

Certifications
The department highly encourages and supports students to obtain professional certifications through an industry sponsored exams. In addition to course work, the Department sponsors courses which prepare candidates to be successful.

The Alfred State Certification Center is open for students to sit for their certification exam. The Center hosts all the Pearson Vue tests and Prometric: Automotive Service of Excellence. The student has access through Alfred State College to have a discount on CompTIA study material, practice tests and certification tests and includes A+, Sec+ and Network+.

Please note: All entering students must purchase a windows laptop computer. All the Computer Information and Technology disciplines are all Microsoft based. Apple computers are highly encouraged in this department.
DEPARTMENT PROGRAMS

- Computer Information Systems (AAS)
- Computer Science (AS)
- Cyber Security (BTech)
- Information Technology: Applications Software Development (BTech)
- Information Technology: Network Administration (BTech)
- Information Technology: Web Development (BTech)
The culinary industry offers a wide range of career opportunities; the list is endless, from health care to management positions in large companies. The department includes two programs: culinary arts - focusing on food production and management and baking, production and management - focusing on retail baking production. The department also offers a three-year dual degree program, along with an opportunity to obtain a baccalaureate degree in technology management in the following two years.

MISSION
The Culinary Arts Department is focused on developing skills needed for competent culinary professionals for an evolving industry.

TECHNICAL STANDARDS
It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory settings required for completion of the program. Students in this degree program should be able to:

• Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
• Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
• Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
• Communicate effectively, both orally and in writing.
• Capability to lift 50 pounds of kitchen product or equipment to industry standard counter height
• Ability to professionally manage and cope with work in a high paced and crowded lab environment for several hours a day.

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at www.alfredstate.edu/tool-lists.

FACILITIES
• Production lab – This lab gives students the opportunity to learn quantity food production and service through the preparation and service of 700 institutional meals for customers daily.
• The Refinery Restaurant lab – A well-equipped dining room and kitchen, this lab has virtually all the equipment used in commercial restaurants. Students prepare and serve meals to order for patrons daily.
• Bakery lab – This is reputed to be the best-equipped training facility of its kind in the state. The student has access to many types of baking equipment used commercially to produce baked goods for the Wellsville campus student dining hall (The Rig) and The Refinery Restaurant. Students produce baked goods in freshman and senior labs, which are sold and served to many. In addition, the preparation and presentation of elaborate creations, common in upscale restaurants, offers students the opportunity to develop their talents.

DEPARTMENT PROGRAMS
Culinary Arts (AOS)
Culinary Arts: Baking, Production & Management (AOS)
The Digital Media and Animation Department offers Associate of Applied Science and Bachelor of Science degrees in digital media and animation, Associate of Science and Bachelor of Science degrees in graphic and media design, and Associate of Science and Bachelor of Science degrees in game and interactive design.

**MISSION**

Prepares graduates for immediate employment or continued educational opportunities in a range of design and technology-related disciplines. The department provides quality technical education that integrates theory and practice with a foundation in the arts and sciences.

**FACILITIES**

- **Studios** – Students in DMA programs have 24-hour access to a large traditional studio space for foundations in traditional materials, figure drawing, and 2D and 3D design, a computer lab that provides industry-standard capability in 2D graphics, web design, interactive media, motion graphics, 2D and 3D animation, screen printing, large format printing, laser engraving/cutting, and 3D printing.
- **Video and sound production studio**
- **Virtual reality and 3D sculpting studio**
- **Motion Capture Studio**
- **Other equipment and software** – Digital cameras, production light kits, microphones, digital audio recorders, HD video cameras, drawing tablets, and other pieces of high-end equipment are available for students to sign out.
- **Creative House** - Designed specifically for students in the Digital Media & Animation or Graphic & Media Design programs, this Living Learning Community (LLC) features a studio workspace for its residents. Students live and learn with like-minded colleagues in a space made for productive and creative collaboration. With a studio space, a space to screen work, success workshops, live-in upperclassmen as mentors, and other extras, students who live in the Creative House LLC are prepared to hit the ground running on their creative projects. You can apply here - https://www.alfredstate.edu/webforms/creative-house-application

**Please note:** All entering students in the Digital Media and Animation Department programs are required to purchase a laptop computer. www.alfredstate.edu/required-laptops

**DEPARTMENT PROGRAMS**

- Digital Media and Animation (AAS)
- Digital Media and Animation (BS)
- Game and Interactive Design (AS)
- Game and Interactive Design (BS)
- Graphic and Media Design (AS)
- Graphic and Media Design (BS)
Electrical, Machine Tool, and Welding Technology

Bradley Thompson, Chair
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From electrical contractors to welders and machine tool operators, Alfred State offers a variety of programs that prepare students to launch careers in high-demand professions. Each program provides 1,800 hours of related course work, theory, and hands-on practice, providing graduates with the necessary skills to be successful in these dynamic fields.

ELECTRICAL CONSTRUCTION & MAINTENANCE ELECTRICIAN PROGRAM

The hands-on electrical training provided in the first year consists of actual wiring projects off campus, as well as residential wiring projects in our laboratories. Our senior electrical students receive real-life experiences working with the campus maintenance department, trouble-shooting campus equipment, rewiring existing facilities, and designing and installing the electrical systems in the new facilities. Seniors will also design and install photovoltaic systems and wind turbine systems. They will work in the laboratories designing and installing automated projects (incorporating relay logic), PLCs, pneumatics, hydraulics, process control systems, three-phase transformer systems, industrial distribution, and motor theory and repair. All of the freshmen and senior students will utilize the National Electrical Code.

MISSION FOR ELECTRICAL CONSTRUCTION & MAINTENANCE ELECTRICIAN

Educate and instill in our students within a two-year time frame all of the information necessary to be successful in the electrical trades. This includes interpreting and understanding the National Electrical Code, electrical theory, mathematics, electrical nomenclature, wiring methods, and troubleshooting as it applies to residential, commercial, industrial wiring, and sustainable electrical systems. This also includes the necessity to work safely, be responsible, be dependable, and take pride in their craftsmanship.

TECHNICAL STANDARDS FOR THE ELECTRICAL CONSTRUCTION & MAINTENANCE ELECTRICIAN PROGRAM

It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodations in all classrooms, laboratory, or field experiences required for completion of the program. Students in this degree program:

- Must be able to function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Must be able to appropriately and safely use standard laboratory equipment, materials, and instrumentation that requires possession of fine motor skills and mobility.
- Must be able to lift 50 pounds of materials up to 5ft to mount electrical panels at standard industry height.
- Must be able to communicate orally with a person 6 to 10 feet away.
- Must be able to read and decipher information found in technical manuals.
- Must be able to visually translate information on analog or digital meters and other test equipment.

MISSION FOR WELDING AND CNC MANUFACTURING & MACHINING TECHNICIANS

Strive to provide employers with entry-level technicians who are capable of functioning in and adapting to a rapidly changing environment.

TECHNICAL STANDARDS FOR WELDING & CNC MANUFACTURING & MACHINING PROGRAMS

It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodations in all classrooms, laboratory, or field experiences required for completion of the program. Students in this degree program:

- Must be able to function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Must be able to appropriately and safely use standard laboratory equipment, materials, and instrumentation that requires possession of fine motor skills and mobility.
- Must be able to lift up to 50 pounds to a height of 5ft in order to load materials into manufacturing machines.
- Must be able to communicate orally with a person 6 to 10 feet away in a shop environment.
- Must be able to visually decipher an oscilloscope monitor and digital/ analog meter, and scan tool displays.
- Must be able to diagnose mechanical failures that are distinguished audibly.
- Must be able to understand and retain information found in service repair manuals and use diagnostic flow charts.
- Must be able to stand for long periods of time.

DEPARTMENT FACILITIES

- **Electrical Trades Labs** - Our electrical trades laboratories are well equipped with the latest in electrical test equipment. Students will facilitate learning by direct hands-on applications of the theory, knowledge, and skills presented in lecture. In this program, approximately 50 percent or more of each day is spent working hands on in the laboratory or at a job site. Computer technology has been integrated into all of the courses.
- **Machine Tool/Manufacturing Labs** - The first-year lab is equipped with lathes, mills, shapers, grinders, etc., and appropriate tools acquired from a $1 million grant from the Gleason Foundation. In the second year of the CNC Manufacturing and Machining program, learning takes place in a state-of-the-art laboratory, where students are instructed in the use of multiple CNC machines that expand their experience to best prepare them for the manufacturing shop environment.
- **Sustainable Advanced Manufacturing Center** - This $5 million, 16,000 square-foot facility houses freshman and senior welding students and senior CNC Manufacturing and Machining students, who train for in-demand jobs, while learning state-of-the-art sustainable practices in advanced manufacturing through more efficient processes. The building includes classrooms, a computer lab, a welding booth shop, a welding fabrication shop, material handling and preparation space, a CNC machine shop, and metrology and inspection space.

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at [www.alfredstate.edu/tool-lists](http://www.alfredstate.edu/tool-lists).

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DEPARTMENT PROGRAMS

Electrical Construction and Maintenance Electrician (AOS)
CNC Manufacturing and Machining (AOS)
Welding Technology (AOS)
English and Humanities
Travis Matteson, Department Chair and Program Coordinator
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The English and Humanities Department offers courses in composition, foreign language, fine art, speech, philosophy, and literature for the entire college. Colleges, universities, and large corporations have been increasingly emphasizing the significance of a liberal arts and sciences education in providing a solid foundation upon which careers are built. The liberal arts and sciences: humanities program prepares students for life by stressing the importance of reading, writing, and thinking, while developing in them an appreciation of the arts and of the wisdom of great minds.

MISSION
Instruct students in written and oral communication and impart an appreciation and understanding of the humanities and their role in the life of human beings living in a diverse world.

FACILITIES
The department is housed in the Hunter Student Development Center, where mathematics, computer, and study skills labs, as well as classrooms are equipped with the most recent technological teaching aids.

DEPARTMENT PROGRAMS
Liberal Arts and Sciences: Humanities (AA)
Technical Communication and Emergent Media (BS)
MISSION STATEMENT

The individual studies associate's degree, offered on campus or online, provides an opportunity to earn the degree, explore majors, career options, and futures. It is also excellent preparation for transfer into four-year programs or various colleges and universities, and can be tailored to fulfill a career goal that cannot be met by traditional programs offerings.

The Individual Studies Department offers curriculums that allow students to explore majors, and career options and create a specialized degree program. The department houses three curricula: individual studies (AS), interdisciplinary studies (BTech) and the undeclared major.

The undeclared major gives students the opportunity to try different options and select a course of study the first two semesters that fits students' individual interests and background. Along the way, students take advantage of extensive support services, including career planning and counseling, offered by caring faculty and staff throughout the program. Students enrolled in the undeclared major must transfer to a degree-granting program within two semesters. The program includes both a component of core courses and a component of elective courses.

The individual studies program, offered on campus or online, gives students the opportunity to explore majors, career options, and futures. It is also excellent preparation for transfer into four-year programs or various colleges and universities and can be tailored to fulfill a career goal that cannot be met by traditional program offerings. It allows students to sample courses from different fields.

The bachelor of technology in interdisciplinary studies program is designed to provide a four-year curriculum in which students are empowered to personalize, within specified core and concentration areas, their technology-based program of study. The program is founded in academic flexibility by provided two sets of broad-based academic options. Students start with a core set of courses selected for years one and two of the program and two concentration areas by years three and four. Year one and two core areas include: STEM, management, design, health/agricultural/science, humanities/social sciences, and technical communication. Years three and four concentration areas include: STEM, management, technical communication/design, humanities/social science, and health/science.

FACILITIES

The department is housed within the Academic Advising Center in the Hunter Student Development Center, where mathematics, computer, and study skills labs, as well as classrooms, are equipped with the most recent technological teaching assistance.

DEPARTMENT PROGRAMS

- Individual Studies (AS)
- Interdisciplinary Studies (BTech)
- Undeclared Major
The Mathematics and Physics Department offers a variety of courses, including pre-algebra, algebra, trigonometry, statistics, calculus, differential equations, astronomy, physics, and physical science. Students are recommended for placement in mathematics on the basis of their high school preparation and their placement test score. The department faculty serve as advisers for students majoring in the areas of mathematics and/or science and for those in the pre-environmental science and forestry programs. They also serve as advisers for undeclared majors. Physics and physical science courses develop within the student an understanding of basic physical principles and an appreciation of the natural environment. Technical programs require a firm foundation in fundamental physics. To that end, courses also encourage and develop the student’s competence in the use of logical procedures in problem solving. Math courses are taught to develop students’ abilities in logical reasoning, problem solving, and critical thinking, as well as to build algebraic reasoning and calculus skills.

MISSION
Provides mathematics and physics foundation courses for engineering and engineering technology students. The department also provides general education mathematics and natural science courses for all students.

FACILITIES
- Physics labs – These labs are well equipped with apparatus to facilitate learning by direct experience and to provide students with an opportunity to discover many principles on their own. The laboratory instructor is a member of the regular teaching staff and, in most cases, is the same instructor the student has for the physics lecture session. Facilities include a linear air track, lasers, air table, X-ray recorders, gamma spectrometers, oscilloscopes, precision electrical measuring devices, strobe lights, precision timers, and an 8-inch Cassegrain telescope, as well as a large collection of traditional physics apparatus, many of which are used directly by the students in their laboratory work.

DEPARTMENT PROGRAMS
- Liberal Arts and Sciences: Math and Science (AA)
- Pre-Environmental Science and Forestry (AA)
The Mechanical and Electrical Engineering Technology Department has several programs that prepare graduates to join the workforce as successful technical and management professionals in a variety of industries, including electrical engineering technology, mechanical engineering technology, computer engineering technology, and mechatronics technology. Because the department maintains active contact with related industries and professional societies and works closely with them to assist graduates in exploring their profession and creating contacts for employment, graduate placement is excellent. Educational opportunities also occur through projects, competitions, and field trips in addition to memberships in several active professional society student chapters.

**MISSION**

To prepare graduates for immediate employment and continued educational opportunities through a quality technical and experience-based education.

**FACILITIES**

- **Advanced Electronics Laboratory** – (SET 456) Each work station in this laboratory has a computer that controls automated test equipment stations with a variable generator, digitizing oscilloscope, multi-meter, and power supplies. Students can capture the oscilloscope display, run automatic frequency response, or measure device characteristics and insert these results into their laboratory reports. The work stations have programs for data analysis and circuit simulation such as Excel, MATLAB, LabVIEW, Multisim and Ultiboard. Internet connections allow quick reference to manufacturer’s data sheets. In addition to the general-purpose and automated test equipment, the laboratory also contains radio frequency (RF) test equipment such as a spectrum analyzer and data communications test equipment to investigate modulation and transmission.

- **Automated Manufacturing Laboratory** – (SET 389) Provides direct experience with computer numerical control (CNC) machines, robotics, and the integration of robotic concepts to automated manufacturing. This includes a 3-axis HAAS mini mill, HAAS mini CNC lathe and an Emco 155 vertical mill. Part design and programs for operation of the CNC systems are prepared and executed. This lab is also equipped with a 3-axis coordinate measuring machine (CMM) for parts inspection and reverse engineering.

- **Computer-Aided, Mechanism, and Mechanical Design Laboratory** – (SET 396) Provides a true design environment that is supported by the latest software for drafting, solid modeling, product design, mechanism and system design, calculations, presentations, and analysis. Labs consist of either “stand alone” desktop computers or student laptops. The laboratory is also equipped as a standard industrial research and development laboratory in the area of mechanical systems dynamics. This facility enables students to analyze rotational equipment, industrial power transmission devices, and various mechanical linkage designs. Using a “learn-by-doing” approach, students are able to apply the theoretical concepts conveyed during lecture to complete rigorous laboratory assignments.

- **Data Acquisition Laboratory** – (SET 449B) Here students are introduced to general characteristics of electromechanical sensors and transducers, electrical measurement systems, electronic signal conditioning, data acquisition systems, and response characteristics of instruments. Industrial equipment, such as a punch press, drill press, and metal lathe are equipped with sensors that are configured to measure physical quantities such as force, strain, displacement, velocity and acceleration. Computers in the laboratory running LabVIEW software perform data acquisition, calculation and report generation with a graphical user interface. Utilizing renewable energy sources requires environmental monitoring. Laboratory activities could include using transducers to measure wind speed and direction, solar radiation, and temperature along with voltage, current and power measurement.

- **Electronic Fabrication Laboratory** – (SET 462A) This is a freshman “skills” laboratory covering a wide range of basic electronic fabrication techniques. It introduces the student to layout and design software tools for sheet metal chassis and printed circuit boards (PCBs) designs, electronic component identification, the proper use of soldering/de-soldering tools, wire-wrapping, schematic layout, and PCB design and fabrication techniques, as well as familiarize with a wide range of hand and power tools and proper safety practices. The laboratory is equipped with a kick-shear, punch press, bending brake, drill presses, Pace solder stations, and CNC rapid prototype machine. The laboratory contains a safety chemical vapor hood used for chemical etching of PCBs. The soldering work stations also feature individual ventilation fans. Once students learn the foundational techniques, students are allowed to use the fabrication resources for later class projects.

- **Electrical Machines Laboratory** – (SET 454) Electrical machines convert electrical energy into mechanical energy or vice versa. A fundamental distinction can be drawn between DC, AC, and three-phase machines. The machines used for training in electrical engineering are designed so that nearly all of the circuitry and drives found in industry, commerce, and at home can be conveyed in a didactic fashion in hands-on training. Using the servo drive and braking system, it is possible to easily determine all of the relevant data for electrical machines. Electrical Machines modules include DC machines, shunt-wound, series-wound and compound-wound machines 300W (EEM 2-3), AC machines 300W, universal motor 300W, single-phase induction motor with operating and auxiliary capacitor 300W and split-pole motor 300W (EEM 3-3), asynchronous machines 300W and three-phase induction motor with squirrel cage and distinct pull-out torque 300W (EEM 4-3), and synchronous machines and mains synchronization 300W, synchronous machines 300W and mains (grid power) synchronization 300W (EEM 5-3).

- **Embedded Controller Laboratory** – (SET 449A) This laboratory provides an integrated engineering systems approach toward understanding automation principles with emphasis on embedded microcontrollers. Exposure to electrical, mechanical, and process control areas is integrated into this laboratory allowing for evaluation of embedded controller applications using motion control and peripheral devices such as dc and stepper motors, pushbuttons, switches, seven segment and liquid crystal displays (LCD), matrix keypads, analog to digital converters, speakers and radio frequency (RF) and infrared (IR) interface locations.

- **Energy Storage and Conversion Laboratory** – (SET 246) Provides hands-on experience in the areas of fluid mechanics, heat transfer, and thermodynamics. Classroom theory is reinforced through the application to HVAC systems, wind turbines, solar-thermal, fuel cells, batteries, and other thermal-fluids process equipment. The characteristics of the laboratory systems are investigated, tested, and evaluated for component and overall efficiencies. Students gain experience in the operation of data acquisition, process control, temperature, pressure, fluid flow control, combustion, and system-level test equipment.

- **Fluid Power Laboratory** – (SET 252) This lab is used for both lower- and upper-division fluid power courses. Lab facilities include fully functional pneumatic and hydraulic system components. Students design and fabricate working fluid power circuits to reinforce topics covered in the classroom setting. Upper-division students use the hydraulic laboratory facilities to prepare for an optional industry certification offered at the end of the semester.

- **General Purpose Laboratories** – (EJ 414, EJ 415, EJ 417) General purpose laboratories are equipped with web, office, and programming software. They are used for a variety of courses such as programming, web, database, and microcomputer applications.

- **Industrial Controls Laboratory** – (SET 454) This laboratory contains multiuse work areas. When used as an introductory electrical circuits and a digital electronics laboratory, students bring in their breadboard notebook constructed in the fabrication lab and use it to build and test simple circuits to develop an understanding of the fundamentals of circuit theory and digital electronics. Other test equipment such as oscilloscopes, meters, power supplies, and signal generators are on each workstation. This laboratory is also equipped with eight matched sets of AC and DC fractional horsepower machines and the test equipment.
equipment necessary to analyze their performance. Stepper motors, servo motors, programmable logic controllers (PLC), transformers, rectifiers, synchronous machines, loading devices, variable frequency drives, and a simulated transmission line relay demonstrator are available and used for laboratory experiments.

- **Machine Tool/Manufacturing Laboratory** – (SET 380) Is equipped with 20 manual tool room style engine lathes, vertical and universal milling machines, drill presses, and radial drill presses. Traditional machining operations are introduced and reinforced in this laboratory with the goal of giving the students “hands-on” exposure to various methods and techniques applied to production so as to give a better understanding of the related design concepts.

- **Materials Testing Laboratory** – (SET 384) Includes a 160,000-pound universal testing machine and other test equipment to examine impact, torsion, hardness, and fatigue. Metallographic preparation and computer-aided image processing are used to examine material structure. Heat treating furnaces are also used to investigate the effects of thermal processing.

- **Metrology and Measurements Laboratory** – (SET 379) Serves as a state-of-the-art “quality assurance” center and is anchored by new equipment recently donated by companies and businesses. Facilities include a manual coordinate measurement machine donated by Helmel Engineering and a digital Starrett optical comparator and direct computer controlled coordinate measurement machine, both acquired through a grant from the Gleason Foundation.

- **Microelectronics Laboratory** – (SET 462B) This laboratory gives the student a realistic experience in semiconductor manufacturing processes. In industry, the nature of the integrated circuit (IC) fabrication process is highly complex and absolutely intolerant of mistakes. Complex ICs have a multitude of transistors, capacitors, and resistors. Fabrication of these devices is rather simple in theory - deposit, pattern, etch, and repeat. However, the actual fabrication process is unbelievably detailed at every step. For very complex ICs, there can be 500 or more individual process steps! The slightest mistake at any of these steps can render the entire device useless. Through a recent grant opportunity, this laboratory was equipped with Modu-Lab semiconductor device manufacturing equipment and a clean-room facility. Oxidation/diffusion, photolithography (spin/bake/expose/develop), etch, and vapor deposition stations allow the student the opportunity to design, build, and test their own simple solid-state devices, while gaining experience in clean room operations.

- **Microfabrication and Semiconductor Manufacturing Facility** – (SET 468) This classroom includes a clean room for advanced miniature device and circuit development. The facility provides state-of-the-art instruments for designing, fabricating, characterizing and testing of complex micro-scale structures and devices in MicroElectroMechanical Systems (MEMS) and Microelectronics. The recent upgrade allows fabrication of very small MEMS devices such as sensors, actuators and microfluidic systems, and more advanced microelectronic components such as integrated circuits (ICs), transistors, capacitors, inductors, resistors, and diodes.

- **Networking Laboratories** – (SET 440 and SET 446) Two fully equipped networking laboratories are used to give students hands-on experience so critical to the competitive computer and information technology job market. The college has an academic license for VMWare software products so students, using the latest version of VMWare Workstation, can run multiple guest operating system virtual machines on our powerful lab computers creating complex layered virtual networks that can be directly connected to any of our lab network equipment. The labs are equipped with a blade server with 48 gigabytes of RAM and 12 terabyte storage array upon which VMWare enterprise software is used to create a private cloud infrastructure where students can create and access virtual appliances. The college has an academic license for all Microsoft software, which allows students to acquire experience using the latest enterprise network operating systems.

- **Power Electronics Laboratory** – (SET 454) Power electronics is the technology of switching and converting high levels of electrical power. Today, this is done using semiconductor components like diodes, thyristors and IGBTs. The main area of application for power electronics is drive technology. The modular training system accompanies you on your journey from static converter technology to closed-loop control drives and offers you the possibility of dealing in detail with the topics most relevant to you. The modular system with training panels and the systematic software support allows for continuous upgrading, supplements or technology-promoted extensions. Power electronics modules include line commutated converter circuits 300W (EPE 30-3), self-commutated converter circuits 300W (EPE 40-3), converter drives with DC motors 300W (EPE 31-3) and converter drives with DC motor 300W (EPE 43-3).

- **Power System Laboratory** – (SET 456) This laboratory contains professional trainer modules that simulate a power system. Each module contains hardware and software installed on its own computer for a full power analysis. A stand-alone power network is a type of power supply network that is closed and has no active lines coupling it to other parts of the electrical power supply grid. A stand-alone network is markedly smaller than a combined electricity grid and does not usually incorporate high-voltage power lines. For this type of network, there are two distinct modes of operation: stand-alone mode and isolated parallel or generator-to-generator operation. This type of supply network is frequently used for the industrial power supplies of large businesses. When this stand-alone network is connected to a smart grid, it is referred to as a microgrid. This type of grid has three different operating modes: on-grid, off-grid and dual mode. Microgrids will be playing a huge role in the smart grids of tomorrow. The Micro Grid modules include Micro Grid Stand Alone Operation (EMG 1) and Micro Grid Isolated Parallel Operation (EMG 2). Energy Management modules include Complex Loads, Power Consumption Measurement and Peak Overloading (EUC 1). This trainer contain three-phase consumers with star and delta connections (R, L, C, RL, RC and RLC loads) and measure with active and reactive energy meters for symmetric and asymmetric RL loads in the event of a phase failure or over-compensation (RC load).

- **Renewable Energy Laboratory** – (SET 456) Professional Photovoltaics system allows the passage of the sun to be simulated realistically. This makes it possible to perform experiments in the lab in practical fashion without any need for the sun itself. The design of photovoltaic systems operating in parallel with the electric power grid is realistic. In order to stabilize the electricity grid, the techniques of derating the power inverter and controllable local transformers are used. Knowledge and practical skills along with computer-based assessment of measured data are made possible by the professional photovoltaics multimedia course along with SCADA Power Lab software. The module includes solar module with solar altitude emulator, the Solar Altitude Emulator and Load Unit 1kOhm. 500W (EPH 3).

- **Student Project Laboratory** – (SET 460) Space in this laboratory provides support for course projects and particularly the senior capstone design experience. This facility provides secure storage for projects and the necessary tools and support equipment. The laboratory houses a model house room layout for testing of competitive autonomous robots. The active campus Robotics Club makes use of the room for building, maintaining, and evaluating student built robots.

- **Systems Laboratory** – (EJ 411) This lab is used for teaching microcomputer hardware and operating systems installation, upgrading, troubleshooting, and maintenance.

- **Thermodynamics Laboratory** – (SET 344) Provides students hands-on experience with diesel and multi-fuel spark ignition engines. Real-time equipment performance data is used for simulation, modeling, and economic analysis. Areas of the energy systems laboratory are also allocated for senior projects and the SAE Baja student club.

- **Thermofluid Mechanics Laboratory** – (SET 245) Is equipped with systems which provide experience with the principles of fluid mechanics and thermodynamics. Fluid flows through venture tubes, orifices, nozzles, pipes, ducts, and open channels together with system components such as pumps, fans, and piping systems are used to provide a broad range of experimentation to support basic principles.

**DEPARTMENT PROGRAMS**

- Computer Engineering Technology (AAS)
- Computer Engineering Technology (BS)
- Electrical Engineering Technology (AAS)
- Electrical Engineering Technology (BS)
- Mechanical Engineering Technology (AAS)
- Mechanical Engineering Technology (BS)
- Mechatronics Technology (AAS)
- Mechatronics Technology (BS)
The impending shortage of practitioners and current critical shortage of educators is leading to multiple options for those interested in the nursing profession. Jobs are available nationwide in a wide range of settings with excellent salaries and opportunities for growth. At Alfred State, we are preparing students to be designers, coordinators, and managers of health care. Our students graduate as leaders contributing to the advancement of health care and the profession itself. The Nursing Department offers an associate degree nursing program accredited by the Accreditation Commission for Education in Nursing (ACEN).

The associate degree is designed to prepare individuals to become registered nurses (RNs). Students of this program become eligible to take the NCLEX-RN licensing exam and receive excellent clinical preparation in a variety of settings.

Alfred State nursing AAS graduates may enter directly into the Alfred State bachelor's degree program in nursing. The AAS program can be completed full-time in two years or part-time as the student desires and is a face-to-face model. The upper-level nursing courses are offered in an online format.

MISSION
Foster the development and growth of professional nurses in a rural environment. Nursing practice exhibits compassion, caring, and lifelong learning.

FACILITIES

- Physical & Health Sciences Building – This beautiful showcase facility, which opened in 2012 following an $18.5 million renovation project, houses the Nursing Department.
- Nursing skills lab – The lab utilizes state-of-the-art equipment including mid-fidelity manikins, newborn manikin SimNewB, and a PROMPT Birthing Simulator to complement and reinforce the learning that takes place in clinical experiences at area hospitals. This lab simulates a hospital floor setting with six stations and six VitalSim™ manikins. Each station is fully equipped for the student to learn and practice clinical skills in an acute care setting.
- High-fidelity simulation labs – These two high-fidelity simulation labs each house a SimMan 3G® manikin. The simulation observation room is equipped with computers and monitors to record simulation activities.
- Practice lab – Students have access to two stations that simulate a hospital floor setting, four examination stations, and two VitalSim™ manikins within this lab.
- Public Health Simulation – In addition to the above skills labs, there are facilities for students in Nursing and Allied Health to participate in simulations to promote learning in settings outside of acute care.

DEPARTMENT PROGRAMS
Nursing (AAS)
Nursing Dual Degree (AAS to BS in Nursing)
RN to BS in Nursing
The Physical and Life Sciences Department at Alfred State provides students with a strong education in a wide range of scientific and technical disciplines through online and on-campus curricular offerings. Faculty specializations span a spectrum of molecular and cell biology, genetics/genomics, nutrition science, forensic science, chemical instrumentation, microbiology, and physical chemistry. While diverse, the faculty and staff share the common goal of effectively delivering the practical and theoretical foundations of disciplines through a rich blend of interactive lectures, informal discussion, meaningful laboratory inquiries, and internships. In addition to discipline-related course work, each program is complemented by a broad array of general education courses aimed at equipping students with insights and background that will help fulfill their roles in greater society. Emphasis is also placed on lifelong learning, as reflected by the many articulation agreements assuring seamless transition to other programs within Alfred State and to other institutions of higher learning.

The department offers students direct use of modern laboratory/clinical equipment in real-world or simulated settings. Practical, hands-on competencies, critical reasoning skills, and, where pertinent, team-based problem solving, are emphasized. If a student expresses an interest outside of a discipline's normal scope, independent study options may also be developed.

In some programs there are physical ability requirements based on individualized assessment rooted in current medical evidence or the best objective evidence. See each program for specific physical requirements. If a student's physical ability compromises or threatens their success in a program, or the health and safety of others, they may be denied enrollment or continuation in the program.

MISSION

To be recognized for employing a comprehensive plan for recruiting and admitting, orienting and advising, retaining, graduating, and placing students of its degree programs.

FACILITIES

Physical & Health Sciences Building — (A construction project will begin shortly to renovate this building.) The Physical and Life Sciences Department is located in this facility. Four science-ready lecture rooms are on the first floor with eight laboratories found on the second and third floors for the biological science, health science, and the forensic science technology programs. The laboratories are outfitted with state-of-the-art equipment and instrumentation, anatomic models, and the latest application software for teaching and learning as well as for independent study and research.

DEPARTMENT PROGRAMS

- Biological Science (AAS)
- Forensic Science Technology (BS)
- Health Sciences (BS)
The Social and Behavioral Sciences Department offers courses in anthropology, criminal justice, education, history, human services, political science, psychology, and sociology. It coordinates six curricula: criminal justice (AS and BS), human services management, human services, liberal arts and sciences: social science, and liberal arts and sciences: adolescent education (teacher education transfer).

The criminal justice associate degree program provides graduates a solid foundation in the field of criminal justice and its basic components. The program offers practical knowledge that is integrated across core criminal justice courses and that is then combined with other relevant course work. The program emphasizes the development, structure, and function of the criminal justice system within the US, as well as ethical law enforcement practices and community relations. In addition, the program's professional course work includes a management component that helps prepare graduates for administrative and leadership positions within the criminal justice system.

The criminal justice bachelor's degree program provides graduates a solid foundation in the field of criminal justice, both its essential components and emerging areas, with a focus on leadership and applied learning. With strong preparation in conceptual knowledge, students gain practical experience in criminal justice, including the opportunity to complete either an internship or a lab-based criminal investigation course in their final semester. In order to prepare graduates for a wide variety of careers, the program emphasizes several areas within criminal justice: ethical law enforcement practices, decision-making, community relations, working with diverse populations, public safety, and criminal justice leadership and administration.

The human services management bachelor's degree program prepares graduates for mid-level positions in human services and social services agencies requiring skills in both direct service to clients and in management. It also prepares them for transfer into graduate-level programs in such areas as human services, public administration, and social work administration.

The human services associate-level program prepares students for entry-level career positions in a variety of human service occupations or to continue their education in baccalaureate programs. Students who pursue careers upon graduation often work with the elderly, chemical dependency, or the mentally and developmentally disabled. Students who transfer often select baccalaureate majors in human services management, social work, criminal justice, education, human services, psychology, and sociology.

The liberal arts and sciences: social science associate degree program is a transfer program that provides flexibility to students in their choice of future major. Students take considerable course work in psychology, sociology, and history, and additional courses in mathematics, English, the humanities, and the natural sciences. Students may select one of six concentrations: history/social studies, English, math, physics, biology, or chemistry.

The liberal arts and sciences: adolescent education (teacher education transfer) associate-level program prepares graduates to transfer to a four-year adolescent education program at a public or private college or university. Students may select one of six concentrations: history/social studies, English, math, physics, biology, or chemistry.

MISSION
Develop and offer excellent academic programs in criminal justice, human services, social sciences, and education, and to develop and offer high-quality courses in the social and behavioral sciences that meet the program needs of the students of Alfred State.

FACILITIES
The department is housed in the Hunter Student Development Center, where mathematics, computer, and study skills labs, as well as classrooms, are equipped with the most recent technological teaching aids.

DEPARTMENT PROGRAMS
- Criminal Justice (AS)
- Criminal Justice (BS)
- Human Services (AS)
- Human Services Management (BS)
- Liberal Arts and Sciences: Adolescent Education - Teacher Education Transfer (AA)
- Liberal Arts and Sciences: Social Science (AA)
Recommended: Geometry and Algebra 2

Required: Algebra

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra

Recommended: Geometry and Algebra 2

ADVANTAGES

- Required course work covers areas critical to success in today’s business workplace: technical accounting knowledge, communication and interpersonal skills, career-related computer literacy.
- High-tech classrooms with computer technology integrated into course content.

PROGRAM STUDENT LEARNING OUTCOMES

- Recognize the primary theories within the principle functional areas of business.
- Demonstrate professional business communication.
- Illustrate critical thinking and effective decision-making within the principle functional areas of accounting.
- Identify ethical issues within accounting.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State accounting graduates may enter directly into either the business administration BBA, financial planning BBA, the interdisciplinary studies BTech, or technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES

Students may transfer directly into one of our own BBA degree programs or to another college. Students are encouraged to make their intentions known to their academic adviser during their freshman year. Through the careful use of elective courses, students can realize excellent transfer credit.

The Business Department has established many formal articulation agreements with local four-year institutions, although graduates may transfer to colleges virtually anywhere. Historically, accounting graduates have done very well after leaving Alfred State, whether they enter the workforce or transfer to an advanced program.

OCCUPATIONAL OPPORTUNITIES

- Banking
- Manufacturing
- Retail
- Government and other not-for-profit entities
- Tax agencies
- Financial services

EMPLOYMENT STATISTICS

Employment and transfer rate of 100 percent – 100 percent continued their education.

RELATED PROGRAMS

Agricultural Business
Business Administration
Computer Information Systems
Financial Planning
Marketing
Technology Management

ACCOUNTING

AAS DEGREE – CODE #0630

Holly Chase, Program Coordinator
Email address: chasehs@alfredstate.edu

The accounting program is one of our most established and respected within the business discipline. It is a computer-based program in which the latest accounting theory and real-world practice receive equal emphasis as applied to both financial and managerial accounting issues. If you’re looking to enter the job market upon graduation or if you’re considering an advanced degree, this major is tailor-made for you.

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering the accounting program. Laptop specifications are available at http://www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

ACCOUNTING - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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| | | | |
| Finance Accounting | Managerial Accounting | Intermediate Accounting I | Intermediate Accounting II |
| Freshman Composition | Business | Accounting | Accounting |
| Info Technology | Communication | Principles of | Gen Ed Natural |
| Elective | Intro Personal Financial Plan | Macroeconomics | Science Elective |
| Principles of Marketing | Math Elective | Tax Accounting I | Business Law II |
| Gen Ed Math Elective | 3 | 3 | 3 |
| Math Elective | 4 | 3 | |
| 16 | 3 | 3 | |

GRADUATION REQUIREMENTS

62 semester hours, including 20 hours in major field with a 2.0 cumulative index in such courses, as well as six credit hours of math.

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in ACCT 4523 Intermediate Accounting II. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $23 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?
The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
The BTech in the agribusiness management program is designed to provide you, tomorrow’s agricultural entrepreneurs, with the skills to make local agriculture economically viable through the application of traditional production practices and the development of value-added (VA) products. You will take production courses to build a strong foundation in agriculture, value-added courses to develop non-traditional agriculture skills, and business courses to understand marketing and financial management.

This program will appeal to both traditional agriculture students who come from a farm background and to students who are new to agriculture. This program will prepare students to be successful in their efforts to improve the profitability of an existing farm or start a new agricultural venture.

ADVANTAGES
• Our graduates have the technical knowledge of agricultural production practices, land and water resources, management, and agricultural markets necessary to enter nearly any facet of the agribusiness field.
• Our students have hands-on experience with modern automated agricultural production systems, organic farming methods, and value added agriculture.
• Our students have the opportunity to work on the college farm and learn first-hand how to manage multiple species in modern high-tech facilities.
• Our students also learn the application of fundamental business management skills to agriculture.

RELATED CLUBS AND ACTIVITIES
Students have the opportunity to participate in the Collegiate Agricultural Leaders (CAL) Club, Collegiate FFA, Equestrian Club, Dairy Judging Team, Agricultural Skills Day, Spring Fling Consignment Sale, Community-Supported Agriculture projects, local foods projects, showmanship contests, and Sustainability Club.

OCCUPATIONAL OPPORTUNITIES
• Management or ownership of commercial farms
• Agricultural credit officers for banks, government, loan agencies, and farm cooperative loan agencies.
• High school agriculture teacher/agriculture educator
• Writers of technical publications, radio and TV scripts, news items for magazines and newspapers, education and public relations materials
• Manager/assistant managers of farm supply stores
• Warehouse managers for farm chemicals, feed, seed, and fertilizers
• Chain store and retail food management
• Agricultural consulting services
• Ag education
• Cooperative Extension

EMPLOYMENT STATISTICS
Employment and continuing education data not available

RELATED PROGRAMS
Agricultural Technology
Agricultural Business
Agricultural Automation and Robotics

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
• Required: Algebra, Geometry, Biology

A typical day consists of two, one-hour lectures and a two-hour studio in the first and second years. At the junior and senior levels, three-hour studios are required.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
**TYPICAL EIGHT-SEMESTER PROGRAM**

### First
- **ANSC 1204** Introduction to Animal Science 4
- **AGRI 1001** Farm Practicum I 1
- **BIOL 1304** Botany 4
- **COMP 1503** Freshman Composition 3
- **GLST 2113** Global & Diverse Perspectives 3

### Second
- **AGPS 1104** Soils 4
- **MATH 1033** College Algebra 3
- **OR** Statistics I 3
- **MATH 1123** Principles of Macroeconomics 3
- **SPCH 1083** Effective Speaking 3
- **SPCH xxx3** Effective Speaking or Equivalent 3
- **XXX 2** Ag Elective 2
- **AGRI 2001** Farm Practicum II 1

### Third
- **AGEC 3213** Farm & Rural Business Mgmt I 3
- **XXX 2** Ag Elective 2
- **AGPS 2113** Field & Forage Crops 3
- **ACCT 1124** Financial Accounting 4
- **LITR 2** Literature Elective 3
- **AGRI 3001** Farm Practicum III 1

### Fourth
- **ACCT 2224** Managerial Accounting 4
- **AGRI 2101** Sophomore Seminar 1
- **XXX 3** Gen Education Elective 3
- **AGEC 4303** Farm & Rural Business Mgmt II 3
- **XXX 3** Gen Education Elective 3
- **AGRI 4001** Farm Practicum IV 1

### Fifth
- **AGEC 3** Ag Business Elective (upper) 3
- **XXX 3** Technical Elective 3
- **XXX 3** Ag or Business Elective (upper) 3
- **XXX 3** Technical Elective 3
- **TGMT 7153** Principles of Management 3

### Sixth
- **ECON 2023** Principles of Microeconomics 3
- **MKTG 6003** Strategic Marketing 3
- **BUAD 7023** Legal Environment of Business 3
- **XXX 3** Technical Elective 3
- **XXX 3** Technical Elective 3

### Seventh
- **BUAD 5023** Human Resource Management 3
- **COMP 5703** Technical Writing II 3
- **BUAD 7004** Small Business Planning & Mgmt 4
- **AGRI 3** AGRI/AGPS Elective (upper) 3
- **XXX 3** Open Elective (upper) 3

### Eighth
- **AGRI 7002** Senior Seminar/ Capstone Proj 2
- **AGRI XXXX** Ag Internship or 12 upper division elective 12

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**Graduation Requirements**
- Total minimum credit hours for graduation is 120.
- A cumulative overall index of at least 2.0 is required in order to graduate.
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State.

**Additional Program Information**
- Seven of the 10 SUNY-approved General Education categories must be fulfilled
Agricultural Automation and Robotics
AAS Degree - Code #2917
Dr. Philip Schroeder, Department Chair and Program Coordinator
Email Address: Schroedp@alfredstate.edu

Careers related to agriculture are diverse and constantly changing. Today's students need the flexibility to tailor a degree to suit their needs. That's why our agricultural automation and robotics curriculum has been designed to prepare students to enter the workforce as an agricultural automation technician or continue their education in one of Alfred State's baccalaureate programs.

Advantages
- Opportunities for hands-on experience with automated milking equipment.
- Hands-on experience and class work in both agriculture and engineering.
- The only program of its kind in the US.

Direct Entry into Baccalaureate Degree Programs
Alfred State agricultural automation and robotics graduates may also enter directly into either the agribusiness management BTech, interdisciplinary studies BTech, or the technology management BBA degree program.

Related Clubs and Activities
Students have the opportunity to participate in the Collegiate Agricultural Leaders (CAL) Club, Collegiate FFA, Equestrian Club, Dairy Judging Team, Agricultural Skills Day, Spring Fling Consignment Sale, Community Supported Agriculture projects, local foods projects, showmanship contests, and Robotics Club.

Continuing Education Opportunities
Many schools, including Cornell University, grant full credit to students wishing to transfer to four-year programs. A formal articulation agreement exists between Alfred State and Cornell University for transfer options.

Occupational Opportunities
- Installation and maintenance of agricultural automation equipment
- Agricultural automation equipment operations
- Agricultural automation equipment research and development
- Salespeople and consultants for agricultural equipment distributors

Employment Statistics
Employment statistic data not available

Related Programs
Agricultural Technology
Agricultural Business
Electrical Engineering Technology
Mechanical Engineering Technology
Mechatronics Technology

Entrance Requirements/Recommendations
Required: Algebra, Geometry, Algebra 2
Recommended: Physics

Office of Accessibility Services
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

Typical Four-Semester Program

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<td>ANSC 1204 Introduction to Animal Science</td>
<td>AGPS 1104 Soils</td>
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<tr>
<td>AGRI 1001 Farm Practicum I</td>
<td>AGRI 2102 Ag Equip Maint and Rep</td>
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<td>MATH 1323 OR HIGHER</td>
<td>MEC 1203 Materials Science</td>
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<tr>
<td>COMP 1503 Freshman Composition</td>
<td>ELET 1142 Electronic Fabrication</td>
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<tr>
<td>MEC 1003 Intro to Mechanical Eng Tech</td>
<td>AGEC 2101 Farm Records</td>
</tr>
<tr>
<td>ELET 1202 Intro to Electrical Eng Tech</td>
<td>GLST 2113 OR GE Equivalent</td>
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</tbody>
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Third
AGRI 4012 Internship

Fourth
AGRI 4103 Construct Techqs for Agrictr
AGRI 4900 Directed Study
MCET OR ELET 2423 1133 Circuit Fundamentals OR Digital Logic
MCET OR ELET 2461 1111 Circuit Fundamentals Lab OR Digital Logic Lab
XXX 4423 1113 Gen Ed & LAS Elective
CISY OR CISY 4423 1111 Intro to Mobil Robotics & Animation OR Computer Programming
SPCH OR GE Equivalent 1083 Effective Speaking OR GE Equivalent

Suggested Technical or Transfer-related Electives:
- MCET 2423 Circuits Fundamentals
- MCET 2461 Circuits Fundamentals Lab
- MEC 1663 Manufacturing Processes
- MEC 4003 Solid Modeling
- MEC 3334 Statics
- MEC 3223 Mechanical Design Principles
- MEC 4024 Dynamics
- MATH 1063 Tech Calc I
- ELET 2103 Electronics Theory I
- ELET 2151 Electronics Theory I
- ELET 4224 Alternative Energy Generation
- CHEM 1114 General Chemistry
- PHYS 1024 General Physics I
- AGPS 3004 Soil Fertility
- ANSC 3202 Dairy Management Analysis
- ANSC 3003 Feeds and Nutrition
- ANSC 3223 Dairy Calf Management
- ANSC 3103 Livestock Management & Production
- ANSC 3204 Dairy Cattle Production III
- AGPS 5103 Sustainable Vegetable Production Tech
- AGPS 5003 Integrated Pest Management
- AGRI 2013 Organic & Sustainable Ag Tech
- AGRI 6103 Precision Agriculture
- BIOL 2803 Environmental Sciences
- BIOL 2801 Environmental Sciences Lab
- BIOL 4254 General Microbiology
- BIOL 6534 Genetics
Graduation Requirements

Students must:

• Successfully complete the prescribed sequence of courses.
• Achieve a minimum index of 2.0 in their core courses.
• Achieve a minimum index of 2.0 overall.
• Be recommended by the department faculty.
AGRICULTURAL BUSINESS

AAS DEGREE - CODE #0511

Dr. Philip Schroeder, Program Coordinator
Email address: SchroedeP@alfredstate.edu

It's an exciting time to be an agricultural business student. In fact, one out of every six jobs in the American economy is related to agriculture and food businesses. So we've designed our agricultural business curriculum to provide you with the technical and business skills necessary to be successful in this dynamic field. Career opportunities in agribusiness range from managing a farm to working in the timber, banking, or publishing industries.

ADVANTAGE

- Our graduates have the technical knowledge of agricultural production practices, land and water resources, management, and agricultural markets necessary to enter nearly any facet of the agribusiness field.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate essential technical knowledge of animal husbandry methods.
- Demonstrate essential technical knowledge of crops, soils, and growing conditions.
- Demonstrate the ability to analyze information, and compare and contrast agricultural business management systems.
- Demonstrate the ability to find and use information related to agricultural business management.
- Demonstrate written and oral communication skills appropriate for agricultural business.
- Apply critical thinking and reasoning to agricultural business management.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State agricultural business graduates may enter directly into either the agribusiness management BTech, interdisciplinary studies BTech, or the technology management BBA degree program.

RELATED CLUBS AND ACTIVITIES

Students have the opportunity to participate in the Collegiate Agricultural Leaders (CAL) Club, Collegiate FFA, Equestrian Club, Dairy Judging Team, Agricultural Skills Day, Spring Fling Consignment Sale, Community-Supported Agriculture projects, local foods projects, showmanship contests, and Sustainability Club.

CONTINUING EDUCATION OPPORTUNITIES

Many schools, including Cornell University, grant full credit to students wishing to transfer to four-year programs.

A formal articulation agreement exists between Alfred State and Cornell University for transfer options.

OCCUPATIONAL OPPORTUNITIES

- Management or ownership of commercial farms
- Agricultural credit officers for banks, government, loan agencies, and farm cooperative loan agencies
- Feed, seed, and fertilizer sales technicians
- Writers of technical publications, radio and TV scripts, news items for magazines and newspapers, education and public relations materials
- Manager/assistant managers of farm supply stores
- Warehouse managers for farm chemicals, feed, seed, and fertilizers
- Chain store and retail food management
- Agricultural consulting services

EMPLOYMENT STATISTICS

Employment and continuing education rate of 80 percent – 40 percent are employed; 40 percent continued their education.

RELATED PROGRAMS

Accounting
Agricultural Technology Management

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Recommended: Algebra

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

AGRICULTURAL BUSINESS - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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GRADUATION REQUIREMENTS

Students must:

- successfully complete the prescribed sequence of courses
- achieve a minimum index of 2.0 in their core courses
- achieve a minimum index of 2.0 overall
- be recommended by the department faculty
AGRICULTURAL TECHNOLOGY
AAS DEGREE - CODE #0510
Dr. Philip Schroeder, Department Chair and Program Coordinator
Email: Schroepd@alfredstate.edu

Careers related to agriculture are diverse and constantly changing. Today’s students need the flexibility to tailor a degree to suit their needs. That’s why our agricultural technology curriculum has been designed to let you select the elective courses that fit your career goals. You can choose concentrations of courses in animal science, enhancing your knowledge of animal agriculture and/or dairy science, or enhance your knowledge of crops and plant sciences, including fruit and vegetable production.

ADVANTAGES
- Opportunities for hands-on experience with organic farming.
- Animal science concentration is a progressive practical program emphasizing dairy cattle management and provides both a science and a business background.
- Plant science concentration focuses on the management of soil to increase production of both human and animal food crops and the science and business behind it. It includes an emphasis on sustainability.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate essential technical knowledge of animal husbandry methods.
- Demonstrate essential technical knowledge of crops, soils, and growing conditions.
- Demonstrate the ability to analyze information, and compare and contrast agricultural management systems.
- Demonstrate the ability to find and use information related to agricultural production systems.
- Demonstrate written and oral communication skills appropriate for agricultural production systems.
- Apply critical thinking and reasoning to agricultural business management.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State agricultural technology graduates may enter directly into either the agribusiness management BTech, interdisciplinary studies BTech, or the technology management BBA degree program.

ANIMAL/DAIRY SCIENCE CONCENTRATION
The animal science concentration is a progressive practical program emphasizing dairy cattle management. The program offers both managerial and hands-on experiences. This concentration’s courses provide a science and business background. A strong emphasis is placed on application of these principles with a free-stall housed organic herd milked by a robot and our herds of Angus and Herford cattle, sheep, and meat goats. The farm also houses horses, pigs, and poultry that are used to extend learning opportunities for our students.

PLANT/CROPS/FRUIT/VEGETABLE CONCENTRATION
This curriculum emphasizes management of the soil to increase production of food crops for both human and livestock consumption. Students are usually interested in crop farming or market gardening careers. Students are taught conventional, natural, and organic food production systems. This concentration’s courses provide a science and business background. A strong emphasis is placed on application of sustainability principles on our farm, research plots, gardens, hydroponic systems, greenhouses, and high tunnels.

SHOWMANSHIP DAY
All students enrolled in agriculture classes truly enjoy participating in the annual showmanship activities each spring. Students can select a species of animal (cattle, horses, swine, alpacas, or sheep) to train, groom, and show in this annual competition. Family, friends, and alumni are invited to enjoy the competition and the awards barbecue following the showmanship contest.

RELATED CLUBS AND ACTIVITIES
Students have the opportunity to participate in the Collegiate Agricultural Leaders (CAL) Club, Collegiate FFA, Equestrian Club, Dairy Judging Team, Agricultural Skills Day, Spring Fling Consignment Sale, Community Supported Agriculture projects, local foods projects, showmanship contests, and Sustainability Club.

CONTINUING EDUCATION OPPORTUNITIES
Many schools, including Cornell University, grant full credit to students wishing to transfer to four-year programs. A formal articulation agreement exists between Alfred State and Cornell University for transfer options.

OCCUPATIONAL OPPORTUNITIES
- Owners, operators, managers, and herdsmen for dairy cattle and meat animal farms
- Fruit, vegetable, and field crop production
- Food industry
- Salespeople and consultants for feed, fertilizer, agricultural, and veterinary supply companies
- Agricultural banking and lending
- Inspectors of agricultural products
- Laboratory and field technicians for artificial insemination and veterinary supply companies
- Dairy farm inspectors

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 40 percent are employed; 80% continued their education.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra
Recommended: Geometry, Algebra 2, Biology, Chemistry

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### AGRICULTURAL TECHNOLOGY - AAS DEGREE

#### ANIMAL SCIENCE CONCENTRATION TYPICAL FOUR-SEMESTER PROGRAM

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If full-time student, may cross register at AU for equestrian classes.

#### PLANT SCIENCE CONCENTRATION TYPICAL FOUR-SEMESTER PROGRAM

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If full-time student, may cross register at AU for equestrian classes.

#### Suggested Agriculture or Transfer-Related Electives:

<table>
<thead>
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<th>Suggested Agriculture or Transfer-Related Electives</th>
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<td>Livestock Mgmt &amp; Production</td>
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<td>Organic &amp; Sustainable Ag Tech</td>
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<td>MATH</td>
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#### GRADUATION REQUIREMENTS

Students must:
- successfully complete the prescribed sequence of courses
- achieve a minimum index of 2.0 in core courses
- achieve a minimum index of 2.0 overall
- be recommended by the department faculty
Our four-year Bachelor of Science in architectural technology program is designed to provide students with a comprehensive architectural education. While the two-year AAS degree in architectural technology offers a broad range of skills, the four-year program continues the course of study by combining a holistic perspective of the built environment with an applied technical knowledge of construction systems and materials acquired throughout a four-year studio sequence.

All architecture degree programs share course work across the first two years, while the BS and BArch have some shared course work in the third and fourth years. This alignment demands that the AAS and BS in architectural technology are required to meet the same NAAB “Student Criteria” and “Program Criteria” that apply to the BArch program. The BArch program is the first and only fully accredited undergraduate professional architecture degree program in the SUNY system.

ADVANTAGES

• Broad exposure gives students the ability to be conversant with and/or seek employment within the architectural field, and also in related professions that engage the built environment.
• The degree may be accepted for credit toward professional licensure in New York State.
• Alfred State offers multiple study abroad options through our signature 12-week semester study abroad program (offered in conjunction with Sant'Anna Institute in Sorrento, Italy) and other programs offered in conjunction with SUNY partners. To learn more, see www.alfredstate.edu/study-abroad.

PROGRAM STUDENT LEARNING OUTCOMES

• PSLO.1. = NAAB PC.1. Career Paths — The program helps students understand the path to becoming a licensed architect in the United States and the range of career opportunities available to them that utilize the discipline’s skills and knowledge.
• PSLO.2. = NAAB PC.2 Design — The program promotes the role of design in shaping the built environment and conveys the methods by which design integrates multiple factors, in different settings and scales of development.
• PSLO.3. = NAAB PC.3 Ecological Knowledge and Responsibility — The program provides a holistic understanding of the dynamic between built and natural environments, enabling future architects to responsibly mitigate climate change by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities.
• PSLO.4. = NAAB PC.4 History and Theory — The program prepares students to understand the histories and theories of architecture and urbanism, framed by broad social, cultural, economic, and political forces.
• PSLO.5. = NAAB PC.5 Innovation — The program expands students’ understanding of the field and encourages exploration, risk-taking, and inventiveness.
• PSLO.6. = NAAB PC.6 Leadership and Collaboration — The program helps students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.
• PSLO.7. = NAAB PC.7 Learning and Teaching Culture — The program fosters a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among the members of its faculty, student body, administration, staff, and the profession.
• PSLO.8. = NAAB PC.8 Social Equity and Inclusive Environments — The program deepens students understanding of diverse cultural and social contexts and helps students translate that into built environments that support and include people who have different backgrounds, resources, and abilities.
• PSLO.9. = NAAB SC.1 Health, Safety, and Welfare in the Built Environment — How the program promotes students’ understanding of the role of the built environment in human health, safety, and welfare at multiple scales.
• PSLO.10. = NAAB SC.2 Professional Practice — How the program fosters an understanding of professional ethics, the regulatory standards, and the fundamental business processes relevant to architectural practice in the United States.
• PSLO.11. = NAAB SC.3 Regulatory Context — How the program enables students to understand the fundamental principles of life safety codes, and related regulations that apply to buildings and sites within the US, and the evaluative criteria architects use to assess those regulations as part of a project.
• PSLO.12. = NAAB SC.4 Technical Knowledge — How the program prepares students to understand the established and emerging systems, technologies, and assemblies of building construction, and the criteria architects use to assess those technologies against the design and performance objectives of projects.
• PSLO.13. = NAAB SC.5 Design Synthesis — Ability to make design decisions within an-architectural project while demonstrating broad synthesis and consideration of user requirements, regulatory requirements, site conditions, ecological concerns, and accessible design.
• PSLO.14. = NAAB SC.6 Building Integration — Ability to make design decisions within an architectural project while demonstrating broad integration and consideration of building envelope systems and assemblies, structural systems, environmental control systems and life safety systems.

CONTINUING EDUCATION OPPORTUNITIES

Graduates wishing to continue their education may choose to apply to master’s programs in architecture or related disciplines. The lengths of such programs vary and depend on institutional requirements.

CAREER OPPORTUNITIES

• Architectural designer
• Registered Architect
• 3D modeler/animator
• Building Information Modeling (BIM) manager
• Specifications writer
• Code enforcement official

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 73 percent are employed; 27 percent continued their education.

RELATED PROGRAMS

Construction Management

ENCENTREREQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2

Recommended: Pre-calculus, Physics

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TRANSFER STUDENTS

Prior to studio placement within the BS architectural technology program, applicants from schools or programs with which Alfred State College does not have an active articulation agreement must submit a comprehensive academic portfolio for review. This portfolio will include examples of student work, course syllabi, assignments, and grade reports and will be evaluated along with the student’s overall grade point average and studio course grades.

Students applying for transfer from schools with which Alfred State College has an existing and active articulation agreement (SUNY Delhi, Dutchess CC, Erie CC, Finger Lakes CC, Hudson Valley CC, SUNY Morrisville, Onondaga CC, Orange County CC) may submit a condensed design portfolio.

Alfred State College uses SlideRoom to collect portfolio details, which will guide all students through the process of assembling the correct materials for the portfolio.
TYPICAL PROGRAM
In the first and second years, a typical day consists of two one-hour lectures and a two-hour studio. At the third-year and fourth-year levels, the studio meeting times are three hours. Students can expect to spend additional time working on projects and course work out of studio.

REQUIRED EQUIPMENT
All students in both the architecture and interior design programs are required to purchase a computer in addition to other equipment. Typically the costs of these purchases can be covered using financial aid. Please consult a financial aid counselor for further details. A tier 2 laptop computer is required for students entering this degree program. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

GENERAL NOTES:
Enter level of student into math and composition/literature sequences is a function of student’s high school preparation and mathematics and English placement examinations.

Math through Technical Calculus I must be completed. Students who start at a higher level of math must meet SUNY general education and campus liberal arts and sciences course credit requirements for graduation.

Minimum combined GPA of 3.0 is required in Alfred State studio courses (ARCH 1184, ARCH 2394, ARCH 3104, and ARCH 4304) or comparable courses at another institution to guarantee admission into ARCH 5306 - Design Studio 3. A portfolio review is required of all continuing or transfer students not meeting this requirement.

If entry-level math requirement is met, take LAS elective to complete degree requirements of 3 or 4 credits, otherwise take free elective.

Students must complete at least one course from seven of the 10 SUNY General Education knowledge areas.

Minimum grade of “C” is required for ARCH 2394, ARCH 3014, ARCH 4104, ARCH 5306, ARCH 6306, ARCH 7306, and ARCH 8306.

GRADUATION REQUIREMENTS
Successfully complete all courses in the prescribed eight-semester program and earn a minimum cumulative index of 2.0.

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<tr>
<td><strong>Second</strong></td>
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<tr>
<td>ARCH 2394</td>
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<td>ARCH 2014</td>
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<tr>
<td>COMP 1503</td>
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<td>MATH 2043</td>
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<td>ARCH 8306</td>
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Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and/or to pursue licensure.
ARCHITECTURAL TECHNOLOGY (AAS)

AAS DEGREE - CODE #0538

Lori Smithely, Program Coordinator
Email Address: smithela@alfredstate.edu

The AAS architectural technology program is structured to provide students with knowledge and skills for entry-level positions in the architectural office and related disciplines. The program consists of a core graphics sequence with additional courses in appropriate technical areas. Digital tools are integrated throughout the four-semester program.

All architecture degree programs share course work across the first two years, while the BS and BArch have some shared course work in the third and fourth years. This alignment demands that the AAS and BS in architectural technology are required to meet the same NAAB “Student Criteria” and “Program Criteria” that apply to the BArch program. The BArch program is the first and only fully accredited undergraduate professional architecture degree program in the SUNY system.

ADVANTAGES

- Students gain an understanding of how design solutions affect and are impacted by construction systems, mechanical, electrical and plumbing systems, structures, building methods, and materials.
- Broad exposure gives students the ability to be conversant with and/or seek employment with all related professions within the architectural field.
- The degree may be accepted for credit toward professional licensure in New York State.

PROGRAM STUDENT LEARNING OUTCOMES

- PSLO.1. = NAAB PC.1. Career Paths — The program helps students understand the path to becoming a licensed architect in the United States and the range of career opportunities available to them that utilize the discipline’s skills and knowledge.
- PSLO.2. = NAAB PC.2 Design — The program promotes the role of design in shaping the built environment, and conveys the methods by which design integrates multiple factors, in different settings and scales of development.
- PSLO.3. = NAAB PC.3 Ecological Knowledge and Responsibility — The program provides a holistic understanding of the dynamic between built and natural environments, enabling future architects to responsibly mitigate climate change by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities.
- PSLO.4. = NAAB PC.4 History and Theory — The program prepares students to understand the histories and theories of architecture and urbanism, framed by broad social, cultural, economic, and political forces.
- PSLO.5. = NAAB PC.5 Innovation — The program expands students’ understanding of the field and encourages exploration, risk-taking, and inventiveness.
- PSLO.6. = NAAB PC.6 Leadership and Collaboration — The program helps students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.
- PSLO.7. = NAAB PC.7 Learning and Teaching Culture — The program fosters a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among the members of its faculty, student body, administration, staff, and the profession.
- PSLO.8. = NAAB PC.8 Social Equity and Inclusive Environments — The program deepens students’ understanding of diverse cultural and social contexts and helps students translate that into built environments that support and include people who have different backgrounds, resources, and abilities.
- PSLO.9. = NAAB SC.1 Health, Safety, and Welfare in the Built Environment — How the program promotes students’ understanding of the role of the built environment in human health, safety, and welfare at multiple scales.
- PSLO.10. = NAAB SC.2 Professional Practice — How the program fosters an understanding of professional ethics, the regulatory standards, and the fundamental business processes relevant to architectural practice in the United States.
- PSLO.11. = NAAB SC.3 Regulatory Context — How the program enables students to understand the fundamental principles of life safety, land use, and related regulations that apply to buildings and sites within the US, and the evaluative criteria architects use to assess those regulations as part of a project.
- PSLO.12. = NAAB SC.4 Technical Knowledge — How the program prepares students to understand the established and emerging systems, technologies, and assemblies of building construction, and the criteria architects use to assess those technologies against the design and performance objectives of projects.
- PSLO.13. = NAAB SC.5 Design Synthesis — Ability to make design decisions within an architectural project while demonstrating broad synthesis and consideration of user requirements, regulatory requirements, site conditions, ecological concerns, and accessible design.
- PSLO.14. = NAAB SC.6 Building Integration — Ability to make design decisions within an architectural project while demonstrating broad integration and consideration of building envelope systems and assemblies, structural systems, environmental control systems and life safety systems.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State architectural technology AAS graduates may enter directly into either the architectural technology BS or the architecture BArch programs (portfolio review may be required). AAS students who elect to apply for internal transfer to BS or BArch programs need to have completed either MATH 2043 (College Trigonometry) or MATH 1054 (Precalculus). Please note that a minimum combined GPA of 3.0 is required in Alfred State studio courses (ARCH 1184, ARCH 2394, ARCH 3104, and ARCH 4304) to guarantee admission into ARCH 5306 - Design Studio 3. Architectural technology AAS graduates may also enter directly into the construction supervision B Tech, the interdisciplinary studies B Tech, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES

Graduates may enter the workforce or may continue in Alfred State’s architectural technology BS or BArch programs. Graduates may also transfer to professional or pre-professional degree programs at other institutions. Transfer is contingent on program and institution.

CAREER OPPORTUNITIES

- Architectural technician
- Architectural drafter
- Product detailer
- Space planner
- Estimator
- Manufacturer’s sales representative

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent continued their education.

RELATED PROGRAMS

Construction Engineering Technology
Interior Design

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TYPICAL PROGRAM

In the first and second years, a typical day consists of two one-hour lectures and a two-hour studio. Students can expect to spend additional time working on projects and course work out of studio.

GENERAL NOTES:

Students must complete at least one course from each of five SUNY General Education knowledge areas.
Entry level of student into math and composition/literature sequences is a function of student’s high school preparation and mathematics and English placement examinations.

Math through Technical Calculus I must be completed. Students who start at a higher level in math must meet all SUNY general education and campus liberal arts and sciences course credit requirements for graduation.

Minimum grade of “C” is required for ARCH 1184, ARCH 2394, ARCH 3104, and ARCH 4304.

If entry-level math requirement is met, take LAS elective to complete degree requirements of 3 credits, otherwise take free elective.

**GRADUATION REQUIREMENTS**

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative index of 2.0, which is equivalent to a “C” average.

**REQUIRED EQUIPMENT**

All students in both the architecture and interior design programs are required to purchase a computer in addition to other equipment. Typically the costs of these purchases can be covered using financial aid. Please consult a financial aid counselor for further details. A Tier 3 or 4 laptop computer is required for students entering this degree program. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

**ARCHITECTURAL TECHNOLOGY - AAS DEGREE**

**TYPICAL FOUR-SEMESTER PROGRAM**

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<td>Design Fundamentals 1</td>
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<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
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<td>MATH 1034</td>
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<td>Structures I</td>
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<td>ARCH 4013</td>
<td>Municipal Codes &amp; Regulations</td>
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<td>SPCH 1083</td>
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</tbody>
</table>

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and/or pursue licensure.
ARCHITECTURE

BARCH DEGREE – CODE #0135

Matthew DiRado, Program Coordinator
Email Address: diradoma@alfredstate.edu

You’re considering studying architecture? You have found the right place! The Bachelor of Architecture (BArch) program helps prepare students to be well-rounded, creative, and socially responsible architects who shape our world through the design of meaningful and inspirational spaces. The BArch is a fully accredited professional program, preparing students for employment and the opportunity to pursue licensure shortly after graduation, reducing the need for further graduate education or an advanced degree.

ADVANTAGES

• Students enrolled in the BArch program have had the opportunity to select a “cognate area of focus to allow them to develop additional expertise.” A list of options is available in the department office or from an academic advisor.

• Upon successful completion of the BArch degree, graduates may begin an internship and the other professional steps leading to licensure as a registered, practicing architect. Students may participate in the Architectural Experience Program (AXP) while enrolled at Alfred State.

• The BArch program provides a career-focused, project-based education integrating theory and practice with a strong multidisciplinary foundation that draws upon an institutional heritage of building and technology.

• Alfred State offers multiple study abroad options through our signature 12-week semester study abroad program (offered in conjunction with Sant’Anna Institute in Sorrento, Italy) and other programs offered in conjunction with SUNY partners. To learn more, see www.alfredstate.edu/study-abroad.

NAAB ACCREDITATION INFORMATION

In the United States, most state registration boards require a degree from an accredited professional degree program as a prerequisite for licensure. The National Architectural Accrediting Board (NAAB), which is the sole agency authorized to accredit professional degree programs in architecture offered by institutions with US regional accreditation, recognizes three types of degrees: the Bachelor of Architecture, the Master of Architecture, and the Doctor of Architecture. A program may be granted an eight-year term, an eight-year term with conditions, or a two-year term of continuing accreditation, or a three-year term of initial accreditation, depending on the extent of its conformance with established educational standards. Doctor of Architecture and Master of Architecture degree programs may require a non-accredited undergraduate degree in architecture for admission. However, the non-accredited degree is not, by itself, recognized as an accredited degree.

Alfred State Department of Architecture and Design offers the following NAAB-accredited degree program: Bachelor of Architecture (BArch) 156 Credit Hours

A detailed archive of NAAB-related accreditation documents is available on our website.

POST-GRADUATE STUDIES

BArch graduates who wish to continue academic study may choose to apply at another institution to master’s or doctoral programs in architecture or related disciplines.

CAREER OPPORTUNITIES

A wide range of career opportunities are available to graduates of this accredited degree: intern architect, practicing architect (after successfully meeting state registration requirements), or practitioner in related sub-fields that include, but not limited to: sustainable architecture, urban design, interior architecture, adaptive reuse and historic preservation, building construction management, hospitality design, lighting design, acoustical design, religious building design, and others.

PROGRAM STUDENT LEARNING OUTCOMES

• PSLO.1 = NAAB PC.1. Career Paths — The program helps students understand the path to becoming a licensed architect in the United States and the range of career opportunities available to them that utilize the discipline’s skills and knowledge.

• PSLO.2 = NAAB PC.2 Design — The program promotes the role of design in shaping the built environment, and conveys the methods by which design integrates multiple factors, in different settings and scales of development.

• PSLO.3 = NAAB PC.3 Ecological Knowledge and Responsibility — The program provides a holistic understanding of the dynamic between built and natural environments, enabling future architects to responsibly mitigate climate change by leveraging ecological, advanced building performance, adaptation, and resilience principles in their work and advocacy activities.

• PSLO.4 = NAAB PC.4 History and Theory — The program prepares students to understand the histories and theories of architecture and urbanism, framed by broad social, cultural, economic, and political forces.

• PSLO.5 = NAAB PC.5 Innovation — The program expands students’ understanding of the field and encourages exploration, risk-taking, and inventiveness.

• PSLO.6 = NAAB PC.6 Leadership and Collaboration — The program helps students understand approaches to leadership in multidisciplinary teams, diverse stakeholder constituents, and dynamic physical and social contexts, and learn how to apply effective collaboration skills to solve complex problems.

• PSLO.7 = NAAB PC.7 Learning and Teaching Culture — The program fosters a positive and respectful environment that encourages optimism, respect, sharing, engagement, and innovation among the members of its faculty, student body, administration, staff, and the profession.

• PSLO.8 = NAAB PC.8 Social Equity and Inclusive Environments — The program deepens students understanding of diverse cultural and social contexts and helps students translate that into built environments that support and include people who have different backgrounds, resources, and abilities.

• PSLO.9 = NAAB SC.1 Health, Safety, and Welfare in the Built Environment — How the program promotes students’ understanding of the role of the built environment in human health, safety, and welfare at multiple scales.

• PSLO.10 = NAAB SC.2 Professional Practice — How the program fosters an understanding of professional ethics, the regulatory standards, and the fundamental business processes relevant to architectural practice in the United States.

• PSLO.11 = NAAB SC.3 Regulatory Context — How the program enables students to understand the fundamental principles of life safety, land use, and related regulations that apply to buildings and sites within the US, and the evaluative criteria architects use to assess those regulations as part of a project.

• PSLO.12 = NAAB SC.4 Technical Knowledge — How the program prepares students to understand the established and emerging systems, technologies, and assemblies of building construction, and the criteria architects use to assess those technologies against the design and performance objectives of projects.

• PSLO.13 = NAAB SC.5 Design Synthesis — Ability to make design decisions within an architectural project while demonstrating broad synthesis and consideration of user requirements, regulatory requirements, site conditions, ecological concerns, and accessible design.

• PSLO.14 = NAAB SC.6 Building Integration — Ability to make design decisions within an architectural project while demonstrating broad integration and consideration of building envelope systems and assemblies, structural systems, environmental control systems and life safety systems.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2, and Pre-Calculus.

Recommended: Physics is strongly recommended.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

PORTFOLIO REQUIREMENTS

All students who apply to the BArch program are required to submit a portfolio of creative work that demonstrates their interest in design and the built environment.
Through the portfolio, the department hopes to get a sense of the applicant as a creative individual. We understand that the portfolio will not demonstrate mastery of architecture, but instead present a student’s potential through explorations and representation of the built environment, which may be presented as art work such as drawings, sketches, models, sculpture, or photographs. The portfolio should focus mainly on the representation of space, but may also include a small representation of creative work such as woodworking, crafts, graphic design, and/or other creative endeavors (e.g., high school, college course) or from personal pursuits (e.g., employment, hobbies). Each portfolio should be a balanced representation of both two- and three-dimensional works.

Alfred State College uses SlideRoom to collect portfolio details, which will guide all students — new or transfer — through the process of assembling the correct materials for the portfolio.

**PORTFOLIO REQUIREMENTS FOR TRANSFER STUDENTS**

Prior to studio placement within the architectural technology BArch program, applicants from schools or programs with which Alfred State College does not have an active an articulation agreement must submit a comprehensive academic portfolio for review. This portfolio will include examples of student work, course syllabi, assignments, and grade reports and will be evaluated along with the student’s overall grade point average and studio course grades.

Students applying for transfer from schools with which Alfred State College has an existing and active articulation agreement (SUNY Delhi, Dutchess CC, Erie CC, Finger Lakes CC, Hudson Valley CC, SUNY Morrisville, Onondaga CC, Orange County CC) may submit a condensed design portfolio.

Alfred State College uses SlideRoom to collect portfolio details, which will guide all students — new or transfer — through the process of assembling the correct materials for the portfolio.

**EMPLOYMENT STATISTICS**

Employment and continuing education rate of 100 percent – 85 percent are employed; 15 percent continued their education.

**TYPICAL PROGRAM**

In the first and second years, a typical day consists of two one-hour lectures and a two-hour studio. At the third-year, fourth-year, and fifth-year levels, the studio meeting times are three hours. Students can expect to spend additional time working on projects and course work outside of studio.

**GENERAL NOTES:**

Students must complete at least one course from seven of the 10 SUNY General Education knowledge areas.

All students who transfer in courses from another institution must undergo an academic portfolio review before placement in any studio course.

Minimum of "C" is required to continue from one studio course to the next. (This includes: ARCH 1184, ARCH 2394, ARCH 3104, ARCH 4304, ARCH 5306, ARCH 6306, ARCH 7306, ARCH 8306, ARCH 8716, and ARCH 8776.)

Entry level of student into math and composition/literature sequences is a function of student’s high school preparation and mathematics and English placement examinations.

Math through Technical Calculus I must be completed. Students who start at a higher level of math must meet all SUNY general education and campus liberal arts and sciences course credit requirements for graduation.

**GRADUATION REQUIREMENTS**

Successfully complete all courses in the prescribed 10-semester program at a minimum cumulative index of 2.5, which is equivalent to a “C+” average.

**REQUIRED EQUIPMENT**

All students in both the architecture and interior design programs are required to purchase a computer in addition to other equipment. Typically the costs of these purchases can be covered using financial aid. Please consult a financial aid counselor for further details. A tier 3 or 4 computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
## ARCHITECTURE - BARCH DEGREE

### TYPICAL TEN-SEMESTER PROGRAM

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<td>ARCH 1184</td>
<td>Design Fundamentals 1</td>
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<td>Survey of Design</td>
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<td>Architectural History I</td>
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<td>ARCH 3003</td>
<td>Environmental Controls 1</td>
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<td>SOCI 1163</td>
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<td>ARCH 4013</td>
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<td>CIVL 4103</td>
<td>Structures I</td>
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<td>SOCI 5213</td>
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<td></td>
<td>ARCH 8733</td>
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<td></td>
<td>ARCH 8753</td>
<td>Advanced Structural Concepts</td>
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<td><strong>Tenth</strong></td>
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<td>ARCH 8793</td>
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</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and/or pursue licensure.
AUTOBODY REPAIR

AOS DEGREE – CODE #0453

Jeffrey Stevens, Department Chair and Program Coordinator
Email address: stevenjs@alfredstate.edu

This specialization will prepare you with 1,800 hours of practical experience and classroom training applicable to the dynamic autobody repair field. Your laboratory experience will range from spot repair, total wreck repair, and specialized paint jobs to estimating, panel replacement, and frame straightening.

ADVANTAGES

• Inter-Industry Conference on Automotive Collision Repair (ICAR) certified.
• Students successfully completing autobody repair may wish to remain at Alfred State in the automotive service technician; heavy equipment, truck and diesel technician; or motorsports programs for another one-and-one-half years to receive a second degree upon successful completion of course. This requires department chair’s approval.

PROGRAM STUDENT LEARNING OUTCOMES

• Demonstrate a focused, coherent, organized written report.
• Perform mathematical calculations required for entry-level automotive employment.
• Demonstrate a functional ability to read and retain/apply written instructions and specifications relevant to their work environment.
• Demonstrate critical thinking and program-solving skills to work with sheet metal repair.
• Demonstrate ability to identify different types of frame damage.
• Demonstrate painting skills for B/C and single stage painting.
• Demonstrate the ability to repair frame and structure collision damage.
• Demonstrate the ability to identify, evaluate, remove, and replace various mechanical components.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State autobody repair graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES

• Autobody repair specialist
• Automotive refinisher
• Body shop owner
• Frame straightening specialist
• Shop foreman
• Service manager
• Wheel alignment specialist

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 83 percent are employed; 17 percent continued their education.

RELATED PROGRAMS

Automotive Service Technician
Heavy Equipment, Truck and Diesel Technician
Mechanical Engineering Technology
Motorsports Technology
Welding Technology

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Recommended: Algebra

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

TECHNICAL STANDARDS

It is essential that students in this degree program are able to participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory experiences required for completion of the program. Students in this degree program should be able to:

1. Lift 50 pounds to industry standard automotive lift height
2. Effectively communicate with a person six (6) to ten (10) feet away.
3. Visually decipher small images on a monitor or digital display.
4. Distinguish sounds associated with mechanical failures.
5. Comprehend written information found in service repair resources.
6. Possess a valid motor vehicle driver’s license.
7. Function in a safe manner, not placing themselves, faculty, staff, other students, or property in jeopardy.
8. Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.

CERTIFICATION OR LICENSURE

Graduates may take Automotive Service Excellence (ASE) certification exams. Graduates are also eligible to take the New York State inspection certification. Students may take the ASE exam for certification in refrigerant recycling and recovery during their senior year.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu, or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

AUTOBODY REPAIR - AOS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<th>Semester</th>
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<td>AUTO 1326</td>
<td>Body Welding</td>
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<td>First</td>
<td>AUTO 1313</td>
<td>Wrecker Operation &amp; Estimating</td>
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<td>Second</td>
<td>AUTO 1306</td>
<td>Rust Repair</td>
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<td>AUTO 1343</td>
<td>Refinishing Basics</td>
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<td>Third</td>
<td>AUTO 2309</td>
<td>Brakes, Susp &amp; Structural</td>
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<tr>
<td>Third</td>
<td>AUTO 1344</td>
<td>Reconditioning &amp; Mechanical Components</td>
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<td>AUTO 2365</td>
<td>Chassis Electrical</td>
<td>5</td>
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<td>Fourth</td>
<td>AUTO 3819</td>
<td>Auto Body Skis/ Computized Est</td>
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<tr>
<td>Fourth</td>
<td>AUTO 3809</td>
<td>Inspect, Gen Alignment &amp; AC</td>
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</tbody>
</table>

GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
AUTOMOTIVE SERVICE TECHNICIAN

AOS DEGREE – CODE #0451

Jeffrey Stevens, Department Chair and Program Coordinator
Email address: stevensj@alfredstate.edu

This specialization includes 1,800 hours of practical and classroom training in general automotive repair geared to automotive dealership and independent garage practice. You will receive hands-on experience with all types of automobiles, including domestic, imported, gasoline, diesel, and alternative fuels with labs taught by experts in the field. All systems of the automobile are covered in the instruction, including the latest gasoline fuel injection, electronic controls, emission controls, and automatic transmission overhaul.

ADVANTAGES

- Master certified by the National Automotive Technicians Educational Foundation, Inc. (NATEF).
- NYS Licensed Inspection Station.
- Students successfully completing the general automotive service technician program may return for a third year (senior year) in heavy equipment, truck and diesel technician, motorsports technology, or motorcycle and power sports technology and earn a second associate degree.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate a focused, coherent, organized written report.
- Perform mathematical calculations required for entry-level automotive employment.
- Demonstrate a functional ability to read and retain/apply written instructions and specifications relevant to their work environment.
- Demonstrate the ability to understand operation and diagnostic procedures of modern vehicle electrical and electronic systems.
- Demonstrate the ability to describe operation, diagnose, and repair automotive drive train systems.
- Demonstrate the ability to describe operation, diagnose, and repair modern engines.
- Demonstrate the ability to describe operation, diagnose, and repair modern automotive steering, brakes, and suspension systems.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State automotive service technician graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES

- Automatic transmission technician
- Automotive technician specialist
- Automotive diagnostic specialist
- Brake specialist
- Drivability specialist
- Fuel system specialist
- Independent repair shop owner
- Manufacturer’s service representative
- Marine engine service specialist
- Service manager
- Service salesperson
- Shop foreman
- Wheel alignment specialist

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 66 percent are employed; 32 percent continued their education.

RELATED PROGRAMS

- Autobody Repair
- Heavy Equipment, Truck and Diesel Technician
- Mechanical Engineering Technology
- Motorsports Technology
- Welding Technology

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the program mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at https://www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Recommended: Algebra

TECHNICAL STANDARDS

It is essential that students in this degree program are able to participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory experiences required for completion of the program. Students in this degree program should be able to:

1. Lift 50 pounds to industry standard automotive lift height
2. Effectively communicate with a person six (6) to ten (10) feet away.
3. Visually decipher small images on a monitor or digital display.
4. Distinguish sounds associated with mechanical failures.
5. Comprehend written information found in service repair resources.
6. Possess a valid motor vehicle driver’s license.
7. Function in a safe manner, not placing themselves, faculty, staff, other students, or property in jeopardy.
8. Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.

CERTIFICATION OR LICENSURE

Graduates may take Automotive Service Excellence (ASE) certification exams. Students are eligible to take the New York State inspection certification upon successful completion of their freshman year.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

AUTOMOTIVE SERVICE TECHNICIAN - AOS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

**First**

- AUTO 1109 Brakes, Steering & Susp Sys 9
- AUTO 1124 Automotive Welding 4
- AUTO 1135 Auto Bsc Elctrn & Compt Overhl 5

**Second**

- AUTO 1169 Auto Electric, Fuel & Emission 9
- AUTO 1149 Inspect, Main, AC Htng & Clnrg 9

**Third**

- AUTO 3409 Engine Service 9
- AUTO 4449 Drive Train Service 9

**Fourth**

- AUTO 3429 Adv Elctrn & Engine Perfmc 9
- AUTO 4439 Shop Management & Enhanced Sys 9

GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
BIOLICAL SCIENCE
AAS DEGREE - CODE #1554

Stephen Bauer, Program Coordinator
Email address: bauersm@alfredstate.edu

The biological science degree is a hands-on program designed to prepare you to excel in various scientific laboratories or to continue your education in a number of science or pre-professional fields. The program provides a foundation in biology, chemistry, and mathematics as well as a common core of general education courses.

ADVANTAGES
Biological science is a flexible program that can be tailored to fit the educational requirements of a variety of laboratory-related occupations and transfer opportunities.

PROGRAM STUDENT LEARNING OUTCOMES

- Explain and apply the scientific method in order to document, interpret, and present results of an experiment.
- Evaluate scientific literature to summarize current thinking on a significant topic.
- Display effective interpersonal communication and work skills in the lecture and laboratory setting.
- Choose and employ proper safety practices in the laboratory.
- Demonstrate the calibration and operation of scientific instrumentation.
- Utilize gravimetric and volumetric methods to determine the physical and chemical properties of matter.
- Make both organic and inorganic compounds according to prescribed multi-step syntheses.
- Use microbiological techniques to isolate organisms in pure culture.
- Describe the association of structure and function of plants and animals.
- Classify groups of organisms according to taxonomic criteria and evolutionary relationships.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State biological science graduates may enter directly into the forensic science technology BS, health sciences BS, the interdisciplinaty studies BTech, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
The program also enables graduates to transfer to four-year programs in biology and chemistry as well as programs such as sports medicine, medical technology, ultrasound technology, and pre-professional programs (medicine, veterinary, dentistry, and pharmacy).

OCCUPATIONAL OPPORTUNITIES
- Environmental monitoring
- Pharmaceutical testing
- Wastewater treatment
- Laboratory technician

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 33 percent are employed; 67 percent continued their education.

RELATED PROGRAMS
Forensic Science Technology (BS)
Health Sciences (BS)

ENCENTR要求/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2, Biology, Chemistry
Recommended: SAT and/or ACT test scores

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TECHNICAL STANDARDS
It is essential that students in this degree program are able to fully and safely participate, with or without reasonable accommodation, in all classroom, laboratory, field, internship, and research experiences required for completion of the program. Students in this degree program should be able to:

- Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
- Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
- Communicate effectively, both orally and in writing.

GRADUATION REQUIREMENTS
A minimum of 63 credit hours is required for graduation, with an overall cumulative index of 2.0 or better. A grade of “C” or better is required in courses with BIOL or CHEM prefixes.

All laboratory-based courses for this academic program must be completed in an in-person format. Laboratory-based courses in the on-line format will not fulfill degree requirements

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

BIOLOGICAL SCIENCE - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<td>General Biology I</td>
<td>Chemical Principles I</td>
<td>General Chemistry</td>
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<td>1503</td>
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<tr>
<td>Freshman Composition</td>
<td>Literature Elective</td>
<td>Technical Elective</td>
<td>Topics in General Biology</td>
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<td>MATH</td>
<td>GLST</td>
<td>XXXX</td>
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<tr>
<td>xxxx</td>
<td>2113</td>
<td>xxxx</td>
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<td>Math Elective (MATH 1033 or greater)</td>
<td>Global &amp; Diverse Perspectives</td>
<td>Technical Elective</td>
<td>Open Elective</td>
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</table>

BIOLICAL SCIENCE

15-16

16-18

17-18

15-17

MATH courses must be at the level of MATH 1033 college algebra or above.

Technical Electives:
<table>
<thead>
<tr>
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<th>Course Title</th>
<th>Credits</th>
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<tr>
<td>AGPS 1103</td>
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<tr>
<td>AGPS 1104</td>
<td>Soils</td>
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<td>AGPS 5003</td>
<td>Integrated Pest Management</td>
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<tr>
<td>AGRI 2013</td>
<td>Organic &amp; Sustainable Ag Tech</td>
<td>3</td>
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<td>ANTH 5333</td>
<td>Medical Anthropology</td>
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<tr>
<td>BIOL 1013</td>
<td>Essentials of Exercise Physiol</td>
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<td>BIOL 1113</td>
<td>Biology of Human Sexuality</td>
<td>3</td>
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<td>BIOL 1223</td>
<td>Introduction to Forestry</td>
<td>3</td>
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<tr>
<td>BIOL 1304</td>
<td>Botany</td>
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<td>BIOL 1313</td>
<td>Nutrition</td>
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<tr>
<td>BIOL 1404</td>
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<td>Anatomy &amp; Physiology II</td>
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<tr>
<td>BIOL 2803</td>
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<td>BIOL 5003</td>
<td>Genomics</td>
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<td>BIOL 5013</td>
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<tr>
<td>BIOL 5104</td>
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<tr>
<td>BIOL 5223</td>
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<tr>
<td>BIOL 5503</td>
<td>Virology</td>
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<td>BIOL 6003</td>
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<tr>
<td>CHEM 5414</td>
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<td>CHEM 5900</td>
<td>Directed Study</td>
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<tr>
<td>CHEM 6614</td>
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<td>CHEM 7784</td>
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<td>COMP 5703</td>
<td>Technical Writing II</td>
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<tr>
<td>ENVR 4424</td>
<td>Envirnmntl Chem &amp; Microbiology</td>
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<td>FRSC 3113</td>
<td>Forensic Pathology</td>
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<tr>
<td>HLTH 5113</td>
<td>Complementary &amp; Altv Medicine</td>
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<tr>
<td>HLTH 5233</td>
<td>The Culture of Healthcare</td>
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<tr>
<td>MATH 1084</td>
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<tr>
<td>MATH 2124</td>
<td>Statistical Methods &amp; Analysis</td>
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<td>MEDR 1132</td>
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<tr>
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<tr>
<td>PHYS 2044</td>
<td>College Physics II</td>
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</table>
The building construction program will provide you with instruction in the basic skills required of the carpenter and the mason in the construction of residential or other light-frame commercial and masonry buildings. You will also gain extensive experience in building layout, foundations, framing, sheathing, exterior and interior trim, block work, brick, and concrete construction.

ADVANTAGES

- Coupled with practical experience, the program provides the necessary theory connected with carpentry and masonry operations, as well as blueprint reading, cost and materials estimating, surveying for building layout and control, and safety on the job.
- A large part of the program is actual on-the-job training under the supervision of qualified instructors. Frequently, concrete and lumber companies instruct students in the uses of their products.

PROGRAM STUDENT LEARNING OUTCOMES

- Measure, layout, and cut materials accurately and build various construction systems.
- Safely set up and operate construction tools and equipment.
- Accurately estimate materials for a project and explain how to manage materials and supervise people.
- Read and interpret construction prints.
- Demonstrate essential problem-solving skills generally employed in the construction industry.
- Demonstrate effective written construction communication.
- Demonstrate effective oral communication.
- Perform common mathematical construction calculations.
- Demonstrate the proper selection and installation of materials used to build various construction projects.
- Perform computer-based research and communication.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State building trades: building construction graduates may enter directly into the construction supervision BTech or technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the baccalaureate program in two additional years; others may complete the program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES

- Manufacturers
- Cabinetmaker
- Sales
- Shop foreman
- Installer (cabinets, etc.)
- Dealers
- Maintenance supervisor
- Carpenter
- Contractor
- Self-employment
- Expediter
- Construction superintendent
- Construction foreman
- Mason
- Estimator

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 53 percent are employed; 47 percent continued their education.

RELATED PROGRAMS

Heating, Ventilation, and Air Conditioning
# Building Trades: Building Construction - AOS Degree

## Typical Four-Semester Program

### First Semester
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BLCT 1202</td>
<td>Portable Tools &amp; Fastening Sys</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 1002</td>
<td>Intro to Construction Safety</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 1212</td>
<td>Foundation Systems &amp; Layout</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 1222</td>
<td>Construction Math</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 1232</td>
<td>Framing I</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 1242</td>
<td>Framing II</td>
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<tr>
<td>BLCT 1206</td>
<td>Building Construction Lab I</td>
<td>6</td>
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### Second Semester
<table>
<thead>
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<th>Course Title</th>
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</thead>
<tbody>
<tr>
<td>BLCT 2202</td>
<td>Insulation and Drywall</td>
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<tr>
<td>BLCT 2212</td>
<td>Exterior Building Envelope</td>
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</tr>
<tr>
<td>BLCT 2232</td>
<td>Siding and Cornices</td>
<td>2</td>
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<tr>
<td>BLCT 2242</td>
<td>Wood Products &amp; Fabrication</td>
<td>2</td>
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<tr>
<td>BLCT 2252</td>
<td>Intro to Print Reading &amp; Estim</td>
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<tr>
<td>BLCT 2262</td>
<td>Masonry</td>
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<td>BLCT 2206</td>
<td>Building Construction Lab II</td>
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### Third Semester
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<thead>
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<th>Course Title</th>
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<tbody>
<tr>
<td>BLCT 3602</td>
<td>Residential Remodel</td>
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<tr>
<td>BLCT 3612</td>
<td>Roofing Systems</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 3622</td>
<td>Advanced Print-reading &amp; Estim</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 3632</td>
<td>Exterior Construction Details</td>
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<tr>
<td>BLCT 3642</td>
<td>Interior Trims</td>
<td>2</td>
</tr>
<tr>
<td>BLCT 3652</td>
<td>Advanced Framing</td>
<td>2</td>
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<tr>
<td>BLCT 3606</td>
<td>Building Construction Lab III</td>
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### Fourth Semester
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<tbody>
<tr>
<td>BLCT 4302</td>
<td>Basic CAD-Residential Drawing</td>
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<tr>
<td>BLCT 4332</td>
<td>Green Building &amp; Bldg Science</td>
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</tr>
<tr>
<td>BLCT 4402</td>
<td>Wheeled Finishing &amp; Grading</td>
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<tr>
<td></td>
<td>OR</td>
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</tr>
<tr>
<td>BLCT 4432</td>
<td>Advanced Safety</td>
<td>2</td>
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<tr>
<td>BLCT 4342</td>
<td>Mechanical Systems</td>
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<tr>
<td>BLCT 4352</td>
<td>Interior Finishes</td>
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<tr>
<td>BLCT 4362</td>
<td>Cabinetry</td>
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<td>BLCT 4306</td>
<td>Building Construction Lab IV</td>
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</table>

### Technical Standards

It is crucial that all student applicants in this degree program must be able to meet the following requirements, with or without reasonable accommodation. Students who are enrolled in this degree program should have the physical capabilities to be able to engage in all training, field, and laboratory environments in a safe and ethical manner. Students must be able to:

- Lift and carry up to or 50 pounds of building materials/equipment without accommodations.
- Perform and function in a safe manner in all laboratory and classroom environments and off campus job site locations.
- Effectively communicate with classmates and instructional staff using appropriate visual and/or auditory communication from a distance of 20 feet.
- Physically setup, move, or climb ladders, scaffolding, etc., unaided, using the designated safety method.
- Identify and react to safety alarms which include, but not limited to, fire alarms, back up alarms and those meant for emergencies.
BUSINESS ADMINISTRATION

AS DEGREE – CODE #0671

James McGee, Program Coordinator
Email address: mcgeej@alfredstate.edu

Whether you’re interested in the management, administrative, or technical side of modern business, our degree programs will prepare you with the hands-on courses and real-world skills necessary to succeed in this ever-evolving field. Our business administration AS (transfer) program is designed primarily to provide you with the foundation needed to continue your formal education in the business field in a four-year program.

ADVANTAGES

• Prepares graduates for the rapid pace of technological advancement and an increasingly global society by emphasizing managerial and technical skills and the ability to stay abreast in the dynamic field of business in today’s economy.
• Students gain a thorough foundation in written and oral communication, presentation, and decision-making skills, as well as experience working as part of a team.

PROGRAM STUDENT LEARNING OUTCOMES

• Recognize the primary theories within the principle functional areas of business.
• Demonstrate professional business communication.
• Illustrate critical thinking and effective decision-making within the principle functional areas of business.
• Identify ethical issues within business.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State business administration graduates may enter directly into either the business administration BBA, the financial planning BBA, the interdisciplinary studies BTech, or the technology management BBA degree program at Alfred State.

CONTINUING EDUCATION OPPORTUNITIES

Students may transfer directly into one of our own BBA degree programs or to another college. Although not limited to these schools, common transfer institutions include: Alfred University, St. Bonaventure University, Rochester Institute of Technology, St. John Fisher College, SUNY at Albany, University at Buffalo, SUNY College at Brockport, SUNY College at Fredonia, SUNY College at Geneseo, SUNY College at Oneonta, SUNY College at Oswego, SUNY at Binghamton, Cornell University, Canisius College, Niagara University, and Hilbert College.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 21 percent are employed; 79 percent continued their education.

RELATED PROGRAMS

Accounting
Business Administration
Financial Planning
Marketing
Sport Management
Technology Management

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry

Recommended: Algebra 2

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

BUSINESS ADMINISTRATION - AS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

**First**

- XXXX
- COMP 1503
- CISY
- MATH
- MKTG 2073

**Second**

- BUAD 4203
- BUAD 2033
- LITR
- MATH
- GLST 2113

**Third**

- BUAD 3153
- BUAD 3043
- ACCT 1124
- ECON 1013
- XXXX

**Fourth**

- ECON 2023
- BUAD 4053
- XXXX
- XXXX
- ACCT 2224

Calculus I is essential to achieving junior status in business programs at the following SUNY campuses: the University at Buffalo, Binghamton University, and the University at Albany. Therefore, Calculus I is recommended if you are continuing your education at any one of those universities.

GRADUATION REQUIREMENTS

62 semester hours with a 2.0 cumulative index.

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in BUAD 4053 Business Law II. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $23 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
BUSINESS ADMINISTRATION (BBA)

BBA DEGREE – CODE #0280

BBA DEGREE - ACCELERATED - 3 YEAR - CODE #2602

Mark Bloxsom, Program Coordinator
Email address: bloxsomj@alfredstate.edu

Whether you’re interested in the management, administrative, or technical side of modern business, our degree programs will prepare you with the hands-on courses and real-world skills necessary to succeed in this ever-evolving field. Our business administration BBA offers you preparation for positions of leadership and responsibility in business and industry, governmental and not-for-profit organizations, and graduate study. Students develop important analytical and critical thinking skills necessary for success in today’s business environment.

ADVANTAGES

• Prepares graduates for the rapid pace of technological advancement and an increasingly global society by emphasizing managerial and technical skills and the ability to stay abreast in the dynamic field of business in today’s economy.
• The BBA degree in business administration is designed to allow students to enter as freshmen or to transfer in after earning their AAS or AS business degree.
• An accelerated three-year option exists for highly motivated and academically talented students.

PROGRAM STUDENT LEARNING OUTCOMES

• Demonstrate technical competence in domestic and global environments within the principle functional areas of business.
• Analyze business problems and devise solutions using critical thinking, decision-making processes, and decision-support tools.
• Formulate a strategic plan using effective teamwork while integrating the major functional areas of business and innovation.
• Evaluate software, technology, and information systems in regards to business operations.
• Identify comprehensive business issues and communicate findings and solutions.
• Identify the strategic management environment in relation to the current financial, legal, economic, and social environments.
• Analyze the role of ethics, government regulations, and legalities in management processes.

OCCUPATIONAL OPPORTUNITIES

• Administrative services manager
• Business managers of artists/athletes
• Business operations specialist
• Financial analysts/managers/specialists
• General and operations managers
• Human resource specialist
• Loan counselors/officers
• Management analysts
• Marketing managers
• Sales managers

EMPLOYMENT STATISTICS

Employment and continuing education rate of 95 percent – 65 percent are employed; 30 percent continued their education.

RELATED PROGRAMS

Accounting
Business Administration
Financial Planning
Marketing
Sport Management
Technology Management

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry

Recommended: Algebra 2
### BUSINESS ADMINISTRATION - BBA DEGREE

#### TYPICAL EIGHT-SEMESTER PROGRAM

<table>
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<tr>
<th>Semester</th>
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<th>Course Title</th>
<th>Credit Hours</th>
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<td></td>
<td>Gen Ed Elective</td>
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<tr>
<td></td>
<td>CISY</td>
<td>Info Tech. Elective</td>
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</tr>
<tr>
<td></td>
<td>MKTG</td>
<td>Principles of Marketing</td>
<td>3</td>
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<tr>
<td></td>
<td>MATH</td>
<td>Math Elective</td>
<td>3</td>
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</table>
|          | COMP        | Freshman Composition                 | 3
|          |             |                                     | 15           |
| **Second** |             | Gen Ed Natural Science Elective      | 3            |
|          | XXXX        | Gen Ed Literature Elective           | 3            |
|          | GLST        | Global & Diverse Perspectives        | 3            |
|          | MATH        | Stats I or Stats Methods (or higher) | 3            |
|          | BUAD        | Business Communication               | 3            |
|          |             |                                     | 15           |
| **Third**  | BUAD        | Fundamentals of Management           | 3            |
|          | BUAD        | Business Law I                       | 3            |
|          | ECON        | Principles of Macroeconomics         | 3            |
|          | ACCT        | Financial Accounting                 | 4            |
|          | BUAD        | Intro-Personal Financial Plan        | 3            |
|          |             |                                     | 16           |
| **Fourth** | XXXX        | Business Elective                    | 3            |
|          | ECON        | Principles of Microeconomics         | 3            |
|          | ACCT        |                                       | 3            |
|          | BUAD        | Business Law II                      | 3            |
|          | BUAD        | Effective Speaking or               | 3            |
|          | SPCH        | Approved GE Equivalent               | 3            |
|          |             |                                     | 16           |
| **Fifth**  | BUAD        | Principles of Leadership             | 3            |
|          | BUAD        | Management                           | 3            |
|          | BUAD        | Communications                       | 3            |
|          | BUAD        | Operations                           | 3            |
|          | XXXX        | Open Elective                        | 3            |
|          | XXXX        | Open Elective                        | 3
|          |             |                                     | 15           |
| **Sixth**  | BUAD        | Organizational Behavior              | 3            |
|          | BUAD        | Strategic & Creative Prob Solv       | 3            |
|          | BUAD        | Human Resource Management            | 3            |
|          | XXXX        | Business Elective - Upper            | 3            |
|          | XXXX        | Business Elective                    | 3
|          |             |                                     | 15           |
| **Seventh** | BUAD        | Business Ethics                      | 3            |
|          | BUAD        | Business Elective - Upper            | 3            |
|          | XXXX        | Business Elective - Upper            | 3
|          |             |                                     | 15           |
| **Eighth** | BUAD        | Management Info Systems - MIS        | 3            |
|          | BUAD        | International Business               | 3            |
|          | BUAD        | Business Elective - Upper            | 3
|          | XXXX        | Business Elective - Upper            | 3

### GRADUATION REQUIREMENTS

- 122 credit hours
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State
- Cumulative overall index of at least 2.0
| Year 1 - Semester 1 - Fall | | Year 1 - Winter Session | | Year 1 - Semester 2 - Spring | | Year 1 - Summer Session | | Year 2 - Semester 3 - Fall | | Year 2 - Winter Session | | Year 2 - Semester 4 - Spring | | Year 2 - Summer Session | | Year 3 - Semester 5 - Fall | | Year 3 - Winter Session | | Year 3 - Semester 6 - Spring | |
|---------------------------|-------------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| CISY xxx3                 | Computer Elective             |                           |                           | ECON 1013                 | Principles of Microeconomics |                           | Gen Ed or Business Elective |                           |                           | BUAD 2033                 | Strategic & Creative Prob Solv | XXXX xxx3                 | Open Elective             |
| MKTG 2073                 | Principles of Marketing       |                           |                           | LITR xxx3                | Literature Elective        |                           | Gen Ed Elective             |                           |                           | BUAD 3043                 | Business Law I             | XXXX xxx3                 | Business Elective         |
| MATH xxx3                 | Math Elective                 |                           |                           | MATH xxx3                | Statistics I or Statistical Methods |                           |                           |                           |                           | BUAD 5003                 | Management                | XXXX xxx3                 |                        |
| COMP 1503                 | Freshman Composition          |                           |                           | SPCH 1083                | Effective Speaking         |                           |                           |                           |                           |                           |                           | XXXX xxx3                 |                        |
|                           |                                |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                           |                        |
| Year 1 - Winter Session   | XXXX xxx3                    | Gen Ed Elective            |                           | Year 2 - Semester 3 - Fall | ECON 2023                 | Principles of Microeconomics |                           |                           |                           | XXXX xxx3                 | Business Elective         | XXXX xxx3                 |                        |
| Year 2 - Semester 4 - Spring | BUAD 7273                  | Organizational Behavior   |                           | BUAD 5013                 | Principles of Leadership  |                           |                           |                           |                           |                           |                           | XXXX xxx3                 |                        |
| Year 3 - Semester 5 - Fall | BUAD 7023                  | Legal Environment of Business |                           | BUAD 7033                 | Operations                |                           |                           |                           |                           | BUAD 6003                 | Managerial Finance         | XXXX xxx3                 |                        |
| Year 3 - Winter Session   | XXXX xxx3                   | Gen Ed or Business Elective|                           | Year 3 - Semester 6 - Spring | BUAD 8003                 | Management Info Systems - MIS |                           |                           |                           |                           |                           |                           | XXXX xxx3                 |                        |

**TYPICAL THREE-YEAR PROGRAM STRUCTURE**

**GRADUATION REQUIREMENTS**

- 122 credit hours
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State
- Cumulative overall index of at least 2.0
- Seven of the 10 SUNY approved General Education categories must be fulfilled

**END-OF-PROGRAM EXAM REQUIREMENTS**

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in BUAD 8023 Strategic Management Capstone. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $45 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are **required**, **not optional**.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

**How should I prepare for the assessment exam?**

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
CNC MANUFACTURING AND MACHINING

AOS DEGREE – CODE 00551
Bradley Thompson, Department Chair
Email address: thompbsj@alfredstate.edu

Did you know the average salary for a machinist in industry today is ranked the seventh highest among all American professions (including doctors, lawyers, etc.), and is higher than the average salary for all four-year college graduates?

If earning a high salary is on your list for selecting occupational opportunities, you need to look at CNC manufacturing and machining. More than 50 percent of all machinists in America today will retire in the next 10 to 15 years. This fact alone shows the tremendous opportunity that awaits the trained and well-qualified machinist.

The CNC manufacturing and machining program features instruction in the safe operation of all basic machine tools, such as lathes, milling machines, drill presses, various saws, and grinding equipment, as well as proper measurement and inspection of parts. Interpreting engineering drawings and mathematical calculations required by all machinists is also presented.

The second year includes shop math and CNC (Computer Numerical Controls) programming with an emphasis on hands-on skills using advanced machine tools. A strong emphasis on shop safety is an integral part of the program. The AOS degree program includes operation of CNC lathes (turning centers), and CNC milling machines (machining centers). This includes set-up, as well as operation of the machines. Interpreting engineering drawings and control documents will also be emphasized. The understanding of quality control and how to conduct appropriate measurements and inspection will be integrated into the course work. The intent is to graduate someone with overall advanced machine shop skills.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate and apply safe operation of all machine tools.
- Student will be proficient in basic lathe operation.
- Student will be proficient in basic milling operation.
- Demonstrate mathematical operations using accepted mathematical applications.
- Demonstrate ability to perform advanced procedures on assigned projects.
- Student will be proficient in writing CNC programs for lathe.
- Student will be proficient in writing CNC programs for milling machine.
- Student will be proficient and apply GDT to all projects.
- Student will demonstrate ability to operate CNC equipment.
- Student will demonstrate all knowledge in capstone project.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State CNC manufacturing and machining graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
- CNC programmers, machinists, and engineers
- Tool and die makers
- Machine setters and operators
- Machinists
- Mold makers

EMPLOYMENT STATISTICS
Employment and continuing education rate of 80 percent – 80 percent are employed.

RELATED PROGRAMS
Welding Technology

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra

TECHNICAL STANDARDS
It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodations in all classrooms, laboratory, or field experiences required for completion of the program. Students in this degree program:
- Must be able to function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Must be able to appropriately and safely use standard laboratory equipment, materials, and instrumentation that requires possession of fine motor skills and mobility.
- Must be able to lift up to 50 pounds to a height of 5ft in order to load materials into manufacturing machines.
- Must be able to communicate orally with a person 6 to 10 feet away in a shop environment.
- Must be able to visually decipher an oscilloscope monitor and digital/analog meter, and scan tool displays.
- Must be able to diagnose mechanical failures that are distinguished audibly.
- Must be able to understand and retain information found in service repair manuals and use diagnostic flow charts.
- Must be able to stand for long periods of time.

CNC MANUFACTURING AND MACHINING – AOS DEGREE

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<tr>
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<th>Credits</th>
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<td>MATT 1024</td>
<td>Industrial Machining II</td>
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<td>MATT 1713</td>
<td>Reading Engineering Drawings</td>
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<td>MATT 1913</td>
<td>Machinist Calculations I</td>
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<td>MATT 1234</td>
<td>Industrial Machining III</td>
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<td>MATT 1244</td>
<td>Industrial Machining IV</td>
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<td>Reading Engineering Drems II</td>
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<td>MATT 1923</td>
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<td>MATT 3005</td>
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<td>MATT 3015</td>
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<td>MATT 4025</td>
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<tr>
<td>MATT 4003</td>
<td>Senior Project</td>
<td>3</td>
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GRADUATION REQUIREMENTS
- A student must successfully complete all courses and earn a minimum cumulative index of 2.0, which is equivalent to a “C” average, in the prescribed four-semester program.
• Students are required to have earned a minimum grade of “C” in Machinist Calculations I & Machinist Calculations II (MATT 1913 and MATT 1923), and in the MATT 4003 Senior Project course. (Articulation is available in MATT 1913).
CIVIL ENGINEERING TECHNOLOGY

BS DEGREE - CODE #1102

Erin Vitale, Department Chair and Program Coordinator
Email address: vitaleem@alfredstate.edu

ADVANTAGES

• Curriculum developed with Industry.
• Strong connection to the construction of civil works.

PROGRAM STUDENT LEARNING OUTCOMES

• Utilize principles, hardware, and software that are appropriate to produce drawings, reports, quantity estimates, and other documents related to civil engineering.
• Conduct standardized field and laboratory tests related to civil engineering.
• Utilize surveying methods appropriate for land measurement and/or construction layout.
• Apply fundamental computational methods and elementary analytical techniques in sub-disciplines related to civil engineering.
• Plan and prepare documents appropriate for design and construction.
• Perform economic analysis and cost estimates related to design, construction, operations, and maintenance of systems associated with civil engineering.
• Select appropriate engineering materials and practices.
• Perform standard analysis and design in transportation, water and development.

PROGRAM EDUCATIONAL OBJECTIVES

Program educational objectives were established with the assistance of the Industrial Advisory Committee and are reviewed periodically. The civil engineering technology program produces graduates who:

• Apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the civil engineering technology discipline.
• Design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the civil engineering technology discipline.
• Apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
• Conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.
• Function effectively as a member as well as a leader on technical teams.

OCCUPATIONAL OPPORTUNITIES

• Civil Engineer Technician
• QC/QA Engineer Technician
• Project Engineer

EMPLOYMENT STATISTICS

New program, no employment data available.

Related Programs

• Construction Engineering Technology
• Construction Management Technology
• Survey Engineering Technology
• Survey and Geomatics Engineering Technology

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Algebra 2, Geometry, Pre-Calculus

Recommended: Physics

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TECHNICAL STANDARDS

Students in the civil engineering technology program must meet the following requirements:

• Students must have the ability to use industry-standard software and computers.
• Students must have the ability to traverse varying types of construction sites.

REQUIRED EQUIPMENT

A tier 2 laptop computer will be required of all students. See laptop specifications at www.alfredstate.edu/required-laptops.

CIVIL ENGINEERING TECHNOLOGY – BS
TYPICAL EIGHT-SEMESTER PROGRAM

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<td>Applied Chemical Principles</td>
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<td>COMP 5703</td>
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<td>CIVL 6143</td>
<td>Transport &amp; Highway Design</td>
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<td>CIVL 4143</td>
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<td>CIVL 7203</td>
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<td>OR</td>
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**GENERAL NOTES:**

Students receiving credit for math classes shown in the typical eight-semester program may require additional LAS electives to compete degree requirements.

Must meet seven of the 10 General Education areas.

**GRADUATION REQUIREMENTS**

2.0 cumulative grade point average, and department requirement of 2.0 grade point average in major courses (CIVL).
The certificate program in computed tomography (CT) is an upper-level online program that will produce graduates who are capable of working under the supervision of a physician, and who are proficient in the application of computed tomography imaging equipment and techniques to gather critical radiologic data to enable the diagnosis of a variety of conditions and diseases. The program targets the acquisition of specialized CT certification by place-bound college graduates currently employed in the medical field as licensed radiological technologists.

The curriculum will include instruction in obtaining, reviewing, and integrating patient histories and data; patient instruction and care; anatomic, physiologic and pathologic data recording; radiologic data processing; computed tomography equipment operation; and professional standards and ethics. Students in the program complete both didactic classes online and a clinical rotation at designated hospitals and clinics. The computed tomography program is a two-semester (15 credits in total) program. Upon successful completion of the program requirements, students will be eligible to sit for national certification examinations for computed tomography.

**ADVANTAGES**
The CT certificate program targets existing radiologic technologists who wish to expand and diversify their clinical skills within the healthcare marketplace. With the exception of the clinical requirement, the program is designed to be an online experience.

**PROGRAM STUDENT LEARNING OUTCOMES**
- Demonstrate correct positioning skills.
- Select proper technical factors.
- Utilize appropriate radiation protection techniques.
- Exhibit patient-centered skills.
- Critique images to determine diagnostic quality.
- Display proper work ethics.
- Adapt standard procedures for non-routine patients.
- Apply written communication skills to the construction of documents of record that are established professional guidelines.
- Apply oral communication skills to the explanation of ideas and scientific terminology.
- Use technological resources effectively and appropriately, synthesize theory and concepts from the liberal education domain and other professions into computed tomography.

**CONTINUING EDUCATION OPPORTUNITIES**
Students may transfer directly into one of our own BS or BTech degree programs or to another college.

**OCCUPATIONAL OPPORTUNITIES**
- Hospitals
- Government agencies
- Clinics
- Private physician offices

**EMPLOYMENT STATISTICS**
Employment data not available for this new program

**RELATED PROGRAMS**
- Health Sciences
- Interdisciplinary Studies
- Healthcare Management

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**
Required: Associate degree in radiologic technology or certificate of completion from JRCERT program. Must provide proof of ARRT certification.

**REQUIRED EQUIPMENT**
A tier 1 laptop computer is required for students entering the accounting program. Laptop specifications are available at http://www.alfredstate.edu/required-laptops.
The computer engineering technology program will provide you with the cutting-edge industry knowledge and hands-on skills necessary to secure a career as an applied engineer capable of installing, designing, supporting, and maintaining computer systems and networks. This is an active, technically oriented program with a focus on computer system hardware and network infrastructure, as well as software development and operating systems. We've designed these degrees to prepare you for professional examinations leading to certifications such as the CompTIA A+ and Network+, Microsoft Certified System Administrator (MCSA), Microsoft Certified System Engineer (MCSE), and Cisco Certified Network Associate (CCNA).

ADVANTAGES
- The AAS program is accredited by the Engineering Technology Accreditation Commission(s) of ABET, http://www.abet.org, under the General Criteria and the Computer Engineering Technology and Similarly Named Program Criteria.
- In the first year of the program, students gain a foundation of knowledge in digital and electronic circuits followed by the development of skills in computer hardware, operating systems, and networking.

Direct Entry Into Baccalaureate Degree Programs
Alfred State computer engineering technology AAS graduates may enter directly into either the computer engineering technology BS, the interdisciplinary studies BTech, or technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
Graduates from the AAS computer engineering technology program are eligible to continue their education by enrolling in a baccalaureate program in computer engineering technology at Alfred State or elsewhere. Our computer engineering technology AAS two-year degree program is the same as the first two years of the computer engineering technology BS four-year program.

OCCUPATIONAL OPPORTUNITIES
- Computer network technician/technologist (2/4 years)
- Software/web programmer and developer (4 years)
- Electrical or electronics technician/technologist (2/4 years)
- Communication Technologist (4 years)
- Network administrator (4 years)
- Cyber security technologist (4 years)
- Embedded systems and robotics technician/technologist (2/4 years)

EMPLOYMENT STATISTICS
Employment and continuing education rate:
Computer engineering technology (AAS degree): 100 percent continued their education.

RELATED PROGRAMS
Computer Information Systems
Computer Science
Cyber Security
Electrical Engineering Technology
Information Technology: Network Administration

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students in the computer engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses may require specialized tools and/or electronic components.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TECHNICAL STANDARDS
It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:
- Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
- Appropriately use hand and power tools.
- Appropriately use test, analysis, and measurement equipment
- Maintain professional integrity in the classroom and laboratory setting
- Communicate effectively, orally and written
- Perform experiments safely in a laboratory environment
- Visually decipher lab equipment digital or analogue displays
- Understand and retain information found in equipment manuals, data sheets, and lab instructions
- Comprehend written and oral directions; act on those directions safely
- Visually identify and select hardware components
- Visually distinguish computer software user interface elements
- Interpret software outputs to analyze data
- Have sufficient dexterity to finely adjust equipment settings
- Interpret complex data tables and graphs

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)
Required: Algebra, Geometry, Algebra 2
### COMPUTER ENGINEERING TECHNOLOGY - AAS DEGREE

**TYPICAL FOUR-SEMESTER PROGRAM**

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<td>3</td>
</tr>
<tr>
<td>GLST</td>
<td>2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
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<table>
<thead>
<tr>
<th>Third</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CISY</td>
<td>5123</td>
<td>Scientific Programming</td>
<td>3</td>
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<tr>
<td>ELET</td>
<td>2103</td>
<td>Electronics Theory I</td>
<td>3</td>
</tr>
<tr>
<td>ELET</td>
<td>2151</td>
<td>Electronics Laboratory I</td>
<td>1</td>
</tr>
<tr>
<td>ELET</td>
<td>2143</td>
<td>Embedded Controller Fundtech</td>
<td>3</td>
</tr>
<tr>
<td>CISY</td>
<td>4033</td>
<td>Networking I</td>
<td>3</td>
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<tr>
<td>PHYS</td>
<td>1024</td>
<td>General Physics I</td>
<td>4</td>
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<table>
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<th>Fourth</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SPCH</td>
<td>1083</td>
<td>Effective Speaking</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>xxx</td>
<td>Effective Speaking Equivalent</td>
<td>3</td>
</tr>
<tr>
<td>CISY</td>
<td>4053</td>
<td>Linux/Unix Admin and Scripting</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>1063</td>
<td>Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>2023</td>
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</table>

If not required to take MATH 1033 and MATH 2043, take LAS elective to complete degree requirements of 3 credits; otherwise take free elective.

### COMPUTER ENGINEERING TECHNOLOGY - BS DEGREE

**TYPICAL EIGHT-SEMESTER PROGRAM**

<table>
<thead>
<tr>
<th>First</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CISY</td>
<td>1113</td>
<td>Computer Programming I</td>
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</tr>
<tr>
<td>ELET</td>
<td>1202</td>
<td>Intro to Electrical Eng Tech</td>
<td>2</td>
</tr>
<tr>
<td>ELET</td>
<td>1133</td>
<td>Digital Logic</td>
<td>3</td>
</tr>
<tr>
<td>ELET</td>
<td>1111</td>
<td>Digital Logic Laboratory</td>
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<tr>
<td>COMP</td>
<td>1503</td>
<td>Freshman Composition</td>
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<td>MATH</td>
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<td>College Algebra</td>
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</table>

<table>
<thead>
<tr>
<th>Second</th>
<th>Course</th>
<th>Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>CISY</td>
<td>2143</td>
<td>Microcomputer Systems I</td>
<td>3</td>
</tr>
<tr>
<td>ELET</td>
<td>1142</td>
<td>Electronic Fabrication</td>
<td>2</td>
</tr>
<tr>
<td>ELET</td>
<td>1103</td>
<td>Circuit Theory I</td>
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</tr>
<tr>
<td>ELET</td>
<td>1151</td>
<td>Circuit Theory</td>
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<td>2143</td>
<td>Embedded Controller Fundtech</td>
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<tr>
<td>PHYS</td>
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<td>General Physics I</td>
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<table>
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<tr>
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<td>MATH</td>
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<td>Technical Calculus I</td>
<td>3</td>
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<td>PHYS</td>
<td>2023</td>
<td>General Physics II</td>
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<tr>
<td>LITR</td>
<td>xxx</td>
<td>Literature Elective</td>
<td>3</td>
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<tr>
<td></td>
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</tbody>
</table>

If not required to take MATH 1033 and MATH 2043, take LAS elective to complete degree requirements of 3 credits; otherwise take free elective.

Be advised that a prior felony conviction may impede a student's ability to receive licensure.

### GRADUATION REQUIREMENTS - AAS DEGREE

- 62 semester credit hours in program as listed above
- 25 semester credit hours of liberal arts and sciences
- Four of 10 General Education areas
- 2.0 or above cumulative grade point average
- 2.0 or above grade point average in major courses (ELET, CISY)
- Approval of department faculty
COMPUTER ENGINEERING TECHNOLOGY BS

BS DEGREE - CODE #1357

Aric Bryant, Department Chair and Program Coordinator
Email address: bryantam@alfredstate.edu

The computer engineering technology program will provide you with the cutting-edge industry knowledge and hands-on skills necessary to secure a career as an applied engineer capable of installing, designing, supporting, and maintaining computer systems and networks. This is an active, technically oriented program with a focus on computer system hardware and network infrastructure, as well as software development and operating systems. We've designed these degrees to prepare you for professional examinations leading to certifications such as the CompTIA A+ and Network+, Microsoft Certified System Administrator (MCSA), Microsoft Certified System Engineer (MCSE), and Cisco Certified Network Associate (CCNA).

ADVANTAGES

- The BS programs are accredited by the Engineering Technology Accreditation Commission(s) of ABET, http://www.abet.org, under the General Criteria and the Computer Engineering Technology and Similarly Named Program Criteria.
- In the first year of the program, students gain a foundation of knowledge in digital and electronic circuits followed by the development of skills in computer hardware, operating systems, and networking.

OCCUPATIONAL OPPORTUNITIES

- Computer network technician/technologist
- Software/web programmer and developer
- Electrical or electronics technician/technologist
- Communication Technologist
- Network administrator
- Cyber security technologist
- Embedded systems and robotics technician/technologist

EMPLOYMENT STATISTICS

Employment and continuing education rate:

Computer engineering technology (BS degree): 100 percent are employed.

RELATED PROGRAMS

Computer Information Systems
Computer Science
Cyber Security
Electrical Engineering Technology
Information Technology: Network Administration

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>BS Degree</th>
<th>Enrollment (based on Fall census)</th>
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<tr>
<td>2022</td>
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<tr>
<td>2021</td>
<td>36</td>
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<td>2020</td>
<td>29</td>
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<table>
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<tr>
<th>Degrees Awarded</th>
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<tr>
<td>2021-2022: 5</td>
</tr>
<tr>
<td>2020-2021: 4</td>
</tr>
<tr>
<td>2019-2020: 3</td>
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CERTIFICATION OR LICENSURE

The Bachelor of Science in computer engineering technology is recognized as a "professional degree" that qualifies for experience/education credit toward Professional Engineering (PE) licensure. Graduates from Alfred State's program are allowed six years of the required 12 years of education/experience credit, and are eligible to take the Fundamentals of Engineering (FE), formerly called Engineer-in-Training (EIT), examination upon graduation.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (BS)

Required: Algebra, Geometry, Algebra 2

Recommended: Physics

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TECHNICAL STANDARDS

It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:

- Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
- Appropriately use hand and power tools.
- Appropriately use test, analysis, and measurement equipment
- Maintain professional integrity in the classroom and laboratory setting
- Communicate effectively, orally and written
- Perform experiments safely in a laboratory environment
- Visually decipher lab equipment digital or analogue displays
- Understand and retain information found in equipment manuals, data sheets, and lab instructions
- Comprehend written and oral directions; act on those directions safely
- Visually identify and select hardware components
- Visually distinguish computer software user interface elements
- Interpret software outputs to analyze data
- Have sufficient dexterity to finely adjust equipment settings
- Interpret complex data tables and graphs

REQUIRED EQUIPMENT

A tier 2 laptop computer is required for students in the computer engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses may require specialized tools and/or electronic components.

COMPUTER ENGINEERING TECHNOLOGY - BS DEGREE

TYPICAL EIGHT-SEMESTER PROGRAM

First

<table>
<thead>
<tr>
<th>CISY</th>
<th>1113</th>
<th>Computer Programming</th>
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<tbody>
<tr>
<td>ELET</td>
<td>1202</td>
<td>Intro to Electrical Eng</td>
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<td>Tech</td>
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<td>1133</td>
<td>Digital Logic</td>
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<td>COMP</td>
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Second

| CISY | 2143 | Microcomputer Systems I | 3 |
|      |      | Electronic Fabrication  | 2 |
| ELET | 1142 | Circuit Theory I        | 3 |
| ELET | 1103 | Circuit Theory Laboratory | 1 |
| MATH | 2043 | College Trigonometry    | 3 |
| GLST | 2113 | Global & Diverse Perspectives | 3 |
|      |      |                       | 15|

Third

| CISY | 5123 | Scientific Programming | 3 |
|      |      | Electronics Theory I   | 3 |
| ELET | 2103 | Electronics Laboratory I | 1 |
| ELET | 2151 | Embedded Controller Fundamentals | 3 |
| CISY | 4033 | Networking I           | 3 |
| PHYS | 1024 | General Physics I      | 4 |
|      |      |                       | 17|

Fourth

<p>| SPCH | 1083 | Effective Speaking OR Effective Speaking Equivalent | 3 |
|      | xxx3 | Equivalent                                                   |   |
| CISY | 4053 | Linux/Unix Admin and Scripting                              | 3 |
| MATH | 1063 | Technical Calculus I                                        | 3 |
| PHYS | 2023 | General Physics II                                          | 3 |
| LITR | xxx3 | Literature Elective                                         | 3 |
|      |      |                                                               | 15|</p>
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<td>COMP 5703</td>
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<td>MATH 2074</td>
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<td>XXXX xxx3</td>
<td>ELET or CISY</td>
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<td>XXXX xxx3</td>
<td>Technical Elective</td>
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<td>Sixth</td>
<td>ELET 7404</td>
<td>Embedded &amp; Real Time Systems</td>
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<td>MATH xxx4</td>
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<td>Major Elective - Upper</td>
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<tr>
<td></td>
<td>XXXX xxx3</td>
<td>Major Elective - Upper</td>
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<tr>
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<td>XXXX xxx3</td>
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</tr>
<tr>
<td>Seventh</td>
<td>BSET 7001</td>
<td>Senior Seminar &amp; Project Des</td>
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<td>MATH 7113</td>
<td>Economic Analy for Engr Tech</td>
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<tr>
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<td>MATH 7123</td>
<td>Statistics for Engr Tech &amp; Sci</td>
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<td>PHYS 8013</td>
<td>Modern Physics</td>
<td>3</td>
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<td></td>
<td>CHEM 5013</td>
<td>Applied Chemical Principles</td>
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<td>XXXX xxx3</td>
<td>Major Elective - Upper</td>
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<td>Eighth</td>
<td>BSET 8003</td>
<td>Senior Technical Project</td>
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<td>XXXX xxx3</td>
<td>Elective - Upper</td>
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<td>XXXX xxx3</td>
<td>General Education</td>
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<td>XXXX xxx3</td>
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<td>General Education</td>
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<td>XXXX xxx3</td>
<td>Major Elective - Upper</td>
<td>3</td>
</tr>
</tbody>
</table>

If not required to take MATH 1033 and MATH 2043, take LAS elective to complete degree requirements of 3 credits; otherwise take free elective.

Be advised that a prior felony conviction may impede a student’s ability to receive licensure.

Graduation Requirements - BS Degree

- 126 semester credit hours in eight-semester program
- 60 semester credit hours of liberal arts and sciences
- Seven of 10 General Education areas
- Minimum 45 upper-division credit hours
- Minimum 24 hours upper division in major
- Minimum of 30 hours upper division in residence
- 2.0 or above cumulative grade point average
- 2.0 or above grade point average in major courses (BSET, CISY, ELET)
- Approval of department faculty
As more organizations install and employ computer networks, a need has developed for the “resident expert” to administer the system, install software, establish security, and train others. As a graduate of the computer information systems (CIS) program, you will be well positioned to serve that need with a foundation in programming, databases, and networking.

**ADVANTAGES**

- Students can complete the Cisco Certified Network Association curriculum and have a strong foundation to pursue professional certifications for CompTIA A+, Network+, and CCNA. The college has a Pearson Vue testing center.
- Our laboratories provide students with ample hands-on experience, giving them a considerable edge in the highly competitive computer and information technology job market.

**PROGRAM STUDENT LEARNING OUTCOMES**

- Communicate effectively and efficiently, both orally and in writing.
- Employ critical thinking and problem-solving skills in developing solutions to problems.
- Create and modify functional, clear, concise software design and implementation with current programming languages.
- Create functional webpages using web scripting languages.
- Install, configure, troubleshoot, and administer a simple network.
- Demonstrate proficiency either in two or more operating systems or two or more database systems.
- Demonstrate proficiency in basic office automation software.
- Solve problems in a team setting as a team member.
- Identify issues of professional ethics, including copyright laws, plagiarism, and professional etiquette.
- Solve applied mathematical problems.

**DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS**

Alfred State computer information systems graduates may enter directly into either the cyber security BTech, information technology: applications software development BTech, information technology: network administration BTech, information technology: web development BTech, the interdisciplinary studies BTech, or technology management BBA degree program.

**CONTINUING EDUCATION OPPORTUNITIES**

To facilitate the transfer of graduates choosing to continue their education at the baccalaureate level, students are encouraged to make their intentions known to their academic adviser during their freshman year. Through the careful use of elective courses, students may obtain excellent transfer credit.

Transfer into the information technology programs: network administration, web development, and applications software development will place them at junior status.

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

- Required: Algebra, Geometry*
- Recommended: Algebra 2
- * Students who place into intermediate algebra will be required to take one additional mathematics course.

**OFFICE OF ACCESSIBILITY SERVICES**

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

**REQUIRED EQUIPMENT**

A tier 2 laptop computer is required for students entering the computer information systems program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
If not required, take LAS elective to complete degree requirements of 3 credits, otherwise take free elective.

Adviser-approved mathematics courses do not include MATH 1004, MATH 1104, MATH 1014, or MATH 1143.

Professional electives may include CISY, business, and selected courses from math or engineering as approved by the adviser.

GRADUATION REQUIREMENTS

Must complete a minimum of 24 credit hours of required CISY courses and nine credit hours of professional electives approved by adviser with a minimum 2.0 cumulative index. Twenty credit hours of liberal arts courses, a minimum overall cumulative index of 2.0, along with other requirements as stated in the College Academic Regulations, must be met by candidates of the AAS degree. Must successfully complete a minimum of 61 credit hours of course work.
The computer science program at Alfred State was one of the originally established programs in the SUNY system. It is a comprehensive program, which will prepare you for this fast-moving field with courses in the underlying theories of computing, as well as the specific applications of information manipulation and problem solving.

ADVANTAGES
Students develop strong written and oral communication, critical thinking, and problem-solving skills.

PROGRAM STUDENT LEARNING OUTCOMES
- Communicate effectively and efficiently, both orally and in writing.
- Employ critical thinking and problem-solving skills in developing solutions to problems.
- Create and modify functional, clear, concise software design and implementation with current programming languages.
- Create functional webpages using web scripting languages.
- Demonstrate the scientific method in one area of natural science.
- Assess and implement appropriate data structures within a programming project.
- Demonstrate proficiency in basic office automation software.
- Solve problems in a team setting as a team member.
- Identify issues of professional ethics, including copyright laws, plagiarism, and professional etiquette.
- Demonstrate proficiency with mathematical principles through the level of calculus or discrete mathematics.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State computer science graduates may enter directly into either the information technology: applications software development BTech, interdisciplinary studies BTech or technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
The primary focus of the computer science program is transfer. The AS degree granted is specifically designed to maximize transfer credit to four-year programs. Transfer into the information technology programs: network administration, web development, and applications software development is possible with junior status with careful selection of courses for electives.

OCCUPATIONAL OPPORTUNITIES
- Network management
- Systems administration
- Computer engineering technology
- Computer support
- Computer programming
- Database administration
- Web development

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent continued their education.

RELATED PROGRAMS
- Computer Engineering Technology
- Computer Information Systems
- Cyber Security
- Information Technology: Applications Software Development
- Information Technology: Network Administration
- Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2
Recommended: Pre-calculus, Physics

OFFICE OF ACCESSIBILITY SERVICES
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REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the computer science program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

COMPUTER SCIENCE - AS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

**First**
- CISY 1023 Intro to Information Tech 3
- CISY 1113 Computer Programming I 3
- COMP 1503 Freshman Composition 3
- MATH xxx3 Pre-Calculus 1054 or above 3
- XXXX xxx3 Gen Ed Elective 3
- Total 15

**Second**
- CISY 2133 Computer Programming II 3
- MATH 1084 Calculus I 4
- CISY 2153 Database Appl and Programing I 3
- LITR xxx3 Literature Elective 3
- XXXX xxx3 Gen Ed Elective 3
- Total 16

**Third**
- CISY 4033 Networking I 3
- CISY 3223 Intro to Web Page Development 3
- MATH 2163 Discrete Mathematics 3
- XXXX xxx4 Gen Ed - Natural Science w/Lab 4
- CISY 3193 Computer Architecture & Organi 3
- Total 16

**Fourth**
- CISY 4053 Linux/Linux Admin and Scripting OR 3
- CISY 5403 Database Concepts 3
- CISY 4003 Comp Programming III 3
- SPCH 1083 Effective Speaking 3
- XXXX xxx3 Gen Ed Elective 3
- XXXX xxx3 Open Elective 3
- Total 15

Professional electives may include CISY, business, and selected courses from math or engineering as approved by the adviser.

GRADUATION REQUIREMENTS
Must complete a minimum of 24 credit hours of required CISY courses and one professional elective approved by adviser with a 2.0 cumulative index. A minimum cumulative index of 2.0, along with other requirements as stated in the College Academic Regulations, must be met by candidates for the AS degree. A minimum of 62 credit hours of course work with 30 credit hours in liberal arts is required.
CONSTRUCTION ENGINEERING TECHNOLOGY

AAS DEGREE – CODE #0577

Erin Vitale, Program Coordinator
Email address: vitaleem@alfredstate.edu

The program in construction engineering technology includes a well-designed balance of theoretical and laboratory studies, providing students with a broad knowledge of civil engineering technology and the construction fields. This field is expanding rapidly, and our technical curricula will give you a broad-based education, as well as the hands-on skills and experience needed for leadership in today’s construction business.

ADVANTAGES

• The college offers testing and certification with the American Concrete Institute that students can earn their first semester.
• Students develop the ability to function effectively as a member of a technical team, as well as the ability to apply written, oral, and graphical communication in both technical and nontechnical environments.
• This program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

A student who completes the AAS degree can complete the bachelor’s degree in two additional years.

PROGRAM STUDENT LEARNING OUTCOMES

• An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
• An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline.
• An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
• An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
• An ability to function effectively as a member of a technical team.

PROGRAM EDUCATIONAL OBJECTIVES

Program educational objectives were established with the assistance of the Industrial Advisory Committee and are reviewed periodically. The construction engineering technology program produces graduates who:

• Write, read, and orally present technical reports, letters, and projects that meet the standards of the profession.
• Understand and are able to complete various activities related to construction such as interpret construction documents, draw plans using computer-aided drafting, complete an estimate, manage project activities, and be able to technically review construction materials used on the project.
• Recognize the need for and have an ability to engage in continued formal education as well as lifelong learning.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State construction engineering technology graduates may enter directly into either the construction management BS, the construction supervision BTech, the interdisciplinary studies BTech, or the technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES

<table>
<thead>
<tr>
<th>Building inspector</th>
<th>Codes enforcement officer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction inspector</td>
<td>Construction superintendent</td>
</tr>
<tr>
<td>Engineering technician</td>
<td>Estimator</td>
</tr>
<tr>
<td>Installation supervisor</td>
<td>Materials tester</td>
</tr>
<tr>
<td>Project coordinator</td>
<td>Quality control technician</td>
</tr>
<tr>
<td>Sales representative</td>
<td>Structural detailer</td>
</tr>
<tr>
<td>Supt. of public works</td>
<td></td>
</tr>
</tbody>
</table>

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 50 percent are employed; 50 percent continued their education.

CONSTRUCTION ENGINEERING TECHNOLOGY

ENROLLMENT AND GRADUATION DATA

| Enrollment (based on fall census) |
| 2019 | 21 |
| 2020 | 22 |
| 2021 | 12 |

| Degrees Awarded |
| 2018-2019 | 8 |
| 2019-2020 | 9 |
| 2020-2021 | 6 |

RELATED PROGRAMS

Construction Management
Construction Supervision
Surveying Engineering Technology

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

TECHNICAL STANDARDS

Students in the construction engineering technology program must meet the following requirements:

• Students must have the ability to use industry standard software and computers.
• Students must have the ability to traverse varying types of construction sites.

Students who believe they need a reasonable accommodation to participate in this program may contact the Office of Accessibility Services by email at DisabilityServices@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

REQUIRED EQUIPMENT

A tier 2 laptop computer is required for students entering the construction engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

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### TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>COMP</td>
<td>1503</td>
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<tr>
<td>CIVL</td>
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<td>Civl Eng Tech 1st Yr Exp</td>
<td>1</td>
</tr>
<tr>
<td>CIVL</td>
<td>1204</td>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td>CIVL</td>
<td>1013</td>
<td>Portland Cement Concrete</td>
<td>3</td>
</tr>
<tr>
<td>CIVL</td>
<td>1182</td>
<td>Civil Tech Graphics</td>
<td>2</td>
</tr>
<tr>
<td>MATH</td>
<td>1033</td>
<td>College Algebra</td>
<td>3</td>
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<table>
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<tr>
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<tbody>
<tr>
<td>CIVL</td>
<td>2154</td>
<td>Quality Control of Const Matl</td>
<td>4</td>
</tr>
<tr>
<td>XXXX</td>
<td>xxx3</td>
<td>Technical Elective</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>1024</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td>MATH</td>
<td>2043</td>
<td>College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td>GLST</td>
<td>2133</td>
<td>Global Perspectives or Approved GE Equivalent</td>
<td>3</td>
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</table>

<table>
<thead>
<tr>
<th>Third</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVL</td>
<td>3553</td>
<td>Comm Bldg Const Methods &amp; Prac</td>
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<td>CIVL</td>
<td>4103</td>
<td>Structures I</td>
<td>3</td>
</tr>
<tr>
<td>PHYS</td>
<td>2023</td>
<td>General Physics II</td>
<td>3</td>
</tr>
<tr>
<td>MATH</td>
<td>1063</td>
<td>Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td>LITR</td>
<td>xxx3</td>
<td>Literature Elective</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fourth</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVL</td>
<td>4143</td>
<td>Contracts, Specs, &amp; Estimating</td>
<td>3</td>
</tr>
<tr>
<td>CIVL</td>
<td>4043</td>
<td>Construction Management</td>
<td>3</td>
</tr>
<tr>
<td>CIVL</td>
<td>xxx3</td>
<td>Technical Elective</td>
<td>3</td>
</tr>
<tr>
<td>XXXX</td>
<td>xxx3</td>
<td>Open Elective</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>1083</td>
<td>Effective Speaking OR</td>
<td>3</td>
</tr>
<tr>
<td>SPCH</td>
<td>xxx3</td>
<td>Approved GE Equivalent</td>
<td>3</td>
</tr>
</tbody>
</table>

Entry level of student into math and composition/literature sequences is a function of student's high school preparation and mathematics and English placement examinations.

Students receiving credit for math classes shown in the typical four-semester program may require additional LAS electives to complete degree requirements.

Students must complete two technical electives and two General Education electives.

**Suggested Technical Electives:**
- CIVL 2204 Surveying II
- CIVL 6113 Environmental Technical Concepts
- CIVL 7103 Land Development and Design
- ARCH 4013 Municipal Codes & Regulations
- Other technical electives by department approval.

**GRADUATION REQUIREMENTS**

2.0 cumulative grade point average, and department requirement of 2.0 grade point average in major courses (CIVL).
CONSTRUCTION MANAGEMENT
BS DEGREE – CODE #1761
Reza Yadollahi, PhD, Program Coordinator
Email address: yadollahim@alfredstate.edu

Do you dream of a leadership role in the construction industry? Then this program is for you. Our expert faculty have designed a series of courses that will familiarize you with all aspects of construction management. Technical course work is combined with specific construction management courses as well as several business courses, giving you a broad-based education.

ADVANTAGES
• Alfred State students compete annually in the Associated Schools of Construction Northeast Region student competition.
• Students can compete for scholarships given by the Associated General Contractors of New York.
• Seniors in the BS program are required to take the Associate Constructor Level I exam prior to graduation.
• This program is accredited by the American Council for Construction Education (ACCE), [1717 North Loop Road 1604 East, Suite 320, San Antonio, TX 78232].
• This program is accredited by the Applied and Natural Science Accreditation Commission of ABET, www.abet.org
• Students typically gain work experience through summer employment with construction companies.

PROGRAM STUDENT LEARNING OUTCOMES (ACCE ACCREDITATION)
• Create written communications appropriate to the construction discipline.
• Create oral presentations appropriate to the construction discipline.
• Create a construction project safety plan.
• Create construction project cost estimates.
• Create construction project schedules.
• Analyze professional decisions based on ethical principles.
• Analyze construction documents for planning and management of construction processes.
• Analyze methods, materials, and equipment used to construct projects.
• Apply construction management skills as a member of a multi-disciplinary team.
• Apply electronic-based technology to manage the construction process.
• Apply basic surveying techniques for construction layout and control.
• Understand different methods of project delivery and the roles and responsibility of all constituencies involved in the design and construction process.
• Understand construction risk management.
• Understand construction accounting and cost control.
• Understand construction quality assurance and control.
• Understand construction project control processes.
• Understand the legal implications of contract, common, and regulatory law to manage a construction project.
• Understand the basic principles of sustainable construction.
• Understand the basic principles of structural behavior.
• Understand the basic principles of mechanical, electrical, and piping systems.

PROGRAM EDUCATIONAL OBJECTIVES
Program educational objectives were established with the assistance of the Industrial Advisory Committee and are reviewed periodically. The construction management program produces graduates who:

• Understand technical components and techniques of construction.
• Write, read, and orally present information standard to the construction industry.
• Understand methods and tools to manage both a construction project and construction company.
• Understand safety and risk management.
• Understand industry ethics and statutory requirements.

OCCUPATIONAL OPPORTUNITIES
• Project manager
• Project engineer

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed.

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollment (based on fall census)</th>
<th>Degrees Awarded</th>
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</thead>
<tbody>
<tr>
<td>2020</td>
<td>69</td>
<td>81</td>
</tr>
<tr>
<td>2021</td>
<td>62</td>
<td>28</td>
</tr>
<tr>
<td>2022</td>
<td>69</td>
<td>21</td>
</tr>
</tbody>
</table>

RELATED PROGRAMS
Architectural Technology
Building Trades: Building Construction
Construction Engineering Technology
Construction Supervision

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2
Recommended: Physics

TECHNICAL STANDARDS
Students in the construction management program must meet the following requirements:

• Students must have the ability to use industry standard software and computers.
• Students must have the ability to traverse varying types of construction sites.

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the construction management program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
## CONSTRUCTION MANAGEMENT - BS DEGREE

### TYPICAL EIGHT-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course</th>
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<tbody>
<tr>
<td><strong>First</strong></td>
<td>COMP 1503</td>
<td>Freshman Composition</td>
<td>3</td>
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<td>CIVL 1021</td>
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<tr>
<td></td>
<td>CIVL 1204</td>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CIVL 1013</td>
<td>Portland Cement Concrete</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CIVL 1182</td>
<td>Civil Tech Graphics</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>MATH 1033</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td><strong>Second</strong></td>
<td>CIVL 2154</td>
<td>Quality Control of Const Matl</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PHYS 1024</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MATH 2043</td>
<td>College Trigonometry</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
</tr>
<tr>
<td><strong>Third</strong></td>
<td>CIVL 3553</td>
<td>Comm Bldg Const Methods &amp; Prac</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CIVL 4103</td>
<td>Structures I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHYS 2023</td>
<td>General Physics II</td>
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</tr>
<tr>
<td></td>
<td>MATH 1063</td>
<td>Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>LITR xxx3</td>
<td>Literature Elective</td>
<td>3</td>
</tr>
<tr>
<td><strong>Fourth</strong></td>
<td>CIVL 4143</td>
<td>Contracts, Specs &amp; Estimating</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>CIVL 5703</td>
<td>Technical Writing II</td>
<td>3</td>
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<td></td>
<td>CIVL 7213</td>
<td>Construction Systems</td>
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<tr>
<td></td>
<td>XXXX xxx3</td>
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</tr>
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### Fifth

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
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<tbody>
<tr>
<td>CIVL xxx3</td>
<td>Technical Elective-Upper</td>
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<tr>
<td>ECON 1013</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>COMP 5703</td>
<td>Construction Safety</td>
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<tr>
<td>CIVL 6214</td>
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<tr>
<td>CIVL 6212</td>
<td>Construction Safety Perspectives</td>
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<tr>
<td>ACCT 5043</td>
<td>Accounting Perspectives</td>
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<td>XXXX xxx3</td>
<td>Gen Ed Elective</td>
<td>3</td>
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<tr>
<td>CIVL 6123</td>
<td>Mechanical Systems</td>
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### Sixth

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<tbody>
<tr>
<td>CHEM 5013</td>
<td>Applied Chemical Principles</td>
<td>3</td>
</tr>
<tr>
<td>CIVL 6214</td>
<td>Reinforced Concrete</td>
<td>3</td>
</tr>
<tr>
<td>CIVL 6212</td>
<td>Advanced Estimating</td>
<td>4</td>
</tr>
<tr>
<td>ACCT 5043</td>
<td>Accounting Perspectives</td>
<td>3</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>Gen Ed Elective</td>
<td>3</td>
</tr>
<tr>
<td>CIVL 6123</td>
<td>Mechanical Systems</td>
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### Seventh

<table>
<thead>
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<th>Course</th>
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<tr>
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<td>Statistics I</td>
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<tr>
<td>CIVL 7223</td>
<td>Construction Project Planning</td>
<td>3</td>
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<tr>
<td>MATH 7113</td>
<td>Economic Analy for Engr Tech</td>
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</tr>
<tr>
<td>TMGT 7153</td>
<td>Principles of Management</td>
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<tr>
<td>XXXX xxx3</td>
<td>Gen Ed Elective</td>
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</tr>
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### Eighth

<table>
<thead>
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<th>Course</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUAD xxx3</td>
<td>Bus. Elective - Upper</td>
<td>3</td>
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<tr>
<td>CIVL 5213</td>
<td>Reinforced Concrete</td>
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</tr>
<tr>
<td>CIVL 8123</td>
<td>Construction Project Admin</td>
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<tr>
<td>BUAD 3043</td>
<td>Business Law I</td>
<td>3</td>
</tr>
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<td>XXXX xxx3</td>
<td>Gen Ed Elective - Upper</td>
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<tr>
<td>ECON 2023</td>
<td>Principles of Microeconomics</td>
<td>3</td>
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</tbody>
</table>

### GENERAL NOTES:

Students receiving credit for math classes shown in the typical eight-semester program may require additional LAS electives to compete degree requirements.

Must meet seven of the 10 General Education areas.

### GRADUATION REQUIREMENTS

2.0 cumulative grade point average, and department requirement of 2.0 grade point average in major courses (CIVL).
CONSTRUCTION SUPERVISION

BTECH DEGREE – CODE #2649

Erin Vitale, Department Chair and Program Coordinator
Email address: vitaleem@alfredstate.edu

The Bachelor of Technology (BTech) in construction supervision is a completion degree that will add valuable construction business skills to a technical background. Students with carpentry, heavy equipment, electrical, mechanical, and architecture skills, to name a few, will be able to see how their skills are utilized to build the environment in which they live. The BTech in construction supervision will give graduates a working knowledge of construction estimating, scheduling, and contract law. These skills along with their technical competency will make graduates a prized asset to companies that are involved in the construction industry. The program includes a full-semester internship.

The program is set up as a completion degree, meaning students entering must have an associate degree or 60 credits in a related curriculum. A true 2+2 can be achieved with 21 credits of liberal arts and sciences, including five silos of SUNY General Education completed before entering the program.

ADVANTAGES

• Students take their distinct technical background and apply it in the construction industry through project-based learning.
• With a cohort of students from many different fields of prior study, students will gain an interdisciplinary appreciation of the construction industry.
• Students will gain a strong background in construction contractual requirements.
• Students will expand their understanding of construction job site cost control.

PROGRAM STUDENT LEARNING OUTCOMES

• Create written communication appropriate to the construction discipline.
• Create oral presentations.
• Create a construction project safety plan.
• Create construction project cost estimates.
• Create construction project schedules.
• Analyze professional decisions based on ethical principles.
• Understand different methods of project delivery and the roles and responsibilities of all constituencies involved in the design and construction process.
• Understand construction accounting and cost control.

OCCUPATIONAL OPPORTUNITIES

• Assistant superintendent
• Equipment and material sales
• Project manager for specialty trade contractors
• Superintendent

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

ARTICULATION

Alfred State accepts students from other two-year institutions as juniors into the construction supervision BTech program with appropriate course work and grade point average.

GRADUATION REQUIREMENTS

• 2.0 cumulative GPA and 2.0 in major courses (CIVL)
• 30 credits liberal arts and sciences
• Seven of 10 General Education silos with math silo required

RELATED PROGRAMS

• Architectural Technology
• Building Trades: Building Construction
• Construction Management
• Electrical Engineering Technology
• Heavy Equipment Operations

Mechanical Engineering Technology

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

• Required: Successful completion of an associate degree in a construction-related field or at least 60 transferrable credit hours, and a minimum cumulative GPA of 2.0. Other majors can be considered with construction related work experience. Applicants who have gone through a certified apprentice program and have obtained a journeyman’s card with a recognized trade union may also be considered.

• Recommended: A minimum of 21 credits in liberal arts and sciences, and five different general education fields covered (BC and MA included).
• Students without the required college credits can come into the individual studies (AS) program as a bridge program to the construction supervision (BTech) program.

Please Note: Students entering from an AOS degree program are accepted in the program as ASOP students to facilitate completion of the five bridge courses (15 credits) in Liberal Arts and Sciences/General Education. The Civil Engineering Technology Department chair or curriculum coordinator will review all college credits earned and will recommend specific courses to complete this bridge.

TECHNICAL STANDARDS

Students in the construction supervision program must meet the following requirements:

• Students must have the ability to use industry-standard software and computers.
• Students must have the ability to traverse varying types of construction sites.

REQUIRED EQUIPMENT

A tier 2 laptop computer will be required of all students. See laptop specifications at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

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OFFICE OF ACCESSIBILITY SERVICES

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A tier 2 laptop computer will be required of all students. See laptop specifications at www.alfredstate.edu/required-laptops.
## CONSTRUCTION SUPERVISION – BTECH
### TYPICAL FIVE-THROUGH EIGHT-SEMESTER PROGRAM

### Fifth

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<td>Principles of Microeconomics</td>
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<td>5703</td>
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<td>7153</td>
<td>Principles of Management</td>
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<td>CIVL</td>
<td>3053</td>
<td>Construction Methods &amp; Practic OR</td>
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<td>Comm Bldg Const Methods &amp; Prac</td>
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**Total Credits:** 15

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<td>Tech./Business Elective</td>
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<td>Effective Speaking OR</td>
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**Total Credits:** 18

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**Total Credits:** 15

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship.
COURT AND REALTIME REPORTING
AAS DEGREE – CODE #0647
Danielle Green, Program Coordinator
Email address: greendr@alfredstate.edu

This program, approved by the National Court Reporters Association, will prepare you for a career in various court reporting fields—from official to freelance to realtime and closed captioning for the hearing impaired.

ATTRIBUTES
• Independence
• Great lifestyle
• Prestige
• Flexibility
• Mobility
• Exciting work environments

ADVANTAGES
• Development of high-speed recording skills to 225-plus words per minute through the use of realtime translation machine shorthand and computer aided transcription (CAT).
• In the first year, students learn realtime shorthand theory and develop computer skills that will enhance their overall employability.
• Development of skills in recording and transcribing specialized court reporting matter starts in the summer term and continues through the second year.
• The college offers court reporting courses online, making it possible for students who transfer in credit or attend other colleges to earn their degree from Alfred State in court and realtime reporting. This approach is perfect for working professionals, adult and returning students, and anyone who needs high flexibility in their academic schedule.

PROGRAM STUDENT LEARNING OUTCOMES
• Develop a shorthand recording speed on five minutes of unfamiliar dictation with at least 95 percent accuracy.
• Write a dictated list with 95 percent accuracy using advanced shorthand theory, special abbreviations, and phrasing principles.
• Perform readback and analysis of shorthand notes.
• Perform proper transcription and various other functions using the computer.
• Translate two-voice and multi-voice testimony.
• Analyze and describe various aspects of the technology of court reporting and captioning.
• Apply the rules of grammar, spelling, and punctuation, and capitalization of transcripts.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State court and realtime reporting AAS graduates may enter directly into either the interdisciplinary studies BTech or technology management BBA degree program at Alfred State.

OCCUPATIONAL OPPORTUNITIES
• Official court and hearing reporters
• General freelance reporters
• Realtime and closed-captioning reporters
• Scoping

PROFESSIONAL OUTLOOK
• According to the Bureau of Labor Statistics Occupational Outlook Handbook, the national median salary for court reporters and simultaneous captioners was $61,660 in 2020.
• The US Department of Labor projects that court reporting job opportunities will grow fastest in the careers that help the deaf or the hard of hearing, such as realtime captioning and communication access realtime translation (CART).

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed.
COURT AND REALTIME REPORTING - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM (on campus and online)

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<td>CTRP 2262/2272</td>
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<td>CTRP 2282/2292</td>
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<td>Persnl Dictionary Prod &amp; Maint</td>
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<td>CTRP 4383/4393</td>
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<td>CTRP 4635</td>
<td>Procedures for Reporters &amp; Capt.</td>
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</table>

Total Credit Hours: 64

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.

ADDITIONAL PROGRAM INFORMATION

- The internship course (CTRP 4602) is completed off campus.
- All students are required to take CTRP 3163 in the summer.
- Students are permitted to repeat a court reporting writing class (Theory I-IV & Speed Building I-V) two times only. If a student is unsuccessful in the same course reporting writing class three times, they will be unable to progress in the court reporting program.
- Students may submit a written appeal to the department, but if not approved, they will be unable to continue in the program.
- Students returning to Alfred State after a substantial break (six months or longer) or transferring from another school may be required to take a placement test to determine coursework at the discretion of the program.

GRADUATION REQUIREMENTS

- A cumulative overall index of at least 2.0 is required in order to graduate.
- All CTRP skill writing classes must be taken and passed at Alfred State with a passing grade of "C" or better.
- Court reporting students must also meet all the NCRA requirements as stated in the course objectives, including the passing of three, five-minute tests on unfamiliar matter with 95 percent accuracy on two-voice material at 225 wpm, jury charge material at 200 wpm, and literary material at 180 wpm; the completion of 40 verified hours of internship experience, including the production of a 40-page transcript; the transcription of a simulated RPR skills test at RPR speed levels in three hours; and the production of accurate transcripts using computer-aided technology as stated in the course outlines.
COURT REPORTING & CAPTIONING
CERTIFICATE – CODE #2152
Danielle Green, Program Coordinator Email address: greendr@alfredstate.edu

This program, approved by the National Court Reporters Association, will prepare you for a career in various court reporting fields—from official to freelance to realtime and closed captioning for the hearing impaired.

ATTRIBUTES
• Independence
• Great lifestyle
• Prestige
• Flexibility
• Mobility
• Exciting work environments

ADVANTAGES
• Development of high-speed recording skills to 225-plus words per minute through the use of realtime translation machine shorthand and computer aided transcription (CAT).
• In the first year, students learn realtime shorthand theory and develop computer skills that will enhance their overall employability.
• Development of skills in recording and transcribing specialized court reporting matter starts in the summer term and continues through the second year.
• The college offers court reporting courses online, making it possible for students who transfer in credit or attend other colleges to earn their certificate from Alfred State in court and realtime reporting. The online approach still requires two years of course work and does not change any of the standards reflected in graduation requirements for all students. This approach is perfect for working professionals, adult and returning students, and anyone who needs high flexibility in their academic schedule.

PROGRAM STUDENT LEARNING OUTCOMES
• Develop a shorthand recording speed on five minutes of unfamiliar dictation with at least 95 percent accuracy.
• Write a dictated list with 95 percent accuracy using advanced shorthand theory, special abbreviations, and phrasing principles.
• Perform readback and analysis of shorthand notes.
• Perform proper transcription and various other functions using the computer.
• Translate two-voice and multi-voice testimony.
• Analyze and describe various aspects of the technology of court reporting and captioning.
• Apply the rules of grammar, spelling, and punctuation, and capitalize of transcripts.

OCCUPATIONAL OPPORTUNITIES
• Official court and hearing reporters
• General freelance reporters
• Realtime and closed-captioning reporters
• Scoping

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed. Survey data can be found here.

RELATED PROGRAMS
Court and Realtime Reporting (AAS)
Technology Management (BBA)

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra

Technical Standards
• Students must have sufficient manual dexterity to operate industry standard machinery.
• Students must possess adequate hearing to provide accurate verbatim transcripts.

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering the court reporting and captioning program. Apple products are not compatible with stenographic software. Laptop specifications are available at http://www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

COURT REPORTING AND CAPTIONING - CERTIFICATE
TYPICAL FOUR-SEMESTER PROGRAM (on campus and online)

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Total Credit Hours: 43

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

GRADUATION REQUIREMENTS
• A cumulative overall index of at least 2.0 is required in order to graduate.
• All CTRP skill writing classes must be taken and passed at Alfred State with a passing grade of “C” or better.
• Court reporting students must also meet all the NCRA requirements as stated in the course objectives, including the passing of three, five-minute tests on unfamiliar matter with 95 percent accuracy on two-voice material at 225 wpm, jury charge material at 200 wpm, and literary material at 180 wpm; the completion of 40 verified hours of internship experience, including the production of a 40-page transcript; the transcription of a simulated RPR skills test at RPR speed levels in three hours; and the
production of accurate transcripts using computer-aided technology as stated in the course outlines.

ADDITIONAL PROGRAM INFORMATION

- The internship course (CTRP 4602) is completed off campus.
- Students are permitted to repeat a court reporting writing class (Theory I-IV & Speed Building I-V) two times only. If a student is unsuccessful in the same court reporting writing class three times, they will be unable to progress in the court reporting program.
- Students may submit a written appeal to the department, but if not approved, they will be unable to continue in the program.
- Students returning to Alfred State after a substantial break (six months or longer) or transferring from another school may be required to take a placement test to determine coursework at the discretion of the program.
The Associate in Science (AS) degree in criminal justice provides graduates with a solid foundation in the field of criminal justice and its basic components. The program offers practical knowledge that is integrated across core criminal justice courses and that is then combined with other relevant course work. The program emphasizes the development, structure, and function of the criminal justice system within the US, as well as ethical law enforcement practices and community relations. In addition, the program’s professional course work includes a management component that helps prepare graduates for administrative and leadership positions within the criminal justice system.

ADVANTAGES

Students are taught by experts in the field of criminal justice to guide them in their academic and career goals. Students can take coursework in policing, corrections, courts, forensics and cybercrime to give them broad based knowledge and skills to prepare them for a job in criminal justice.

PROGRAM STUDENT LEARNING OUTCOMES

- Apply critical thinking skills in the context of professional practice.
- Perform the basic operations of personal computer use, as well as employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
- Communicate effectively and appropriately in oral and written forms.
- Explain the importance of ethical behavior by criminal justice professionals as part of the social contract between a diverse citizenry and the criminal justice system.
- Apply basic management practices to the topical issues facing the police, court, and correction systems.
- Demonstrate basic knowledge of the New York State Penal Code and of Criminal Law Procedure.
- Demonstrate knowledge of the causes and consequences of crime.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State criminal justice graduates may enter directly into the criminal justice BS, interdisciplinary studies BTech, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES

Graduates are well prepared to enter a police academy or to seamlessly transfer into Alfred State’s criminal justice program at the baccalaureate level.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 0 percent are employed; 100 percent continued their education.

RELATED PROGRAMS

Criminal Justice (BS)
Forensic Science Technology
Human Services
Individual Studies
Interdisciplinary Studies
Liberal Arts and Sciences: Social Science

CRIMINAL JUSTICE - AS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

First

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<td>Statistical Concepts</td>
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Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

Notes: Minimum number of hours required for graduation is 60. Elective courses must be from approved list of courses. Some elective courses have prerequisites, so make sure you have met them before registering for them. You can find them in the college catalog.

GRADUATION REQUIREMENTS

- Good academic standing (2.0 cumulative GPA) or higher
- Successful completion of all courses in the prescribed four-semester plan
- Submission of the college’s degree application form

CRIMINAL JUSTICE - CODE #2279

Dr. Jill Priest Amati, Program Coordinator
Email address: amati@alfredstate.edu

Email address: oas@alfredstate.edu

Recommended: Geometry and Biology

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
The Bachelor of Science (BS) degree in criminal justice provides graduates with a solid foundation in the field of criminal justice, both its essential components and emerging areas, with a focus on leadership and applied learning. With strong preparation in conceptual knowledge, students gain practical experience in criminal justice, including the opportunity to complete either an internship or a lab-based criminal investigation course in their final semester. In order to prepare graduates for a wide variety of careers, the program emphasizes several areas within criminal justice:

- Ethical law enforcement practices
- Decision-making
- Community relations
- Working with diverse populations
- Public safety
- Criminal justice leadership and administration

**ADVANTAGES**

BS program students can attend the Police Academy and receive up to 12 credits toward their degree.

Police Academy: [http://www.alfredstate.edu/police-academy](http://www.alfredstate.edu/police-academy)

**PROGRAM STUDENT LEARNING OUTCOMES**

- Communicate effectively and appropriately in written and oral form.
- Apply critical thinking to modern criminal justice practices, procedures, and policies, as well as other disciplines.
- Perform the basic operations of personal computer use and employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
- Describe the development of the US criminal justice system, its structures, laws, and functions, and how the system fits within the US democratic system.
- Explain the importance of ethical behavior by criminal justice professionals as part of the social contract between a diverse citizenry and the criminal justice system.
- Apply contemporary management and leadership concepts and theories.
- Show how theories of crime, crime prevention, treatment, and punishment have impacted public policy in the US.
- Show the connections between US constitutional law and state and local criminal law and procedures.
- Examine the importance of diversity training for criminal justice professionals across all levels and parts of the US system.
- Demonstrate knowledge of the causes and consequences of crime.

**EMPLOYMENT OPPORTUNITIES**

The US Bureau of Labor Statistics and the New York State Department of Labor predict that job opportunities will exist over the next decade in law enforcement at the local, county, state, and federal levels, and in correctional institutions, parole and probation departments, private security companies, and police science organizations, among others. Though the numbers point to no more than a stable projected job market over the next few years, the sheer volume of criminal justice positions should ensure ample opportunities for graduates possessing expertise in the field.

**EMPLOYMENT STATISTICS**

Employment and continuing education rate of 100 percent – 77 percent are employed; 23 percent have continued their education.

**RELATED PROGRAMS**

- Criminal Justice (AS)
- Human Services
- Human Services Management
- Liberal Arts and Sciences: Social Science

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Required: Algebra
CRIMINAL JUSTICE - BS DEGREE

TYPICAL EIGHT-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
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<tbody>
<tr>
<td>COMP 1503</td>
<td>Freshman Composition</td>
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<td>MATH 1123</td>
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<td>MATH 1113</td>
<td>Statistical Concepts</td>
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<td>MATH 2124</td>
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<td>SOCI 1163</td>
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<td>CJUS 1003</td>
<td>Intro to Criminal Justice (Minimum of &quot;C&quot; required)</td>
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| Minimum of 15-16 Credit |

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<td>PLSC 1043</td>
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<tr>
<td>CJUS 2003</td>
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<td>XXXX xxx3</td>
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<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
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<tr>
<td>SOCI 1183</td>
<td>Contemporary Social Problems</td>
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<tr>
<td>BUAD 3153</td>
<td>Fundamentals of Management</td>
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<tr>
<td>SOCI 1243</td>
<td>Criminology</td>
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<td>XXXX xxx3</td>
<td>Gen Ed Elective - Natural Science</td>
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<tr>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
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<tr>
<td>CJUS 4103</td>
<td>Policing in a Free Society</td>
<td>3</td>
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<td>SOCI 1223</td>
<td>Power, Privilege, &amp; Difference</td>
<td>3</td>
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<tr>
<td>XXXX xxx3</td>
<td>Open Elective</td>
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<td>XXXX xxx3</td>
<td>Open Elective</td>
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<tr>
<td>CJUS 4003</td>
<td>Corrections Process in the U.S</td>
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<tr>
<td>COMP 5703</td>
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<td>SOCI 5023</td>
<td>Research Methods</td>
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<td>CJUS 5003</td>
<td>Constitutional Issues in Crime</td>
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<td>CJUS 5103</td>
<td>Courts in Contemporary Society</td>
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<td>XXXX xxx3</td>
<td>LAS Elective - Upper</td>
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<td>Law &amp; Criminal Evidence</td>
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<td>CJUS 6203</td>
<td>Ethics in Criminal Justice Administration</td>
<td>3</td>
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<td>PHIL 6003</td>
<td>Professional Ethics</td>
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<tr>
<td>PSYC 6103</td>
<td>Family &amp; Intimate Relationship Violence</td>
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<td>SOCI 6003</td>
<td>Juvenile Justice Administration</td>
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<td>XXXX xxx3</td>
<td>LAS Elective - Upper</td>
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| Minimum of 18 Credit |

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<td>PSYC 7003</td>
<td>Working w/Diverse Populations</td>
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<td>CJUS 7004</td>
<td>Criminal Investigation &amp; Mgmt</td>
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<td>XXXX xxx3</td>
<td>Professional Elective</td>
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<td>Professional Elective</td>
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</tr>
<tr>
<td>XXXX xxx3</td>
<td>LAS Elective - Upper</td>
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</table>

| Minimum of 12 Credit |

**INTERNSHIP REQUIREMENTS**

Students who elect to go the internship route will be responsible for locating and securing the internship. The internships (three-hour and 12-hour) require a minimum of either 120 or 480 hours of work experience in an approved public safety agency, commonly defined as police, courts, corrections, fire service, or in a commercial/industrial security agency. The agency or industry selected must be approved by the internship coordinator and the department chair and be specifically related to the curriculum of the student. Students must be in good academic standing (cumulative GPA of 2.0 or higher) and be able to pass any required background check.

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.

**GRADUATION REQUIREMENTS**

- Good academic standing (cumulative GPA of 2.0 or higher)
- Successful completion of all courses in the prescribed eight-semester plan
- Submission of the college's degree application form
CULINARY ARTS
AOS DEGREE – CODE #0578
Debra Burch, Department Chair and Program Coordinator
Email address: burchda@alfredstate.edu

The courses train students in the principles applied to culinary arts. The goal is to prepare men and women for supervisory positions, and culinary positions that require special skills and knowledge of food and business. By learning fundamental and advanced culinary principles in the food service industry and employing the techniques of menu planning, preparation, and supervision in the lab classes, the students develop skills, confidence, and critical thinking.

ADVANTAGES
- Students may earn the manager servsafe certification from the Educational Foundation of the National Restaurant Association as part of the program.
- Graduates have the option of applying for readmission into a dual-degree program, whereby they may obtain a second degree in baking, production and management in one additional year.

PROGRAM STUDENT LEARNING OUTCOMES
- Interpret and comply with prevailing food safety regulations.
- Create products from complex recipes.
- Successfully vie for employment or continuing education in the food service industry.
- Productively utilize typical culinary equipment.
- Establish product and plate cost for menu items.
- Demonstrate the relationship among menu, equipment, layout, and design.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State culinary arts graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
- Chef Manager
- Cook
- Sous Chef
- Chef
- Production Manager
- Health Care
- Food Service Manager
- School Servicer
- Caterer
- Food Sales Representative
- Food Marketing
- Dining Room Manager
- Entrepreneur

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 25 percent are employed; 75 percent continued their education.

EXPENSES
In addition to regular college expenses, the student must purchase a probe thermometer, calculator, uniform package, and uniform laundry service from the Alfred State Campus Store. Uniforms may cost approximately $360 to $460. The uniform laundry service is approximately $60 per semester. It is mandatory for all culinary arts students to have at least a five-meal, meal plan. First-semester textbooks cost approximately $500, and approximately $100 each succeeding semester.

RELATED PROGRAMS
Culinary Arts: Baking, Production and Management

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for the program mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program.

Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Knowledge of basic math, reading, and writing skills.

Technical Standards
It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory settings required for completion of the program. Students in this degree program should be able to:
- Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
- Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
- Communicate effectively, both orally and in writing.
- Capability to lift 50 pounds of kitchen product or equipment to industry standard counter height
- Ability to professionally manage and cope with work in a high paced and crowded lab environment for several hours a day.

CERTIFICATION OR LICENSURE
Students may earn the manager servsafe certification from the Educational Foundation of the National Restaurant Association as part of the program.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

RELATED PROGRAMS
Culinary Arts: Baking, Production and Management
## CULINARY ARTS - AOS DEGREE

### TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>First</td>
<td>CULN 1083</td>
<td>Food Safety &amp; Service Training</td>
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<td></td>
<td>CULN 1143</td>
<td>Culinary Foundations</td>
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<td></td>
<td>CULN 1373</td>
<td>Purchasing &amp; Cost Control</td>
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<td>CULN 1479</td>
<td>Kitchen Fundamentals</td>
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<td>Second</td>
<td>CULN 2043</td>
<td>Fundamentals of Nutrition</td>
<td>3</td>
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<td>CULN 2183</td>
<td>Menu Planning</td>
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<td>CULN 2263</td>
<td>Cooking Techniques &amp; Preps</td>
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<td>CULN 2479</td>
<td>Culinary Preparations</td>
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<tr>
<td>Third</td>
<td>CULN 3253</td>
<td>Beverage &amp; Fermentation</td>
<td>3</td>
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<td></td>
<td>CULN 3353</td>
<td>Hospitality Supervision</td>
<td>3</td>
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<td></td>
<td>CULN 3479</td>
<td>Advanced Culinary Preparation</td>
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<tr>
<td></td>
<td>CULN 3173</td>
<td>Intl Cook, Garde Manger &amp; Baki</td>
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<td></td>
<td>CULN 4163</td>
<td>Advanced Cuisine</td>
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### GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
CULINARY ARTS: BAKING, PRODUCTION & MANAGEMENT

AOS DEGREE – CODE #0423
Debra Burch, Department Chair and Program Coordinator
Email address: burchda@alfredstate.edu

There’s never been greater demand for skilled bakers. Our program will prepare you for this exciting field with 1,350 hours of hands-on production experience, of which approximately 80 percent is concentrated in bakery training. The major includes detailed instruction in methods, ingredients, measurements, controls, equipment, and merchandising. And the production for breakfast, lunch, and dinner requirements is built into one daily schedule.

ADVANTAGES
- Students may earn the manager servsafe certification from the Educational Foundation of the National Restaurant Association as part of the program.
- Graduates have the option of applying for readmission into a dual-degree program whereby they may obtain a second degree in culinary arts in one additional year.

PROGRAM STUDENT LEARNING OUTCOMES
- Interpret and comply with prevailing food safety regulations.
- Create products from complex formulas.
- Successfully vie for employment or continuing education in the food service industry.
- Competently utilize typical bakery equipment.
- Establish product and plate cost for bakery menu items.
- Demonstrate the relationship among menu, equipment, layout, and design.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State culinary arts: baking, production and management graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
- Baker
- Caterer
- Pastry chef
- Sales representative
- Commercial baker and management
- Management
- Product developer
- Entrepreneur

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 57 percent are employed; 43 percent continued their education.

EXPENSES
In addition to the regular college expenses, the student must purchase decorating tips, a probe thermometer, calculator, uniform package, and uniform laundry service from the Alfred State Campus Store. Uniforms may cost approximately $360 to $460. The uniform laundry service is approximately $60 per semester. It is mandatory that all culinary arts: baking, production and management students have at least a five-meal, meal plan. First-semester textbooks cost approximately $500, and approximately $100 each succeeding semester.

RELATED PROGRAMS
Culinary Arts

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for the program mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Knowledge of basic math, reading, and writing skills.

TECHNICAL STANDARDS
It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory settings required for completion of the program. Students in this degree program should be able to:
- Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
- Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
- Communicate effectively, both orally and in writing.
- Capability to lift 50 pounds of kitchen product or equipment to industry standard counter height
- Ability to professionally manage and cope with work in a high paced and crowded lab environment for several hours a day.

GRADUATION REQUIREMENT
A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.

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CULINARY ARTS: BAKING, PRODUCTION AND MANAGEMENT - AOS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<td>Intro to Food Science &amp; Technol</td>
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The Bachelor of Technology degree in cyber security at Alfred State is designed to prepare you to enter the workforce as an information security professional—one of the fastest-growing computer and information technology career paths—with a special emphasis in network and host security, secure programming, secure database applications, mobile device security, and cloud security. From courses in security, to programming language sequences such as .NET, Java, and C++, this program will help you meet the needs of today's and tomorrow's information security industry. You will also receive a solid foundation in web development, networking, and microcomputer systems. And in order to give you the hands-on experience employers are looking for, a full-semester internship is included.

ADVANTAGES
- Organizations of all types and sizes need information technology professionals, and emphasis on security has never been higher.
- Due to the solid foundation in all the major fields of information technology, the job opportunities for graduates are wide and numerous.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate troubleshooting strategies with a variety of security problems.
- Install and configure web, database, file, and application servers.
- Develop and implement effective security and disaster recovery systems and policies.
- Develop and maintain technical documentation and procedures for security management.
- Demonstrate effective research, planning, and security management of software updates and fixes.
- Apply accumulated knowledge and skills in an actual industry environment.
- Demonstrate effectiveness in the use of computer forensic tools, procedures, techniques, and hardware, as well as maintain physical evidence.
- Demonstrate effectiveness in configuring authentication schemes, such as NAT, content security and content vectoring, SYNDefender, and VPNs using industry standard firewalls.
- Demonstrate effectiveness in the use and scan of a network with heterogeneous operating systems and identify security vulnerabilities.
- Demonstrate knowledge of multiple areas within the liberal arts arena.
- Demonstrate knowledge in design and configuration of Windows security.
- Demonstrate effectiveness in tracking and monitoring attacks against Linux servers and how to prevent them.

CONTINUING EDUCATION OPPORTUNITIES
Articulation agreements have been established with many community colleges and additional agreements are in development. It is possible, with careful selection of courses, to transfer from a variety of associate degrees, including computer information systems, information technology, computer science, and others. Upon completion of the bachelor's degree, students will be prepared to pursue a graduate degree in information technology. The computer information systems degree (AAS) at Alfred State is especially well suited for transfer into the bachelor's degree at the junior level.

OCCUPATIONAL OPPORTUNITIES
Organizations of all types and sizes need information technology professionals and emphasis on security has never been higher. The primary employment field includes security IT specialists, Virtual Private Network administrators, authentication specialists, database administrators, programmers, and system analysts. Due to the solid foundation in other areas, graduates will not be limited to these areas; thus, the job opportunities are wide and numerous.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS
Computer Engineering Technology
Computer Information Systems
Computer Science

Digital Media and Animation
Information Technology: Applications Software Development
Information Technology: Network Administration
Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the cyber security program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

CYBER SECURITY - BTECH DEGREE
TYPICAL EIGHT-SEMESTER PROGRAM

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* If not required, take LAS elective to complete degree requirements of three credits; otherwise take free elective.

** BUAD 4003 or BUAD 6113 recommended.

GPA of 2.5 or higher is required in major courses; GPA of 2.0 minimum overall is required.

Internship is student-initiated.

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.

**GRADUATION REQUIREMENTS**

- 124 credit hours
- 39 credit hours in major field required courses
- 24 credit hours in professional courses
- 18 credit hours in core concentration
- 30 credit hours in liberal arts/general education courses
- A 2.5 grade point average in the major is needed for the required internship
- Other requirements as stated in college academic regulations
- Seven general education areas are required, including three of the following five: art, language, other world civilizations, American history, or western civilization
DIAGNOSTIC MEDICAL SONOGRAPHY
AAS DEGREE - CODE #2560

Jennifer Updyke, Program Director
Email address: updykejs@alfredstate.edu

Diagnostic medical sonography is a two-year AAS degree program preparing qualified students to become health care professionals who use high-frequency sound waves to produce anatomical images for diagnostic purposes. The program coordinates on-campus didactic and laboratory classes and clinical experiences at area hospitals, to which students are responsible for their own transportation.

Students must be able to demonstrate technical standards and pass clinical competencies as described by the American Registry of Diagnostic Medical Sonography (ARDMS), and the Commission on Accreditation of Allied Health Education Programs (CAAHEP), recognized by the United States Department of Education as the national accreditation agency of programs for sonography. Upon graduation, students are prepared to take the ARDMS SPI and Content Specialty Exams.

Clinical education is assigned to provide experiences consistent with the student’s level of achievement in different hospital and outpatient environments. Through clinical assignments, students have opportunities to work with the most modern and specialized equipment available and knowledgeable staff with a wealth of experience in imaging. These assignments include a 10-week (40 hours per week) summer session that is required and provides valuable experience in developing clinical competency skills. In addition, 15 weeks of full-time clinical will be assigned in both fall and spring semesters of the second year of the program. Students will require housing close enough to their clinical placements to travel there on a daily basis.

The program currently admits 20 students each year, with a fall semester start date only. One student placement is reserved for an on-campus curriculum change, with the remaining 19 placements being filled by admissions.

ADVANTAGES
• Prepares the student for the American Registry of Diagnostic Medical Sonography registry exams.
• Sonography and simulation laboratory on campus.
• Low student-to-faculty ratio.
• Gaining proficiency in the technical skills necessary for diagnostic medical sonography.
• Extensive clinical experience in hospital setting.
• Availability of on-campus housing and variety of campus activities.

PROGRAM STUDENT LEARNING OUTCOMES
• Demonstrate appropriate technical and effective skills in the clinical setting.
• Demonstrate patient-centered, age-specific skills.
• Analyze images to determine diagnostic quality.
• Demonstrate proper work ethics.
• Examine the value of leadership, professional development, and growth.
• Demonstrate critical thinking and problem-solving skills in both the didactic and clinical setting.
• Apply written communication skills to the construction of documents of record that are established professional guidelines.
• Apply communication skills to the explanation of ideas and scientific terminology.
• Using technological resources effectively and appropriately, synthesize theory and concepts from the liberal education domain and other professions into radiologic technology.
• Explain cultural diversity and evaluate the role of cultural competency, values, and ethics in the patient care setting.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed; 0 percent have continued their education.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Applicants for the diagnostic medical sonography program must possess a recognized high school diploma or its equivalent. A standardized test (SAT or ACT) is not required but recommended. Specific high school course requirements and recommendations are:

Required: Algebra, Geometry, Algebra 2, Biology, Physics, Interview with the academic department.

Recommended: Chemistry

Applicants with previous college experience must submit an official college transcript and their success at the college level will be an admissions consideration. Due to the technical and science rigor, entrance requirements are higher than those of the institution.

TECHNICAL STANDARDS
To participate in the program, the applicant must possess specific non-academic skills. The technical standards described below are consistent with the duties of an entry-level radiographer in a professional position and are required in order to provide adequate patient care and produce a diagnostic image.

The applicant should have the:
• Ability with reasonable accommodation, if necessary, to reach and position the patients on the exam table.
• Ability with reasonable accommodation, if necessary, to move, adjust, and manipulate equipment to perform imaging procedures.
• Ability to review and evaluate recorded images to determine the quality of the image with reasonable accommodation.
• Ability to communicate effectively with patients, doctors, and other personnel so that the patient is not placed in an “at-risk” situation.
• Ability to make proper decisions involving patient and co-worker safety.
• Ability with reasonable accommodation, if necessary, to hear sounds that are necessary to assess patient’s health status.

CONTINUING EDUCATION OPPORTUNITIES
The program allows graduates to transfer to a four-year program in imaging science or healthcare management.

OCCUPATIONAL OPPORTUNITIES
• Hospital Sonography Department Staff Technologist
• Advanced Sonography Modalities- Cardiac, Vascular, and Musculoskeletal
• Sonography Education
• Sonography Department Management
• Industry
• Private Physician Offices

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Graduates may enter directly into either the healthcare management B Tech, the interdisciplinary studies B Tech, or technology management BBA degree program.

Grade of “C+” or better required for all SONO, BIOL and RADT prefix courses.

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
DIAGNOSTIC MEDICAL SONOGRAPHY - AAS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

First

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Be advised that a prior felony conviction may impede a student’s ability to participate in a required clinical experience.

GRADUATION REQUIREMENTS

The AAS degree in diagnostic medical sonography has finely prescribed courses reflective of accreditation standards for students to be prepared for admission to the American Registry of Diagnostic Medical Sonography (ARDMS) Certification Examination. Specific graduation requirements are:

- 64 total semester credit hours
- Minimum of 20 credit hours of liberal arts and sciences from three of the 10 SUNY General Education categories
- 2.0 cumulative GPA and a grade of "C+" or better in the core science courses (SONO and BIOL prefixes)
- Approval of department faculty
DIGITAL MEDIA AND ANIMATION

BS DEGREE – CODE #2018

Jennie Thwing, Program Coordinator
Email address: thwingj@alfredstate.edu

The emerging field of computer imaging and animation is impacting virtually every industry and profession. The digital media and animation program will provide you with a broad range of technical, creative, and problem-solving skills to facilitate your employment in new media and animation. At the core of the program is a sequence of studio courses that enhances individual artistic creativity and provides instruction in the traditional arts and industry-standard computer graphics software.

ADVANTAGES

• Students develop critical thinking skills by completing rigorous problem-solving activities.
• Gain experience creating a professional presentation, as well as evaluating, revising, and defending ideas and artistic decisions in presented work.

PROGRAM STUDENT LEARNING OUTCOMES

• Demonstrate adaptability/flexibility with technology.
• Illustrate critical thinking by completing course work.
• Demonstrate a strong work ethic through time management and quality works.
• Visually analyze their own work, as well as the work of others, in critiques, presentations, writing, and other activities.
• Apply knowledge of the history and theory relevant to digital media and animation through studio work.
• Communicate verbally using specific terminology associated with the software, hardware, and industry.

OCCUPATIONAL OPPORTUNITIES

• Animation
• Interactive media
• Digital imaging
• Media Design
• Fine art

RELATED PROGRAMS

Computer Engineering Technology
Graphic and Media Design
Information Technology: Web Development

ENTRANCE REQUIREMENT/RECOMMENDATIONS

Required: Algebra, Geometry
Recommended: Algebra 2

EMPLOYMENT STATISTICS

Employment and continuing education rate of 80 percent – 60 percent are employed; 20 percent continued their education.

GENERAL NOTES

Entry level of student into math and composition/literature sequences is a function of student's high school preparation and mathematics and English placement examinations.

Minimum of "C" is required for all core courses. A 2.0 GPA or greater in core courses or comparable courses at another institution is required to guarantee admission into DGMA 5103, 5403, and 5603.

Students must complete at least one course from seven of the 10 SUNY General Education silos.

Students are required to complete a digital portfolio assignment and annual reviews to meet graduation requirements.

REQUIRED EQUIPMENT

A tier 4 or Apple MacBook Pro laptop computer is required for students entering the digital media and animation program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
**DIGITAL MEDIA AND ANIMATION – BS**

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<td>Survey of Animatn &amp; Visual Eff</td>
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<td>SOCI xxx3</td>
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<td>Introduction to Film</td>
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<td>Gen Ed/LAS Elective</td>
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<td><strong>Fifth</strong></td>
<td>DGMA 5603</td>
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<td>Advanced Modeling</td>
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<td>DGMA 6103</td>
<td>Production II</td>
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<td>Motion Graphics</td>
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<td>Gen Ed/LAS Elective (Upper Level)</td>
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<td>Gen Ed/Western Civilization OR</td>
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<td>XXXX xxx3</td>
<td>Gen Ed/Foreign Language</td>
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<td>Senior Studio I</td>
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<td></td>
<td>DGMA xxx3</td>
<td>Technical Elective (Upper)</td>
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<tr>
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<td>XXXX xxx3</td>
<td>Gen Ed/LAS Elective (Upper)</td>
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<tr>
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<td>Gen Ed/LAS Elective (Upper)</td>
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<td><strong>Eighth</strong></td>
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<td>Senior Studio Project II</td>
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<td>DGMA 8103</td>
<td>Portfolio</td>
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<td>DGMA xxx3</td>
<td>Technical Elective (Upper)</td>
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<td>XXXX xxx3</td>
<td>Gen Ed/LAS Elective</td>
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<td>XXXX xxx3</td>
<td>Gen Ed/LAS Elective</td>
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</tbody>
</table>

Be advised that a prior felony conviction may impede a student's ability to participate in an internship.
DIGITAL MEDIA AND ANIMATION

AAS DEGREE – CODE #1212

Jennie Thwing, Program Coordinator
Email address: thwingj@alfredstate.edu

The emerging field of computer imaging and animation is impacting virtually every industry and profession. The digital media and animation program will provide you with a broad range of technical, creative, and problem-solving skills to facilitate your employment in new media and animation. At the core of the program is a sequence of studio courses that enhances individual artistic creativity and provides instruction in the traditional arts and industry-standard computer graphics software.

ADVANTAGES

- Students develop critical thinking skills by completing rigorous problem-solving activities.
- Gain experience creating a professional presentation, as well as evaluating, revising, and defending ideas and artistic decisions in presented work.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate adaptability/flexibility with technology.
- Illustrate critical thinking by completing course work.
- Demonstrate a strong work ethic through time management and quality works.
- Visually analyze their own work, as well as the work of others, in critiques, presentations, writing, and other activities.
- Apply knowledge of the history and theory relevant to digital media and animation through studio work.
- Communicate verbally using specific terminology associated with the software, hardware, and industry.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State digital media and animation AAS graduates may enter directly into the digital media and animation BS, the interdisciplinary studies BTech, or the technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES

- Animation
- Interactive media
- Digital imaging
- Media design
- Fine art

RELATED PROGRAMS

Computer Engineering Technology
Graphic and Media Design
Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry
Recommended: Algebra 2

REQUIRED EQUIPMENT

A tier 4 laptop computer is required for students entering the digital media and animation program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

DIGITAL MEDIA AND ANIMATION (AAS DEGREE)

TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
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<tbody>
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<td>DGMA 1403</td>
<td>DGMA 2403</td>
<td>DGMA 3403</td>
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<tr>
<td>Digital</td>
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<td>Foundations I</td>
<td>Animation</td>
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<td>DGMA 1413</td>
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<td>Foundations: Form/Space</td>
<td>3D Design/Color</td>
<td>Production I</td>
<td>Effective Speaking</td>
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<tr>
<td>DGMA 1423</td>
<td>FNAT 2433</td>
<td>DGMA 1333</td>
<td>OR</td>
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<td>Intro to Visual Communication</td>
<td>Figure and Motion</td>
<td>Survey of Animatn &amp; Visual Eff</td>
<td>Effective Speaking Equivalent</td>
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<td>GLST 2113</td>
<td>XXXX xxx3</td>
<td>SPCH xxx3</td>
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<td>Global &amp; Diverse Perspectives</td>
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<td>COMP 1503</td>
<td>MATH xxx3</td>
<td>LITR 2813</td>
<td>SCHR 3513</td>
</tr>
<tr>
<td>Freshman        Composition</td>
<td>Gen Ed - Math Elective</td>
<td>Introduction to Film</td>
<td>Technical Elective</td>
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</table>
| Minimum of “C” is required for all core courses.

Students are required to complete a digital portfolio assignment and annual review to meet graduation requirements.
ELECTRICAL CONSTRUCTION AND MAINTENANCE ELECTRICIAN

AOS DEGREE – CODE #0498

Bradley Thompson, Department Chair and Program Coordinator
Email address: thompsbj@alfredstate.edu

This program provides in-depth instruction in the theories and principles of electricity. Principles of operation for electrical devices and equipment, and correct and safe operation of tools are covered. You will study and learn to interpret and apply the requirements of the National Electric Code for designing electrical layouts, installation methods, and the maintenance, troubleshooting, and repair of electrical circuits and equipment.

Practical (hands-on) application of the classroom theory is the main emphasis of the laboratory work. As an electrical construction and maintenance electrician student, you will assist in the design and installation of the electrical installations of many projects both on and off campus. Approximately one-third of lab time is spent on actual work sites, gaining real-life work experience.

In your senior year, you will create completely automated projects in the lab using PLCs, pneumatics, electronics, and process controls.

ADVANTAGES

- Summer internships are available to selected students through the International Brotherhood of Electrical Workers, Village of Wellsville Electric Department, and RADEC Corporation in Rochester, allowing students to gain additional, valuable trade experience.
- Various IBEW Locals have agreed to award qualified graduates from Alfred State’s electrical construction and maintenance electrician program advanced placement in their apprenticeship programs. The degree of advanced placement to be awarded will be determined after review by the joint apprenticeship committee and after all conditions of the joint apprenticeship standards have been met.

PROGRAM STUDENT LEARNING OUTCOMES

- Read, interpret, and apply technical information from the National Electrical Code.
- Perform basic and complex mathematical equations as they apply to the electrical trade.
- Perform layout, design, and installation for commercial and industrial wiring systems.
- Perform entry-level layout, design, and installation of residential wiring systems.
- Apply combined knowledge to perform maintenance and troubleshooting procedures within the electrical trade.
- Students will develop an understanding of efficiency, design, and NEC requirements as pertaining to renewable energy systems.
- Design, sizing, layout, and selection of equipment for the electrical systems within a residential dwelling.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State electrical construction and maintenance electrician graduates may enter directly into the construction supervision B Tech or technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the baccalaureate program in two additional years; others may complete the program in two-and-one-half years.

CONTINUING EDUCATION OPPORTUNITIES

The following local chapters of the International Brotherhood of Electrical Workers (IBEW) have signed articulation agreements with the electrical construction and maintenance electrician program at Alfred State.

IBEW Local 86, Rochester
IBEW Local 237, Niagara Falls
IBEW Local 241, Ithaca

OCCUPATIONAL OPPORTUNITIES

- Designer
- Installer
- Construction site electrician
- Electrical estimator
- Electrical inspector
- PLC programmer
- Salesperson
- Electrical trade union or non-union apprentice
- Electric motor control technician
- Private contractor (residential, commercial)
- Industrial maintenance electrician
- Technical field representative
- Wholesale representative
- Electrical technician
- Wind turbine technician/installer
- Photovoltaic technician/installer

EMPLOYMENT STATISTICS

Employment and continuing education rate of 90 percent – 82 percent are employed; 8 percent continued their education.

RELATED PROGRAMS

Building Trades: Building Construction
Electrical Engineering Technology

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the programs listed above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Recommended: Algebra; good writing and reading comprehension skills

TECHNICAL STANDARDS

It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodations in all classrooms, laboratory, or field experiences required for completion of the program. Students in this degree program:

- Must be able to function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Must be able to appropriately and safely use standard laboratory equipment, materials, and instrumentation that requires possession of fine motor skills and mobility.
- Must be able to lift 50 pounds of materials up to 5ft to mount electrical panels at standard industry height.
- Must be able to communicate orally with a person 6 to 10 feet away.
- Must be able to read and decipher information found in technical manuals.
- Must be able to visually translate information on analog or digital meters and other test equipment.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
### ELECTRICAL CONSTRUCTION AND MAINTENANCE ELECTRICIAN - AOS DEGREE

#### TYPICAL FOUR-SEMESTER PROGRAM

**First**

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<tr>
<th>Course</th>
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<tr>
<td>ELTR 1156</td>
<td>Residential Wiring I</td>
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<tr>
<td>ELTR 1166</td>
<td>Residential Wiring Lab IA</td>
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<td>ELTR 1176</td>
<td>Residential Wiring Lab IB</td>
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<td>ELTR 2166</td>
<td>Residential Wiring Lab IIA</td>
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<td>ELTR 2176</td>
<td>Residential Wiring Lab II B</td>
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**Third**

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<td>ELTR 3156</td>
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<tr>
<td>ELTR 3326</td>
<td>Magnetic Motor Controls</td>
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<td>ELTR 3306</td>
<td>Alarms and Special Systems</td>
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**Fourth**

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<td>ELTR 3356</td>
<td>ProgrammableCtrls for Ind Automtn</td>
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<td>ELTR 3366</td>
<td>Ind Automtn &amp; Process Controls</td>
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Note: Seniors will rotate through the six courses listed in the third and fourth semesters. These six are taught both semesters.

#### GRADUATION REQUIREMENTS

A student must successfully complete all courses and earn a minimum cumulative index of 2.0, which is equivalent to a “C” average, in the prescribed four-semester program.
ELECTRICAL ENGINEERING TECHNOLOGY BS

BS DEGREE – CODE #0216

David Hunt, Program Coordinator
Email address: huntdj@alfredstate.edu

The electrical engineering technology BS program provide the skills and occupational competence necessary for entry into the field as an applied engineer who works with and is responsible for all the electronic equipment in the field. Thus, in addition to a firm foundation in electrical circuit concepts, the program provides a robust laboratory experience.

This program will prepare you by emphasizing basic knowledge and skills during the first year of the program. Studies include fundamental DC and AC circuit analysis and digital circuit logic to develop skills in use of electronic test equipment and in use of tools and printed circuit fabrication equipment. Laboratory experiments supplement classroom instruction and problem solving. Computer problem solving and simulation aid in course instruction.

The second year of the program continues the study of fundamental electronic circuits. The areas of study include microcontroller circuitry and programming, electronic communication circuits and systems, and IC circuit fabrication on silicon wafers.

ADVANTAGES

- The understanding of general processes gained through laboratory experiences prepares students to either continue their education or enter the workforce in the fields of microcontrollers, power systems, and microelectronics.
- The BS program is accredited by the Engineering Technology Accreditation Commission(s) of ABET, http://www.abet.org, under the General Criteria and the Electrical/Electronic(s) Engineering Technology and Similarly Named Program Criteria.
- The Bachelor of Science degree in electrical engineering technology is recognized as a “professional degree” that qualifies for experience/education credit toward New York Professional Engineering Licensure.

PROGRAM STUDENT LEARNING OUTCOMES (PSLOS) - BS DEGREE

- An ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
- An ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.
- An ability to conduct standard tests and measurements and to conduct, analyze, and interpret experiments.
- An ability to function effectively as a member of a technical team.
- An ability to identify, analyze, and solve narrowly defined engineering technology problems.
- An ability to apply written, oral, and graphical communication in both technical and non-technical environments, and an ability to identify and use appropriate technical literature.
- An understanding of the need for and an ability to engage in self-directed continuing professional development.
- An understanding of and a commitment to addressing professional and ethical responsibilities, including a respect for diversity.
- A commitment to quality, timeliness, and continuous improvement.
- The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems.
- The applications of physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry.
- The ability to analyze, design, and implement control systems, instrumentation systems, communications systems, computer systems, or power systems.
- The ability to apply project management techniques to electrical/electronic(s) systems.
- The ability to utilize statistics/probability, transform methods, discrete mathematics, or applied differential equations in support of electrical/electronic(s) systems.

OCCUPATIONAL OPPORTUNITIES

- Electrical or electronics technician
- Electrical or electronics technologist
- Communications technician/technologist
- Computer technician/technologist
- Semiconductor manufacturing technician/technologist
- Electrical power technician/technologist

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent:

- Electrical Engineering Technology (BS degree): 100 percent – 86 percent are employed; 14 percent continued their education.

ENROLLMENT AND GRADUATION DATA

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<th>BS Degree</th>
<th>Enrollment (based on Fall census)</th>
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RELATED PROGRAMS

- Computer Engineering Technology
- Electrical Construction and Maintenance Electrician

CERTIFICATION OR LICENSURE

The Bachelor of Science degree in electrical engineering technology is recognized as a “professional degree” that qualifies for experience/education credit toward New York Professional Engineering Licensure. Graduates from Alfred State’s program are allowed six years of the required 12 years of education/experience credit and are eligible to take the Fundamentals of Engineering (FE), formerly called Engineer-in-Training (EIT), examination upon graduation.

Be advised that a prior felony conviction may impede a student’s ability to receive licensure.
ENRANCE REQUIREMENTS/RECOMMENDATIONS (BS)
Required: Algebra, Geometry, Algebra 2
Recommended: Physics

TECHNICAL STANDARDS
It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:
• Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
• Appropriately use hand and power tools.
• Appropriately use test, analysis, and measurement equipment
• Maintain professional integrity in the classroom and laboratory setting
• Communicate effectively, orally and written
• Perform experiments safely in a laboratory environment
• Visually decipher computer software user interface elements
• Interpret software outputs to analyze data
• Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
• Appropriately use hand and power tools.
• Appropriately use test, analysis, and measurement equipment
• Maintain professional integrity in the classroom and laboratory setting
• Communicate effectively, orally and written
• Perform experiments safely in a laboratory environment
• Visually decipher computer software user interface elements
• Interpret software outputs to analyze data
• Have sufficient dexterity to finely adjust equipment settings
• Interpret complex data tables and graphs

COURSES that repeat or significantly overlap those taken in the student’s associate degree program cannot be taken for upper-level credit. If the associate degree covered the subject matter in one of the required baccalaureate courses, a different course must be substituted and approved by the faculty advisor.

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the electrical engineering technology programs. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses require specialized tools and/or electronic components.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

ELECTRICAL ENGINEERING TECHNOLOGY - BS DEGREE
TYPICAL ONE-THROUGH EIGHT-SEMESTER PROGRAM

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<td>Digital Logic Laboratory</td>
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<tr>
<td>ELET</td>
<td>1133</td>
<td>Digital Logic</td>
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IF NOT REQUIRED TO TAKE MATH DUE TO PLACEMENT SCORES, TAKE LAS ELECTIVE TO COMPLETE DEGREE REQUIREMENTS OF THREE CREDITS; TAKE FREE ELECTIVE.

GRADUATION REQUIREMENTS - BS DEGREE

- 126 semester credit hours
- 60 semester credit hours of liberal arts and sciences from at least seven of the 10 General Education content groups
- Minimum of 45 hours upper division
- Minimum of 24 hours upper division in major
- Minimum of 30 hours upper division in residence
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
ELECTRICAL ENGINEERING TECHNOLOGY AAS

AAS DEGREE – CODE #0699

David Hunt, Program Coordinator
Email address: huntdj@alfredstate.edu

The electrical engineering technology AAS program provide the skills and occupational competence necessary for entry into the field as an applied engineer who works with and is responsible for all the electronic equipment in the field. Thus, in addition to a firm foundation in electrical circuit concepts, the program provides a robust laboratory experience.

This program will prepare you by emphasizing basic knowledge and skills during the first year of the program. Studies include fundamental DC and AC circuit analysis and digital circuit logic to develop skills in use of electronic test equipment and in use of tools and printed circuit fabrication equipment. Laboratory experiments supplement classroom instruction and problem solving. Computer problem solving and simulation aid in course instruction.

The second year of the associate degree program continues the study of fundamental electronic circuits. The areas of study include microcontroller circuitry and programming, electronic communication circuits and systems, and IC circuit fabrication on silicon wafers.

ADVANTAGES

• The understanding of general processes gained through laboratory experiences prepares students to either continue their education or enter the workforce in the fields of microcontrollers, power systems, and microelectronics.
• The AAS program is accredited by the Engineering Technology Accreditation Commission(s) of ABET, http://www.abet.org, under the General Criteria and the Electrical/Electronic(s) Engineering Technology and Similarly Named Program Criteria.

PROGRAM STUDENT LEARNING OUTCOMES (PSLOS) - AAS DEGREE

• An ability to apply the knowledge, techniques, skills, and modern tools of the discipline to narrowly defined engineering technology activities.
• An ability to apply a knowledge of mathematics, science, engineering, and technology to engineering technology problems that require limited application of principles but extensive practical knowledge.
• An ability to conduct standard tests and measurements and to conduct, analyze, and interpret experiments.
• An ability to function effectively as a member of a technical team.
• An ability to identify, analyze, and solve narrowly defined engineering technology problems.
• An ability to apply written, oral, and graphical communication in both technical and non-technical environments, and an ability to identify and use appropriate technical literature.
• An understanding of the need for and an ability to engage in self-directed continuing professional development.
• An understanding of and a commitment to addressing professional and ethical responsibilities, including a respect for diversity.
• A commitment to quality, timeliness, and continuous improvement.
• The application of circuit analysis and design, computer programming, associated software, analog and digital electronics, and microcomputers, and engineering standards to the building, testing, operation, and maintenance of electrical/electronic(s) systems.
• The applications of physics or chemistry to electrical/electronic(s) circuits in a rigorous mathematical environment at or above the level of algebra and trigonometry.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State electrical engineering technology AAS graduates may enter directly into either the construction supervision BTech, the electrical engineering technology BS, the interdisciplinary studies BTech, or technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES

• Electrical or electronics technician
• Electrical or electronics technologist
• Communications technician/technologist
• Computer technician/technologist
• Semiconductor manufacturing technician/technologist
• Electrical power technician/technologist

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent:

Electrical Engineering Technology (AAS degree): 100 percent 100 percent continued their education.

Enrollment And Graduation Data

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RELATED PROGRAMS

Computer Engineering Technology
Electrical Construction and Maintenance Electrician

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

TECHNICAL STANDARDS

It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:

• Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
• Appropriately use hand and power tools.
• Appropriately use test, analysis, and measurement equipment
• Maintain professional integrity in the classroom and laboratory setting
• Communicate effectively, orally and written
• Perform experiments safely in a laboratory environment
• Visually decipher lab equipment digital or analogue displays
• Understand and retain information found in equipment manuals, data sheets, and lab instructions
• Comprehend written and oral directions: act on those directions safely
• Visually identify and select hardware components
• Visually distinguish computer software user interface elements
• Interpret software outputs to analyze data
• Have sufficient dexterity to finely adjust equipment settings
• Interpret complex data tables and graphs

Courses that repeat or significantly overlap those taken in the student’s associate degree program cannot be taken for upper-level credit. If the associate degree covered the subject matter in one of the required baccalaureate courses, a different course must be substituted and approved by the faculty adviser.

REQUIRED EQUIPMENT

A tier 2 laptop computer is required for students entering the electrical engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses require specialized tools and/or electronic components.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
## ELECTRICAL ENGINEERING TECHNOLOGY - AAS DEGREE

### TYPICAL FOUR-SEMESTER PROGRAM

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If not required to take math due to placement scores, take LAS elective to complete degree requirements of three credits; otherwise, take free elective.

### GRADUATION REQUIREMENTS - AAS DEGREE

- 64 semester credit hours
- 30 semester credit hours of liberal arts and sciences from at least four of the 10 General Education content groups.
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average, and
- Approval of department faculty
FINANCIAL PLANNING

BBA DEGREE – CODE #1938
Scott DuMonde, Program Coordinator
Email address: dumondrd@alfredstate.edu

Personal financial services is one of the most lucrative and rapidly expanding professions in existence. By combining expertise in estate planning, investment planning, risk management, insurance evaluation, tax planning, retirement planning, and employee benefits planning, the CERTIFIED FINANCIAL PLANNER™ professional offers one-stop comprehensive expert advice that would have formerly required a variety of different professionals. As a student completing this four-year degree, you will be eligible to sit for the CERTIFIED FINANCIAL PLANNER™ examination. While there are numerous job opportunities for employment in various types of financial institutions - banks, investment firms, and the insurance industry - perhaps the greatest earnings potential lies in becoming a self-employed CFP® practitioner.

ADVANTAGES

- Students receiving their AAS or AS degree in virtually any business concentration will be able to seamlessly transfer into this program and receive the BBA degree in four more semesters, which includes a full-semester internship in the field.
- Students develop the ability to integrate and synthesize the knowledge identified by the CFP® Board’s required topic list and gained from core courses, into decision making, critical thinking, and problem-solving skills.
- This program is registered with the Certified Financial Planner Board of Standards, Inc.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate competence in domestic and global environments within the principle functional areas of business.
- Analyze personal finance problems and devise solutions using critical thinking, decision-making processes, and decision-support tools.
- Formulate a financial plan while integrating the major functional areas of business and personal finance.
- Incorporate software, technology, and information systems into personal finance.
- Identify comprehensive personal finance issues and communicate findings and solutions.
- Identify the personal finance environment in relation to the current financial, legal, economic, and social environments.
- Analyze the role of ethics, government regulations, and legalities in personal financial planning processes.

OCCUPATIONAL OPPORTUNITIES

- Banking
- Insurance
- Investment firms
- Financial planning firms
- Attorneys' offices
- Self-employment
- Employee benefits specialists
- Accounting firms
- Wealth management firms
- Broker-dealer (securities) firms

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS

Accounting
Business Administration
Marketing

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

CERTIFIED FINANCIAL PLANNERS: THE HIGHEST STANDARD

Today more than ever, CFP® pros are an essential resource. From budgeting, to planning for retirement, to saving for education, to managing your taxes and your insurance coverage, “finances” doesn’t mean just one thing for most Americans - and “financial planning” means much more than just investing. Bringing all the pieces of your financial life together is a challenging task.

Although many professionals may call themselves “financial planners,” CFP® professionals have completed extensive training and experience requirements and are held to rigorous ethical standards. They understand all the complexities of the changing financial climate and are required to make financial planning recommendations in your best interest.

WHY CERTIFICATION MATTERS

Most people think all financial planners are “certified,” but this isn’t true, nor are all certifications the same. Anyone may call him or herself a “financial planner,” but only those who have fulfilled the certification and renewal requirements of the CFP Board can display the CFP® certification marks, which represent a high level of competency, ethics, and professionalism. CFP Board’s Standards of Professional Conduct require CFP® pros to look out for your interests above their own when delivering financial planning advice.

EDUCATION

Unlike many financial advisors, CFP® pros are required to develop their theoretical and practical knowledge by completing a comprehensive course of study at a college or university with a curriculum approved by the CFP Board. Planning professionals with training outside of the CFP Board’s approved list may meet the education requirement through a review process, which looks at transcripts, previous course work, and other professional designations.

EXAMINATION

CFP® professionals must pass the comprehensive CFP® Certification Exam, which tests their ability to apply financial planning knowledge to real-life situations. The exam covers the financial planning process, tax planning, employee benefits and retirement planning, estate planning, investment management and insurance. The average pass rate for this difficult exam is only 55 percent to 60 percent. This comprehensive exam ensures that CFP® professionals are highly qualified to develop a plan for your finances.

EXPERIENCE

CFP® professionals must have a minimum of three years’ experience in the financial planning process prior to earning the right to use the CFP® certification marks. This hands-on experience guarantees that CFP® professionals have practical financial planning knowledge, so you can count on them to help you create a realistic financial plan that fits your individual needs.

ETHICS

When it comes to financial planning, CFP® professionals are held to the highest of standards. CFP Board’s Code of Ethics outlines CFP® professionals’ obligations to uphold principles of integrity, objectivity, competence, fairness, confidentiality, professionalism and diligence. The Rules of Conduct require CFP® professionals to put clients’ interests above their own, and to provide their financial planning services as a “fiduciary” — acting in the best interest of their financial planning clients. CFP® professionals are subject to sanctions if they violate these standards.

ENFORCEMENT

CFP Board’s rigorous enforcement of its Standards of Professional Conduct — including releasing disciplinary information to the public — distinguishes the CFP® certification from the many other designations in the financial services industry. Anyone who seeks CFP® certification is subject to a background check, and those whose past conduct falls short of CFP Board’s ethical and practice standards can be barred from becoming certified. After attaining certification, a CFP® professional who violates CFP Board’s ethical and practice standards becomes subject to disciplinary action, which could include the permanent revocation of certification. Through diligent enforcement of its ethical and practice standards, CFP Board provides you with the confidence that your CFP® professional is both competent and ethical.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email.
at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

**FINANCIAL PLANNING - BBA DEGREE**

**TYPICAL EIGHT-SEMESTER PROGRAM**

<table>
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</table>

**END-OF-PROGRAM EXAM REQUIREMENTS**

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in FSMA 7123 Personal Financial Planning Capstone. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $45 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are **required**, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

**How should I prepare for the assessment exam?**

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.

**GRADUATION REQUIREMENTS**

- 122 credit hours
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State
- Cumulative overall index of at least 2.0
- Seven of the 10 SUNY approved General Education categories must be fulfilled

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.
FORENSIC SCIENCE TECHNOLOGY

BS DEGREE - CODE #2023

Wayne Bensley, Program Director
Email address: benslewd@alfredstate.edu

The forensic science technology major is a technically rigorous four-year program culminating in a Bachelor of Science degree. Students in this laboratory-based on-campus program will complete coursework focusing on three areas of physical evidence analysis:

- Biological applications within forensics, e.g., DNA technologies, genetic analysis, and microbiology.
- Chemical practicalities, notably: physicochemical analysis and identification of drugs, poisons, and fire debris.
- Microscopic-based examinations, including the analysis of fingerprints, firearms evidence, and trace evidence.

The forensic science technology program is fully accredited by FEPAC (Forensic Science Education Programs Accreditation Commission).

MISSION STATEMENT

The mission of the forensic science technology program at Alfred State is to provide our students with a strong foundation in the natural and physical sciences. This includes not only theoretical didactic delivery, but also a wealth of hands-on laboratory-based forensic analytical techniques. Graduates of the program will be equipped with the knowledge and skills necessary to obtain entry-level positions as laboratory technicians, scientists, or examiners in a variety of governmental, institutional, and industrial settings, or with the background necessary for successful transfer into graduate-level programs in the forensic, biological, and chemical sciences or related subjects.

VISION STATEMENT

Through a rigorous hands-on curriculum rooted in the natural and physical sciences, the forensic science technology program at Alfred State strives to produce graduates prepared to be active contributors in a variety of career and educational options.

ADVANTAGES

- All students in the program are required to take a core course load that includes preparation in chemistry, biology, physics, and mathematics as well as more advanced training in organic chemistry, genetics, biochemistry, instrumental methods, analytical chemistry, microbiology, biotechniques, evidentiary law, public speaking, and technical writing.
- Students are trained in the usage and theory of modern instrumental techniques that are utilized by employees in crime laboratories nationwide.
- Students have the opportunity to broaden and deepen their training by selecting from a list of approved technical elective course work.
- All students in the program are required to complete either an off-campus internship or on-campus directed research experience. Students selecting the internship option will be exposed to a workplace setting and may complete this course at a multitude of off-campus locations offering laboratory testing services.
- Students selecting the directed research option will receive preparatory training for future graduate and/or professional school options. In addition, these students will have the opportunity to present their research at both on- and off-campus conferences and/or showcases.

PROGRAM STUDENT LEARNING OUTCOMES

- Apply the scientific principles of chemistry, biology, and physics to specific applications in forensic science.
- Explain and show competency in basic chemical and biological lab procedures, including the identification of and the synthesis of various compounds and the forensic analysis of DNA.
- Demonstrate an understanding of the capabilities, use, potential, and limitations of various laboratory instrumental techniques widely utilized in forensic science.
- Recognize and use appropriate professional and ethical behavior as defined by the forensic science community.
- Demonstrate an understanding of the scientific principles of crime scene investigation and reconstruction, including evidence collection, preservation, and documentation.
- Summarize the criminal justice system and explain the role of the forensic scientist and physical evidence within the criminal justice system.
- Evaluate scientific literature to distinguish fact from opinion, develop informed and reasonable conclusions, apply knowledge and understanding to problems, develop rational and reasonable interpretations, suspend beliefs and remain open to new information and methods, and assimilate information learned into knowledge base.
- Use technological resources effectively and appropriately to communicate, collaborate, and retrieve information; determine when technology is useful and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
- Apply written communication skills to the construction documents of record that are well organized and contain appropriate format, grammar, punctuation, sentence structure, and spelling in accordance with established professional guidelines.
- Apply oral communication skills to the explanation of ideas, scientific terminology, and results of scientific examinations in a competent and confident manner.

OCCUPATIONAL OPPORTUNITIES

- Government crime laboratories and medical examiner's offices
- Private forensic testing laboratories
- Industrial laboratories employing chemical or biological technologists
- Quality control/quality assurance positions in testing laboratories

Examples of locations where our graduates have obtained employment include:

- New York City Office of the Chief Medical Examiner
- New York Police Department Crime Laboratory
- National Security Agency
- United States Army Criminal Investigations Division
- Hamilton County (Ohio) Coroner's Office
- Onondaga County Medical Examiner's Office
- Erie County Crime Lab
- Erie County Medical Examiner's Office
- NMS Labs

FUTURE EDUCATIONAL OPPORTUNITIES

- Graduate-Level Forensic Science Programs
- Medicine
- Dentistry
- Pharmacy
- Biology
- Chemistry
- LECOM Early Acceptance Program

Graduates of the program have been accepted into master's or doctorate level programs from several universities including:

- Syracuse University
- Cedar Crest College
- University of Buffalo
- University of Albany
- George Washington University
- Upstate Medical University
- Pittsburgh University
- Marshall University
- Virginia Commonwealth University
- West Virginia University

LECOM EARLY ACCEPTANCE PROGRAM

- Alfred State's Forensic Science Technology program has an affiliation agreement with Lake Erie College of Osteopathic Medicine (LECOM).
- As a high school senior you can apply to both Alfred State College and LECOM's Early Acceptance Program (EAP) for the College of Osteopathic Medicine of the College of Pharmacy.
- Current Alfred State Forensic Science Technology students with at least two years remaining can also apply to LECOM's EAP.
- Through the 4+4 program, students who earn a BS in Forensic Science Technology at Alfred State College will continue their education at LECOM. For more information visit https://lecom.edu/academics/early-acceptance-program/.
FORENSIC SCIENCE TECHNOLOGY

TYPICAL EIGHT-SEMESTER PROGRAM

First
FRSC 1001 Intro to Forensic Science
Tech I
CHEM 1984 Chemical Principles I
BIOL 1104 General Biology I
COMP 1503 Freshman Composition
MATH 1084 Calculus I

Second
FRSC 2001 Intro to Forensic Science
Tech II
CHEM 2984 Chemical Principles II
BIOL 2204 General Biology II
SPCH 1083 Effective Speaking
GLST 2113 Global & Diverse Perspectives

Third
FRSC 3001 Topics in Forensic Science I
CHEM 3514 Organic Chemistry I
PHYS 1044 College Physics I
LITR xxx3 Literature Elective
XXX xxx3 General Education Elective

Fourth
FRSC 4001 Topics in Forensic Science II
CHEM 4524 Organic Chemistry II
PHYS 2044 College Physics II
MATH 2124 Statistical Methods & Analysis
XXX xxx3 General Education Elective

Fifth
CJUS 1003 Intro to Criminal Justice
CHEM 5414 Analytical Principles
BIOL 5254 Principles of Microbiology
COMP xxx3 Technical Writing II
XXX xxx3 Technical Elective

Sixth
BIOL 6534 Genetics
CHEM 6614 Instrumental Analysis
CJUS 6003 Law & Criminal Evidence
FRSC 6214 Microscopy and Criminalistics

Seventh
FRSC 7214 Forensic Chemistry
CHEM 7784 Biochemistry
XXX xxx3 Technical Elective
XXX xxx3 Technical Elective

Eighth
FRSC 8214 Forensic Biology
FRSC 8111 Forensic Science Tech Capstone
FRSC 8113 Forensic Sci Tech Prof Prepar
FRSC 8703 Senior Research Project
OR
FRSC 8713 Forensic Sci Tech Internship
BIOL 5013 Biotechniques
Approved Technical Electives:
BIOL 1304 Botany
BIOL 1404 Anatomy & Physiology I
BIOL 2504 Anatomy & Physiology II
BIOL 4403 Pathophysiology
BIOL 4900 Directed Study, Biology
BIOL 5900 Directed Study, Biology
BIOL 6003 Molecular and Cell Biology
BIOL 6403 Advanced Pathophysiology
BIOL 7723 Research Methods in Health Sciences
CHEM 4900 Directed Study, Chemistry
CHEM 5900 Directed Study, Chemistry
FRSC 3113 Forensic Pathology
FRSC 4900 Directed Study, Forensic Science
FRSC 5900 Directed Study, Forensic Science
MATH 2094 Calculus II
MATH 6104 Multivariate and Vector Calculus
MATH 6114 Differential Equations
MEDR 1132 Essen. of Pharmacology and MEDR 1133 Med. Terminology

Students pursuing a career in forensic biology/DNA are advised that the following three courses are required at the undergraduate level: Biochemistry, Genetics, and Molecular and Cell Biology.

TECHNICAL STANDARDS
It is essential that students in this degree program are able to fully and safely participate, with or without reasonable accommodation, in all classroom, laboratory, field, internship, and research experiences required for completion of the program. Students in this degree program should be able to:

• Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
• Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
• Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
• Communicate effectively, both orally and in writing.

In addition, this degree program requires students to complete either an off-campus internship experience or a research project. Students in this degree program are expected to meet the following professional standards:

• Maintain confidentiality in professional workplace settings.
• Maintain professional composure at all times.

Be advised that a prior felony conviction may impede a student's ability to participate in an internship experience. In addition, students desiring careers within the field of forensic science should be aware that they will likely have to undergo background checks prior to being offered employment or an internship at a crime laboratory. These background checks are often similar to those required for law enforcement officers and may include questions regarding drug usage, criminal history, driving records, credit history, personal associations, and/or past work performance. In addition, they may include drug tests, polygraph examinations, and physical and medical examinations.

GRADUATION REQUIREMENTS

• Minimum of 122 total semester credit hours
• Completion of at least one course from seven of the 10 SUNY General Education categories
• 60 Liberal Arts & Science credits
• Minimum of 45 upper-division semester credit hours
• Minimum of 30 upper-division semester credit hours in residence
• 3 credit hours of research or internship
• 2.0 cumulative grade point average
• Grade of "C" or higher in courses with BIOL, CHEM, and FRSC prefixes
• Completion of a "mock trial" capstone experience
• Approval of department faculty

All laboratory-based courses for this academic program must be completed in an in-person format. Laboratory-based courses in the on-line format will not fulfill degree requirements.
The game and interactive design (G&ID) program offers a hands-on, studio-based approach to design, programming, and storytelling. Course work covers the breadth of interactive design from AAA (triple A) game titles to the interactions of application interfaces. Skills developed in the program are applicable to the growing fields of user experience (UX) design, application design, web design, data visualization, and interactive entertainment.

ADVANTAGES

Graduates of the game and interactive design Bachelor of Science program will possess the skills and technical knowledge base necessary to be proficient and capable in both the design and development of interactive media. They will be well prepared for entry-level positions in the fields of experience (UX) design, application design, web design, data visualization, and interactive entertainment. The program’s strength is in the versatility and flexibility of the graduating student, allowing employment opportunities to expand well beyond a singular field of design.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate proficiency and flexibility with technology associated with game and interactive design.
- Organize and produce works of interactive media in a team environment.
- Create quality works of game design and interactive media that utilize relevant history and theory.
- Analyze their own work, as well as the work of others in critiques, presentations, writings, and other activities.
- Demonstrate a strong work ethic through time management and quality work.
- Demonstrate critical thinking by completing problem-solving activities.

OCCUPATIONAL OPPORTUNITIES

- Game design
- UX (user experience design)
- Interactive entertainment
- Application design
- Data visualization
- Web design

EMPLOYMENT STATISTICS

No data available.

RELATED PROGRAMS

- Digital Media and Animation
- Graphic and Media Design
- Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra and Geometry. Transfer applicants must possess a 2.0 cumulative grade point average as well as a grade of "C" or better in each course taken during the most recent semester of attendance. Individuals with less than a 2.0 cumulative grade point average may be considered with additional documentation.

Recommended: Algebra 2, Physics

REQUIRED EQUIPMENT

A tier 4 or Apple MacBook Pro laptop computer is required for students entering the game and interactive design program. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
BS DEGREE GRADUATION REQUIREMENTS

- Complete 121 total semester credit hours
- 60 credit hours of liberal arts and sciences from eight of the 10 SUNY general education categories
- 2.0 cumulative GPA
- Grade of "C" or better in core courses (DGMA and CISY prefixes)
- Students are also required to complete a digital portfolio assignment and annual reviews to meet graduation requirements.
The game and interactive design (AS) program will offer a hands-on, studio-based approach to design, programming, and storytelling. Course work covers the breadth of interactive design from AAA (triple A) game titles to the interactions of application interfaces. Skills developed in the program are applicable to the growing fields of user experience (UX) design, application design, web design, data visualization and interactive entertainment. The program will develop foundational skills, yet provide versatility and flexibility in the graduating student, allowing employment opportunities to expand well beyond a singular field of design.

ADVANTAGES
Graduates of the game and interactive design Associate in Science (AS) program will possess the skills and technical knowledge base necessary to be proficient and capable in both the design and development of interactive media. They will be prepared for entry-level positions in the fields of experience (UX) design, application design, web design, data visualization, and interactive entertainment, as well as prepared for transfer to a bachelor's-level program.

PROGRAM STUDENT LEARNING OUTCOMES
Graduates of the program will be able to:

• Demonstrate proficiency with the technology associated with game and interactive design.
• Organize and produce works of interactive media.
• Create quality works of game design and interactive media.
• Analyze their own work, as well as the work of others in critiques, presentations, writings, and other activities.
• Demonstrate a strong work ethic through time management and quality works.
• Demonstrate critical thinking by completing problem-solving activities.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State game and interactive design AS graduates may enter directly into the game and interactive design BS, the interdisciplinary studies BTech, or the technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES
• Game design
• UX (user experience design)
• Interactive entertainment
• Application design
• Data visualization
• Web design

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent continued their education.

RELATED PROGRAMS
• Digital Media and Animation
• Graphic and Media Design
• Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry
Recommended: Algebra 2, Physics

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REQUIRED EQUIPMENT
A tier 4 or Apple MacBook Pro laptop computer is required for students entering the game and interactive design program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

A typical day consists of two, one-hour lectures and a two-hour studio in the freshman and sophomore years. At the junior and senior levels, three-hour studios are required.

TYPICAL FOUR-SEMESTER PROGRAM

First

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<tr>
<td>CISY 1113</td>
<td>3</td>
<td>Computer Programming I</td>
</tr>
<tr>
<td>COMP 1503</td>
<td>3</td>
<td>Freshman Composition</td>
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<td>FNAT 1403</td>
<td>3</td>
<td>Survey of Interactive Media</td>
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<tr>
<td>GLST 2113</td>
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<td>Global &amp; Diverse Perspectives</td>
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<tr>
<td>DGMA 4103</td>
<td>3</td>
<td>Interactive Design</td>
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<td>Art History II</td>
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<td>COMP 3603</td>
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<td>Computer Programming II</td>
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</tr>
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<td>FNAT 2333</td>
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<tr>
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<td>FNAT 3513</td>
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<td>COMP 3603</td>
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<td>XXXX xxx3</td>
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</table>
GRAPHIC AND MEDIA DESIGN

AS DEGREE - CODE #2557
Kylan Sattler, Program Coordinator
Email Address: sattlek@alfredstate.edu

The graphic and media design (AS) program provides graduates with foundational knowledge in graphic design for screen-based and print media. The program focuses on developing the contemporary problem-solving and design skills needed to apply the elements and principles of design, drawing, and visual communication. An awareness of design history is combined with the latest topics in graphic and media design to provide an informed student aimed at innovation in the field.

Graduates will possess the skills necessary to be well rounded in both design and production across a wide variety of print and digital media. They will be prepared for entry-level positions at design firms and in-house design and/or production departments within larger companies.

ADVANTAGES
The Alfred State graphic and media design (GMD) program is different from other such programs because it is constructed to meet the current needs for design in a time-based, screen-filled world. From cellphones to video billboards, new venues are demanding movement and interaction. This program is built to take advantage of new and ever-changing technologies and remain at the leading edge of design.

Because designers are being asked to design for print and screen, this requires new thinking, new versatility, and a new type of creative problem-solver. A new versatile designer is what Alfred State’s graphic and media design program is designed to produce.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate proficiency and flexibility with technology associated with graphic and media design.
- Demonstrate use of a professional design process to conceptualize and create a finished design project.
- Analyze their own work, as well as others through critiques, presentations, and other activities.
- Employ critical thinking to complete problem-solving activities.
- Create quality graphic and media design that utilizes relevant design history and theory.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Graphic and media design AS graduates may enter directly into either the graphic and media design BS, the interdisciplinary studies BTech, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
Graduates will be well prepared to continue into baccalaureate programs in graphic design, media production, and education.

FACILITIES
- Video and audio production studio
- High-end computer labs
- Screen printing
- Large-format printing
- Traditional materials studios
- 24-hour studio access
- HD video and surround-sound in each studio
- Real-world collaborative studio environments
- Virtual reality and 3D sculpting studio
- 3D printing and laser cutting lab

OCCUPATIONAL OPPORTUNITIES
- Graphic design
- Media design
- Fine art
- Video and audio production
- Marketing
- Communications
- Education

RELATED PROGRAMS
- Digital Media and Animation
- Game and Interactive Design

RELATED CLUBS
- Visual Impact Club

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry
Recommended: Algebra 2

REQUIRED EQUIPMENT
A tier 4 or Apple MacBook Pro laptop computer is required for students entering the graphic and media design program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

GRAPHIC AND MEDIA DESIGN (AS DEGREE)
TYPICAL FOUR-SEMESTER PROGRAM

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Minimum of “C” is required for all core courses.

Students are required to complete a digital portfolio assignment and annual review to meet graduation requirements.
The graphic and media design program provides graduates with expertise in graphic design for screen-based and print media. The program focuses on developing the contemporary problem-solving and design skills needed to apply principles of design, drawing, and visual communication. An awareness of design history is combined with the latest topics in graphic and media design to provide an informed student aimed at innovation in the field.

ADVANTAGES

The graphic and media design (GMD) program at Alfred State is different from other graphic design programs. It is designed to meet the current needs for design in a time-based and screen-filled world. From cellphones to video billboards, new venues are demanding movement and interaction. This program is built to take advantage of new and ever-changing technologies and remain at the leading edge of design. Currently, designers are asked to be able to design for print and screen. This requires new thinking, new versatility, and a new type of creative problem solver. This new versatile designer is what this program is designed to produce.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate proficiency and flexibility with technology associated with graphic and media design.
- Demonstrate use of a professional design process to conceptualize and create a finished design project.
- Analyze their own work, as well as others through critiques, presentations, and other activities.
- Employ critical thinking to complete problem-solving activities.
- Create quality graphic and media design that utilizes relevant design history and theory.

FACILITIES

- Video and audio production studio
- High-end computer labs
- Screen printing
- Large-format printing
- Traditional materials studios
- 24-hour studio access
- HD video and surround-sound in each studio
- Real-world collaborative studio environments
- Virtual reality and 3D sculpting studio
- 3D printing and laser cutting lab

OCCUPATIONAL OPPORTUNITIES

- Graphic design
- Media design
- Fine art
- Video and audio production
- Marketing
- Communication
- Education

RELATED PROGRAMS

- Digital Media and Animation
- Game and Interactive Design
- Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry

Recommended: Algebra 2

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 80 percent are employed; 20 percent continued their education.
## GRAPHIC AND MEDIA DESIGN - BS DEGREE

### TYPICAL EIGHT-SEMESTER PROGRAM

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| Second  | FNAT 2333   | Survey of Design                   | 3       |
|         | DGMA 2503   | Digital Foundations II             | 3       |
|         | FNAT 2423   | 3D Design/Color                    | 3       |
|         | GLST 2113   | Global & Diverse Perspectives      | 3       |
|         | MATH xxx    | Math Elective                      | 3       |

| Third   | DGMA 3303   | Digital Photography                | 3       |
|         | DGMA 3503   | Typography                         | 3       |
|         | DGMA 3603   | Production I                       | 3       |
|         | XXXX xxx    | Gen Ed/Social Science Elective     | 3       |
|         | XXXX xxx    | Gen Ed/Natural Science Elective    | 3       |
|         | LITR xxx    | Literature Elective                | 3       |

| Fourth  | FNAT 3513   | Art History II                     | 3       |
|         | DGMA 4103   | Interactive Design                 | 3       |
|         | XXXX xxx    | Technical Elective                 | 3       |
|         | COMP 3603   | Writing for Emergent Media         | 3       |
|         | SPCH 1083   | Effective Speaking or Equivalent   | 3       |

| Fifth   | FNAT 5703   | Technical Writing II               | 3       |
|         | XXXX xxx    | Gen Ed/LAS Elective (Upper Level)  | 3       |

| Sixth   | XXXX xxx    | Technical Elective (Upper Level)   | 3       |
|         | DGMA 6203   | Motion Graphics                    | 3       |
|         | DGMA 7703   | Adv Topics Interactive Design      | 3       |
|         | XXXX xxx    | Gen Ed/LAS Elective (WC or FL)     | 3       |
|         | XXXX xxx    | LAS Elective (Upper Level)         | 3       |

| Seventh | DGMA 7803   | Professional Practices             | 3       |
|         | DGMA 6303   | Spec. Topics in Media Design       | 3       |
|         | DGMA 7603   | Advanced Motion Graphics           | 3       |
|         | XXXX xxx    | LAS Elective                       | 3       |
|         | XXXX xxx    | LAS Elective                       | 3       |

| Eighth  | DGMA 8403   | Sr Studio Proj - Media Design      | 3       |
|         | DGMA 8503   | Special Topics Media Design II     | 3       |
|         | DGMA 8203   | Media Design Seminar               | 3       |
|         | XXXX xxx    | LAS Elective                       | 3       |
|         | XXXX xxx    | Gen Ed/LASElective                 | 3       |

### GRADUATION REQUIREMENTS

To fulfill degree requirements, each student must complete 124 total semester credit hours, including a minimum of 60 credit hours of liberal arts and sciences from eight of the 10 State University of New York general education categories, and earn a 2.0 cumulative GPA and a grade of "C" or better in the core courses (DGMA and FNAT prefixes).

Students are required to complete a digital portfolio assignment and annual review to meet graduation requirements.

A typical day consists of two, one-hour lectures and a two-hour studio in the freshman and sophomore years.
HEALTH INFORMATION TECHNOLOGY
AAS DEGREE – CODE #1969
Erica Matteson, RHIA, Program Coordinator
Email address: matteses@alfredstate.edu

Health information technology (HIT) professionals play an integral role in modern healthcare organizations. HIT professionals are highly trained in the latest information management technology applications. They understand the workflow process in healthcare provider organizations, from large hospital systems to smaller private practices, and are vital to the daily operations, management of health information and electronic health records (EHRs). They ensure a patient's health information is complete, accurate, and protected.

HIT professionals have an extraordinary impact. They are the link between clinicians, administrators, allied health departments, legal and regulatory agencies, financial services and information technology professionals.

These professionals affect the quality of patient information and patient care at every touch point in the healthcare delivery cycle. HIT professionals work on the classification of diseases and treatments to ensure they are standardized for clinical, financial, and legal uses in healthcare. HIT professionals care for patients by caring for their medical data and are responsible for the quality, integrity, security, and protection of patients' health information.

ADVANTAGES
• Graduates are eligible to take the national certification examination to become a registered health information technician (RHIT). Since the program was created in 1968, Alfred State HIT graduates have traditionally achieved a passing rate above the national average.
• Teaching faculty in HIT curriculum have real-world Health Information Management (HIM) industry experience.

PROGRAM STUDENT LEARNING OBJECTIVES
• Apply biomedical knowledge (including medical terminology, anatomy & physiology, pathophysiology, and pharmacology) to apply diagnosis/procedure codes (ICD-9-CM, ICD-10-CM, ICD-10-PCS, CPT, and HCPCS level II) according to current nomenclature.
• Use established federal guidelines, accreditation standards, and APC and DRG calculator/group software to comply with health care documentation (review), reimbursement, and reporting requirements.
• Apply HIM knowledge as defined by organizational policy and external regulations (e.g., Medicare, Medicaid, managed care) and standards to maintain the accuracy and completeness of the patient record.
• Apply HIM knowledge of policies and procedures for confidentiality and security measures regarding the access and disclosure of protected health information (PHI) to authorized users.
• Apply HIM knowledge in the collection, maintenance, and reporting of data for clinical indices/databases/registries to meet specific organizational and regulatory needs for the purposes of medical research and education.
• Organize and present data for quality management, utilization management, risk management, and other related studies.
• Apply HIM knowledge of legal, ethical, accreditation and certification standards as appropriate for the management of patient information.
• Apply basic methods when calculating descriptive, institutional, and health care vital statistics.
• Apply the use of common software applications (e.g., spreadsheets, databases, word processing, graphics, presentation, email, and so on) and HIM-related software applications (e.g., release of information, electronic health record, patient record abstracting, and so on).
• Apply HIM knowledge to promote ethical standards of practice to health information management and coding.
• Demonstrate effective written and oral communication as appropriate to health information management and coding practices. Communicate effectively with consumers, providers, and other health care professionals.
• Demonstrate critical thinking to problem solving and reasoning skills to health information management and coding practices.

PROFESSIONAL PRACTICE EXPERIENCES
Students complete non-paid professional practice experiences (PPEs) in the Health Information Department of a health care facility (160 hours) in their study. PPE arrangements are made in consultation with each student to identify locations considered to be within a reasonable distance. Students are not a substitute for paid staff during PPEs, which means they are expected to receive appropriate supervision and mentoring during completion of all tasks.

The professional practical experience (PPE) includes the completion of on-site hours in the Health Information Management (HIM) Department of a hospital (or other health care facility) with adequate facilities to provide varied work opportunities in HIM.

The Joint Commission Hospital Accreditation Standards Manual requires hospitals to implement “a process to ensure that a person’s qualifications are consistent with their job responsibilities.” This standard “applies to staff, students, and volunteers,” and it further states the hospital is responsible for verifying “the following according to law, regulation, or hospital policy: information on criminal background.” As such, Alfred State students who complete PPEs in the HIT program may be required to undergo a criminal background check prior to placement at the facility.

The PPE facility may require students to undergo a physical examination (on-site at the facility or by the student’s primary care provider) prior to beginning the professional practice experience. The physical examination may include drug screening, a TB test, and/or MMR, influenza and/or COVID immunization or status. Students may be required to incur costs associated with the criminal background check and/or physical examination. Be advised that a prior felony conviction may impede a student’s ability to participate in a required professional practice experience. Students may be required to attend an on-site orientation at the professional practice facility, which could be several days in length beyond the 160 PPE hours. NOTE: Students must make appropriate arrangements with their current employer to complete the 160 hours at the PPE host site.

CONTINUING EDUCATION OPPORTUNITIES
Although not limited to these schools, common transfer institutions for HIT bachelor’s degree programs include SUNY Polytechnic, Stephens College, St. Scholastica, Regis University, University of Cincinnati, and Saint Joseph’s College of Maine.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State health information technology AAS graduates may enter directly into the healthcare management BTech, the interdisciplinary studies BTech, or the technology management BBA degree program.

Alfred State’s Healthcare Management program is not accredited by the Commission on Accreditation for Health Informatics and Information Management Education (CAHIIM) and will not yield RHIA eligibility.

CERTIFICATION
Graduates are eligible to take the Registered Health Information Technician (RHIT), Certified Coding Specialist (CCA, CCS, CCS-P), and Certified Professional Coder (CPC, CPC-A, CPC-H, CPC-H, CPC-P) exams.

OCCUPATIONAL OPPORTUNITIES
• Hospitals and other health care facilities
• Clinics and physicians’ offices
• Insurance companies
• State and federal agencies
• Law firms
• Software companies
• Consulting

EMPLOYMENT STATISTICS
Employment and continuing education rate of 91 percent – 83 percent are employed; 8 percent continued their education.

RHIT EXAMINATION
The RHIT examination pass rate for the August 2021 - July 2022 reporting period is 86 percent. Twelve of fourteen first-time RHIT examination test-takers passed on their first attempt. One repeat test taker also completed their RHIT exam with a passing score on their second attempt.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Biology, Algebra
Recommended: Keyboarding and knowledge of Microsoft Office Professional

Must be able to attend Professional Practice Experience (PPE) courses including 160 hours at a health care facility within reasonable driving/travel distance to their home.
GENERAL NOTES

- Working in the Health Information Management HIM profession requires long periods of standing and/or sitting.
- Job duties typically include handling paper documents and use of computer screens.
- Near vision reading of paper records or computer screens, including the use of multiple computer applications, is required 95 percent of the time.
- Documents are handwritten on paper, and other documents and information used are on computer screens, including scanned documents and images.
- The computer screen fonts may be small. The extensive use of a computer keyboard and mouse is required.
- Individuals should assess their personal limitations and abilities within these working environments, as HIM candidates will be assessed in all of these skill sets during the hiring process.

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops. (A desktop of similar specifications can be used instead of a laptop for specified courses).

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

HEALTH INFORMATION TECHNOLOGY - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM - Full-time (12 credit hours or more)

This program is offered as an internet-based program only

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<td>1083</td>
<td>Effective Speaking</td>
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</table>

HIT students are required to earn a grade of at least a "C" or better in each BIOL and MEDR prefix course prior to placement in the PPEs. Students must also earn a grade of at least a "C" in all BIOL, MEDR, and COMP 1503 courses to graduate from the HIT program. Students receiving a grade of D/F in MEDR or BIOL courses may attempt the course a second time. If the second attempt results in the grade of D/F, the student will be dismissed from the program.
The Bachelor of Science in health sciences program is a rigorous four-year baccalaureate degree in biological sciences designed to satisfy requirements for students entering health care professions or graduate-level biomedical research. Students in the program will be exposed to a rich offering of liberal arts courses and will advance from basic biology, chemistry, and physics courses to upper-level courses in biology, chemistry, health care, and research. The program further provides opportunities to select from a wide range of health-related technical electives to enhance and broaden the student's expertise. These will prepare the graduate for working with future colleagues from the health care professions and the diverse population that will require their services. In addition, this program will prepare the graduate to seek transfer options to graduate-level or initial professional degree programs.

**ADVANTAGES**

- Students will build a solid foundation in biology and chemistry courses.
- Students will be able to internally and seamlessly transfer from Alfred State's biological science (AAS) degree.
- Students will further advance knowledge and skills in biology, chemistry, health care, and research through courses, including microbiology, genetics, bio-techniques, molecular and cellular biology, biochemistry, culture of health care, ethical issues in health care, and research methods.
- Students will have the opportunity to enhance and broaden their training by selecting from a list of approved health-related technical electives such as advanced pharmacology, complementary and alternative medicine, genomics, instrumental analysis, medical anthropology, and more.
- Students will conceptualize and implement their knowledge and skills through a directed research experience or professional internship.

**PROGRAM STUDENT LEARNING OUTCOMES (PSLOS)**

- Apply the scientific principles of biology and chemistry to specific applications in health sciences.
- Explain and show competency in basic biological and chemical laboratory procedures.
- Demonstrate an understanding of the capabilities, use, potential, and limitations of various laboratory instrumental techniques widely utilized in health sciences.
- Recognize and use appropriate professional and ethical behavior as defined by the health sciences community.
- Evaluate scientific literature to distinguish fact from opinion, develop informed and reasonable conclusions, apply knowledge and understanding to problems, develop rational and reasonable interpretations, suspend beliefs and remain open to new information and methods, and assimilate information learned into knowledge base.
- Use technological resources effectively and appropriately to communicate, collaborate, and retrieve information; determine when technology is useful; and select the appropriate tool(s) and technology resources to address a variety of tasks and problems.
- Apply written communication skills to construct documents of record that are well organized and contain appropriate format, grammar, punctuation, sentence structure, and spelling in accordance with established professional guidelines.
- Apply oral communication skills to the explanation of ideas, scientific terminology, and results of scientific examinations in a competent and confident manner.
- Synthesize theory and concepts from the liberal arts education domain and other professions into health sciences.

**OCCUPATIONAL OPPORTUNITIES**

- Laboratory assistant
- Pharmaceutical sales representative
- Environmental health safety officer
- Food scientist
- Biomedical researcher
- Public health worker

**FUTURE EDUCATIONAL OPPORTUNITIES**

- Medicine
- Physician assistant
- Dentistry
- Optometry
- Osteopathy
- Pharmacy
- Audiology
- Physical therapy
- Occupational therapy
- Chiropractic
- Clinical psychology
- Graduate level biology, chemistry, or biomedical science

**LECOM EARLY ACCEPTANCE PROGRAM**

Alfred State's health sciences program has an affiliation agreement with Lake Erie College of Osteopathic Medicine (LECOM).

As a high school senior you can apply to both Alfred State College and LECOM's Early acceptance Program (EAP) for the College of Osteopathic Medicine or the College of Pharmacy.

Current Alfred State health science students with at least two years remaining can also apply to LECOM's EAP.

Through this 4+4 program, students who earn a BS in health sciences at Alfred State College will continue their education at LECOM. For more information visit [https://lecom.edu/academics/early-acceptance-program/](https://lecom.edu/academics/early-acceptance-program/).

**EMPLOYMENT STATISTICS**

Employment and continuing education rate of 100 percent – 33 percent are employed; 67 percent continued their education.

**RELATED PROGRAMS**

- Biological Science
- Forensic Science Technology

**INTERNSHIP OPPORTUNITIES**

- Academic or industrial research laboratory
- Health care or clinical laboratory
- Pharmacy
- Health care practitioner's office

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Specific high school course requirements and recommendations are:

Required: Algebra, Geometry, Algebra 2, Biology, Chemistry

Recommended: Physics, ACT and/or SAT test scores

**TECHNICAL STANDARDS**

It is essential that students in this degree program are able to fully and safely participate, with or without reasonable accommodation, in all classroom, laboratory, field, internship, and research experiences required for completion of the program. Students in this degree program should be able to:

- Function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.
- Make sensory visual and auditory observations during, and interpret data from, all required laboratory assignments.
- Communicate effectively, both orally and in writing.

In addition, this degree program requires students to complete either an off-campus internship experience or a research project. Students in this degree program are expected to meet the following professional standards:

- Maintain confidentiality in professional workplace settings.
- Maintain professional composure at all times.
Be advised that a prior felony conviction may impede a student’s ability to participate in an internship experience.

**REQUIRED EQUIPMENT**
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

**OFFICE OF ACCESSIBILITY SERVICES**
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
HEALTH SCIENCES – BS DEGREE

TYPICAL EIGHT-SEMESTER PROGRAM

**First**
- BIOL 1104 General Biology I 4
- CHEM 1984 Chemical Principles I 4
- MATH xxx3 Math Elective (MATH 1033 or higher) 3
- COMP 1503 Freshman Composition 3
- HLSC 1101 Introduction to Health Science OR 1
- BIOL 1101 Topics in General Biology 15

**Second**
- BIOL 2204 General Biology II 4
- CHEM 2984 Chemical Principles II 4
- GLST 2113 Global & Diverse Perspectives 3
- SPCH 1083 Effective Speaking 3

**Third**
- BIOL 5254 Principles of Microbiology 4
- CHEM 3514 Organic Chemistry I 4
- PSYC 1013 General Psychology 3
- XXXX xxx3 Open Elective 3
- LITR xxx3 Literature Elective 3

**Fourth**
- BIOL 6534 Genetics 4
- CHEM 4524 Organic Chemistry II 4
- MATH 2124 Statistical Methods & Analysis 4
- XXXX xxx3 General Education Elective 3
- HLSC 2111 Health Sciences Seminar OR 1
- BIOL 2111 Biological Sciences Seminar 16

**Fifth**
- CHEM 7784 Biochemistry 4
- HLTH 5233 The Culture of Healthcare 3
- PHYS 1044 College Physics I 4
- BIOL 7723 Research Methods in Health Sci 3
- COMP 5703 Technical Writing II 3

**Sixth**
- NURS 5003 Ethical Issues in Health Care 3
- PHYS 2044 College Physics II 4
- XXXX xxx3 Open Elective 3
- XXXX xxx3 Open Elective 3
- XXXX xxx3 Technical Elective Upper 16

**Seventh**
- BIOL 6003 Molecular and Cell Biology 3
- XXXX xxx3 Open Elective 3
- XXXX xxx3 Technical Elective Upper 3
- XXXX xxx3 Technical Elective Upper 3
- XXXX xxx3 Technical Elective Upper 3

**Eighth**
- XXXX xxx3 Open Elective Upper 3
- XXXX xxx3 Technical Elective Upper 3
- XXXX xxx3 Technical Elective Upper 3
- BIOL 5013 Biotechniques 3
- HLSC 8703 Senior Research Project OR 3
- HLSC 8713 Prof Internship in Health Sci 3

**LOWER LEVEL TECHNICAL ELECTIVES:**
- BIOL 1013 Essentials of Exercise Physiol 3
- BIOL 1113 Biology of Human Sexuality 3
- BIOL 1319 Nutrition 3
- BIOL 1404 Anatomy & Physiology I 4
- BIOL 2504 Anatomy & Physiology II 4
- BIOL 2633 Histotechnology 3
- BIOL 2803 Environmental Science 3
- BIOL 4403 Pathophysiology 3
- BIOL 5503 Virology 3
- ENVR 4413 Environmental Law 3
- ENVR 4424 Environmental Chemistry & Microbiology 3

**UPPER LEVEL TECHNICAL ELECTIVES:**
- ANTH 5333 Medical Anthropology 3
- BIOL 5003 Genomics 3
- BIOL 5104 Kinesiology 4
- BIOL 6113 Diet and Disease 3
- BIOL 6403 Advanced Pathophysiology 3
- CHEM 5414 Analytical Principles 4
- CHEM 6614 Instrumental Analysis 4
- CHEM 6854 Physical Chemistry 4
- FRSC 7214 Forensic Chemistry 4
- FRSC 8213 Forensic Biology 3
- HLTH 5113 Complementary & Altn Medicine 3
- HLTH 5203 End of Life Dilemmas 3
- HLSC 5900 Directed Study 1
- MATH 6104 Multivariate & Vector Calculus 4
- MATH 6114 Differential Equations 4
- NURS 6403 Adv Pharmacology, Herbal Ther, Nutr 3
- NURS 7033 Healthy Aging in Rural Areas 3
- NURS 8003 Informatics & Tech App in Healthcare 3
- PSYC 5093 Health Psychology 3
- PSYC 7003 Working w/Diverse Populations 3

**GRADUATION REQUIREMENTS**
- 124 total semester credit hours
- Completion of at least one course from seven of the 10 SUNY Gen Ed categories.
- Minimum of 60 semester credit hours of Liberal Arts & Science credit hours.
- 48 upper-division credit hours
- 42 upper-division credit hours in the major
- Minimum of 30 upper-division credit hours in residence
- 3 credit hours of research or internship
- 2.0 cumulative grade point average
- Grade of "C" or higher in courses with BIOL, CHEM, HLSC, and HLTH prefixes
- Approval of department faculty

All laboratory-based courses for this academic program must be completed in an in-person format. Laboratory-based courses in the online format will not fulfill degree requirements.
HEALTHCARE MANAGEMENT

BTECH DEGREE – CODE #2647

Kathy Young, Department Chair
(607) 587-4129
Email address: younkh@alfredstate.edu

The Bachelor of Technology in healthcare management (HCM-BT) is an online, upper-division program designed to allow a student or working professional who has earned an associate degree (AAS, AA, or AS) in a health-related area (or at least 60 credits toward such a degree) to complete a bachelor's degree. Individuals may currently be working in a laboratory, radiology, records, occupational therapy, surgical technology, paramedic, or ultrasound setting, and seeking advancement into management or administrative positions. The HCM-BT will open doors for these working adults by providing flexible online courses and laddering with all health-related two-year degrees granted by both colleges of technology and community colleges. The program emphasizes the development of managerial skills through a set of core courses and a wide array of electives to address areas such as healthcare finance/accounting, the culture of healthcare, human resources, communications, healthcare law and ethics and policies, information systems, marketing, and quality control. This degree will also provide an opportunity for students to continue their education toward an MBA to become a CNO, CEO, or COO.

ADVANTAGES

- Students will build a solid foundation in healthcare-related management courses from those currently working in the field.
- Students will be able to internally, seamlessly transfer from Alfred State's radiologic technology, diagnostic medical sonography, health information technology, and nursing AAS degrees.
- Students will have the opportunity to enhance and broaden their training by selecting from a list of approved healthcare technical electives.

PROGRAM STUDENT LEARNING OUTCOMES

- Apply an understanding of self, as well as an understanding of the dynamics of groups and team interaction.
- Discuss and apply the methods used to plan, organize, and lead a healthcare facility.
- Analyze and use the appropriate skills and techniques needed for problem solving and decision making.
- Analyze and explain the application of employment laws and the legal system to the healthcare environment.
- Communicate effectively: oral, written, and nonverbal, using current technology where appropriate.
- Illustrate basic accounting methods and apply them using current technology.
- Perform financial and statistical analysis.
- Discuss the uses of and be able to prepare a comprehensive healthcare marketing plan.

OCCUPATIONAL OPPORTUNITIES

- Medical and health services department managers
- Public relations and fundraising managers
- Administrative services managers
- Training and development managers

FUTURE EDUCATIONAL OPPORTUNITIES

- Master of Business Administration (MBA)
- Master of Science (MS) Health Services Administration
- Master of Science (MS) Healthcare Management
- Doctorate of Philosophy (PhD) Healthcare Administration

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed; 0 percent continued their education.

RELATED PROGRAMS

- Diagnostic Medical Sonography (AAS)
- Health Information Technology (AAS)
- Radiologic Technology (AAS)
- Technology Management (BTech)

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

- **Required:** Successful completion of an associate degree in a health-related field or at least 60 transferrable credit hours, and a minimum GPA of 2.00.
- **Recommended:** A minimum of 21 credits in liberal arts and sciences, and five different general education fields covered.
- **Students without the required college credits can come into the individual studies (AS) program as a bridge program.**

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops. (A desktop of similar specifications can be used instead of a laptop for specified courses).

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

HEALTHCARE MANAGEMENT – BTECH DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<tr>
<th>Session</th>
<th>Courses</th>
<th>Credits</th>
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<tr>
<td><strong>First</strong>&lt;br&gt;<strong>First 7-Week Session</strong>&lt;br&gt;<strong>TMGT</strong>&lt;br&gt;7153&lt;br&gt;Principles of Management&lt;br&gt;<strong>HLTH</strong>&lt;br&gt;5233&lt;br&gt;The Culture of Healthcare</td>
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<td><strong>Second 7-Week Session</strong>&lt;br&gt;<strong>ACCT</strong>&lt;br&gt;5043&lt;br&gt;Accounting&lt;br&gt;<strong>GLST</strong>&lt;br&gt;2113&lt;br&gt;Global &amp; Diverse Perspectives</td>
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<td><strong>Second</strong>&lt;br&gt;<strong>First 7-Week Session</strong>&lt;br&gt;<strong>HLTH</strong>&lt;br&gt;5433&lt;br&gt;Healthcare Marketing&lt;br&gt;<strong>XXX</strong>&lt;br&gt;xxx3&lt;br&gt;General Education Elective</td>
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<td><strong>Second 7-Week Session</strong>&lt;br&gt;<strong>BUAD</strong>&lt;br&gt;6003&lt;br&gt;Managerial Finance&lt;br&gt;<strong>COMP</strong>&lt;br&gt;5703&lt;br&gt;Technical Writing II</td>
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<td><strong>Summer</strong>&lt;br&gt;<strong>First 4-Week Session</strong>&lt;br&gt;<strong>BUAD</strong>&lt;br&gt;5023&lt;br&gt;Human Resource Management</td>
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<td><strong>Second 4-Week Session</strong>&lt;br&gt;<strong>XXX</strong>&lt;br&gt;xxx3&lt;br&gt;Upper Technical Elective</td>
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<td><strong>Third 4-Week Session</strong>&lt;br&gt;<strong>BUAD</strong>&lt;br&gt;7033&lt;br&gt;Operations Management</td>
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<td><strong>Third</strong>&lt;br&gt;<strong>First 7-Week Session</strong>&lt;br&gt;<strong>BUAD</strong>&lt;br&gt;5003&lt;br&gt;Management Communications&lt;br&gt;<strong>XXX</strong>&lt;br&gt;xxx3&lt;br&gt;Upper Technical Elective&lt;br&gt;<strong>XXX</strong>&lt;br&gt;xxx3&lt;br&gt;General Education Elective</td>
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### Second 7-Week Session

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### Fourth

**First 7-Week Session**

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<td>Healthcare Law and Ethics</td>
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<tr>
<td>XXXX</td>
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**Second 7-Week Session**

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<td>XXXX</td>
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### GRADUATION REQUIREMENTS

- 120 total semester credit hours
- 30 semester credit hours of general education.
- 45 upper-division credit hours in the major
- Minimum of 30 upper-division credit hours in residence
- 2.0 cumulative grade point average and a grade of “C” or better in the required core courses
- Approval of department faculty

### GENERAL EDUCATION ELECTIVES:

<table>
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<tr>
<td>HIST</td>
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<td>Hist of West Civil Since 1648</td>
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<tr>
<td>ECON</td>
<td>1013</td>
<td>Principles of Macroeconomics</td>
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<tr>
<td>LITR</td>
<td>2603</td>
<td>Introduction to Literature</td>
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<tr>
<td>SOCI</td>
<td>1163</td>
<td>General Sociology</td>
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<td>SOCI</td>
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<td>Research Methods</td>
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### UPPER TECHNICAL ELECTIVES:

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<td>BUAD</td>
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<td>Research Methods</td>
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<tr>
<td>BUAD</td>
<td>6113</td>
<td>Strategic &amp; Creative Prob Solv</td>
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<tr>
<td>BUAD</td>
<td>6403</td>
<td>Proj Mgmt for Busi Profssns</td>
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<tr>
<td>BUAD</td>
<td>5013</td>
<td>Principles of Leadership</td>
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<tr>
<td>MKTG</td>
<td>6003</td>
<td>Strategic Marketing</td>
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<tr>
<td>BUAD</td>
<td>7023</td>
<td>Legal Environment of Business</td>
<td>3</td>
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<tr>
<td>PSYC</td>
<td>5103</td>
<td>Industrial/Orgnztl Psychology</td>
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<td>HLTH</td>
<td>5203</td>
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<td>Healthcare Management</td>
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<td>ANTH</td>
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<td>Medical Anthropology</td>
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HEATING, VENTILATION, AND AIR CONDITIONING

AOS DEGREE - CODE #0464

Clinton Gray, Department Chair
Email address: GrayCJ@alfredstate.edu

The heating, ventilation, and air conditioning program will prepare you for this growing field with courses on all phases of residential and commercial installation, maintenance, troubleshooting, and repair. It includes forced air, hot water and steam heating, gas and oil burner systems, along with hands-on air conditioning and heat pump technology.

The plumbing aspect of the program provides instruction in the basic skills required by the plumber in the construction of residential housing and commercial buildings. The program ranges from the installation of waste and sewage lines to the installation of potable water lines and plumbing fixtures.

ADVANTAGES
- The program provides the necessary theory connected with plumbing and HVAC, as well as on-the-job training experience overseen by expert tradesmen.
- Students will take the National Refrigerant Handling Certification Course and Test and the National ARI HVAC (Air Conditioning & Refrigeration Institute Heating Ventilation & Air Conditioning) Competency Test.

PROGRAM STUDENT LEARNING OUTCOMES
- Accurately measure and layout PHVAC (plumbing, heating, ventilation, and air conditioning) projects.
- Apply safe practices to hand tools, power tools, and the environment.
- Select and apply the various materials used in the PHVAC trade.
- Perform appropriate trade-related math, including interpretation of charts and graphs.
- Perform installation service and troubleshooting of fuels and emergency sources used in residential and commercial PHVAC.
- Effectively communicate orally.
- Use the computer to access equipment information and operating specifications.
- Effectively communicate in writing.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State heating, ventilation, and air conditioning graduates may enter directly into the construction supervision BTech or technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the baccalaureate program in two additional years; others may complete the program in two-and-one-half years.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra and Geometry

TECHNICAL STANDARDS

It is crucial that all student applicants in this degree program must be able to meet the following requirements, with or without reasonable accommodation. Students who are enrolled in this degree program should have the physical capabilities to be able to engage in all training, field, and laboratory environments in a safe and ethical manner. Students must be able to:
- Lift and carry up to or 50 pounds of building materials/equipment without accommodations.
- Perform and function in a safe manner in all laboratory and classroom environments, and off campus job site locations.
- Effectively communicate with classmates and instructional staff using appropriate visual and/or auditory communication from a distance of 20 feet.
- Physically setup, move, or climb ladders, scaffolding, etc., unaided, using the designated safety method.
- Identify and react to safety alarms which include, but not limited to, fire alarms, back up alarms and those meant for emergencies.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

HEATING, VENTILATION, AND AIR CONDITIONING - AOS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<td>3413</td>
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<td>Blueprint Reading Blgd</td>
<td>Basic House Wiring-</td>
<td>Electrical Fundamentals</td>
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<td>Construct</td>
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<td>Pipe Fitting - Math Estimating</td>
<td>Mid &amp; Hi Ely Furn-Alt</td>
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<tr>
<td>Cop Pipe &amp; Tub, Water Sys Des</td>
<td>Sheet Metal Fabrication</td>
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<tr>
<td>Drainage Systems &amp; Piping</td>
<td>System &amp; Vent</td>
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<tr>
<td>Plumb Trade History &amp; Safety</td>
<td>Sheet Metal Trade</td>
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<td>Watr Heats-Plumb Fix Inst/Rpr</td>
<td>Heating Fuels-Comb Theol/Trabl</td>
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Employment and continuing education rate of 81 percent – 81 percent are employed.

RELATED PROGRAMS

Building Trades: Building Construction Masonry

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
### Fourth Year Courses

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<td>BLCT 4203</td>
<td>Air Cond Components &amp; Install</td>
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<td>BLCT 4213</td>
<td>Air Conditioning Fundamentals</td>
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<td>BLCT 4223</td>
<td>Air Cond Perf &amp; Trou &amp; Ht Pump</td>
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<td>BLCT 4233</td>
<td>Heat Loss &amp; Heat Gain</td>
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<td>BLCT 4243</td>
<td>Refrigeration Handling Cert</td>
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<tr>
<td>BLCT 4253</td>
<td>Residential Duct System Design</td>
<td>3</td>
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**GRADUATION REQUIREMENTS**

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
HEAVY EQUIPMENT OPERATIONS
AOS DEGREE – CODE #1908
Clinton Gray, Department Chair
Email address: GrayCJ@alfredstate.edu

This program will provide you with the hands-on skills and expert training required by heavy equipment operators for the light construction and heavy highway industries. Instruction is provided in heavy equipment operations theory, as well as grades, soils, blueprint reading, safety, and supervision.

You will spend approximately 25 percent of your lab time operating real, industry-standard equipment; the balance of the lab time is spent on equipment inspection, maintenance, grades, lot layout, operation support, and estimating.

ADVANTAGES
Programs leading to an AOS degree are hands-on and do not include liberal arts and sciences courses. Offered at the School of Applied Technology campus in Wellsville, heavy equipment operations is geared toward a person who would like to enter the heavy equipment operation industry following graduation.

PROGRAM STUDENT LEARNING OUTCOMES
• Select the correct piece of equipment and demonstrate the proper use for an earth moving or excavation project.
• Select and use the necessary PPE for a given construction project.
• Demonstrate the proper set-up and use of various types of survey equipment.
• Read and interpret blueprints.
• Accurately estimate materials for a project.
• Demonstrate essential problem-solving and supervisory skills.
• Perform common mathematical calculations.
• Demonstrate how to excavate to meet construction and OSHA standards, based on the soil type.
• Safely operate various equipment utilized in the construction industry.
• Perform computer-based research and communication.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State heavy equipment operations graduates may enter directly into the construction supervision BTech or technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the baccalaureate program in two additional years; others may complete the program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
• Town, village, or county department of public works
• NYS Department of Transportation
• Highway and heavy construction companies
• Mining companies
• Logging companies
• Energy industry
• Self-employment
• Equipment operator
• Construction foreman
• Construction superintendent

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 97 percent are employed; 3 percent continued their education.

RELATED PROGRAMS
Heavy Equipment, Truck & Diesel Technician

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for the program mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Letters of recommendation, essay, and resume indicating related work experience and/or knowledge of field

Recommended: Algebra and Geometry

Students will be accepted for the heavy equipment operations program based on the strength of their application. Criteria for consideration will include high school average, regents exam scores (if a New York State student), grades in related course work, results of standardized tests (if available), and additional information provided through letters of recommendation, a personal essay indicating career goals, and a resume.

Technical Standards

It is crucial that all student applicants in this degree program must be able to meet the following requirements, with or without reasonable accommodation. Students who are enrolled in this degree program should have the physical capabilities to be able to engage in all training, field, and laboratory environments in a safe and ethical manner. Students must be able to:

• Lift and carry up to or 50 pounds of building materials/equipment without accommodations.
• Perform and function in a safe manner in all laboratory and classroom environments and off campus job site locations.
• Effectively communicate with classmates and instructional staff using appropriate visual and/or auditory communication from a distance of 20 feet.
• Physically setup, move, or climb ladders, scaffolding, etc., unaided, using the designated safety method.
• Identify and react to safety alarms which include, but not limited to, fire alarms, back up alarms and those meant for emergencies.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
HEAVY EQUIPMENT OPERATIONS - AOS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
<th>BLCT</th>
<th>Course</th>
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<tr>
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<td>1002</td>
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<td>Safety</td>
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<td>1302</td>
<td>Blueprint Reading &amp; Grades I</td>
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<td>1312</td>
<td>Introduction to Earth Moving</td>
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<td>1322</td>
<td>Preventive Maintenance Checks</td>
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<td>Construction Math</td>
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<td>Operations Part I</td>
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<td>1306</td>
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<td>Work Zone Safety</td>
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<td>Blueprint Reading &amp; Grades II</td>
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</tr>
<tr>
<td></td>
<td>2322</td>
<td>Equipment Preventative Maintnc</td>
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<td>Operations - Part II</td>
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<td>Soils</td>
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<td>Blueprint Reading &amp; Grades III</td>
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<td>3312</td>
<td>Introduction to Grading</td>
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<td></td>
<td>3322</td>
<td>Advanced Operations</td>
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<td>3332</td>
<td>Highway Surfaces</td>
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<td></td>
<td>3342</td>
<td>Construction Proj Supervision</td>
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<td>Tracked Finishing &amp; Grading</td>
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<td>3306</td>
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<td>4002</td>
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<td>4402</td>
<td>Wheeled Finishing &amp; Grading</td>
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<td></td>
<td>4412</td>
<td>Finish Processes</td>
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<tr>
<td></td>
<td>4422</td>
<td>Proj. Management &amp; Support</td>
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<tr>
<td></td>
<td>4432</td>
<td>Advanced Safety</td>
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<td>4442</td>
<td>Machine Control Technology</td>
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<td>4406</td>
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GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
HEAVY EQUIPMENT, TRUCK & DIESEL TECHNICIAN
AOS DEGREE – CODE #0452
Jeffrey Stevens, Department Chair and Program Coordinator
Email address: stevenjs@alfredstate.edu

One of our most popular programs, this specialization includes 1,800 hours of practical experience and classroom training designed to prepare you to enter the dynamic field of heavy equipment maintenance and repair. You will receive a strong foundation on all types of vehicles during your first year, followed by a year of concentration on trucks, bulldozers, earthmovers, farm tractors, and other diesel-powered equipment during your senior year.

ADVANTAGES
- Our heavy equipment, truck and diesel technician program is the only program in New York and New England that is approved by the Association of Diesel Specialists (ADS). The heavy equipment, truck and diesel technician program is one of only nine national ADS TechSmart training programs.
- Students successfully completing the heavy equipment, truck and diesel technician program may return for a third year (senior year) in automotive service technician or motorsports technology and earn a second associate degree. They may be admitted to autobody repair with the department chair’s approval.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate a focused, coherent, organized written report.
- Perform mathematical calculations required for entry-level automotive employment.
- Demonstrate a functional ability to read and retain/apply written instructions and specifications relevant to their work environment.
- Demonstrate the ability to diagnose and repair heavy equipment/truck drive trains.
- Demonstrate the ability to diagnose and repair heavy equipment/truck electrical and electronic systems.
- Demonstrate the ability to diagnose and repair heavy equipment/truck gas engines.
- Demonstrate the ability to diagnose and repair heavy equipment/truck brakes, steering, and suspension systems.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State heavy equipment, truck and diesel technician graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
- Agricultural equipment mechanic
- Service manager
- Diesel engine specialist
- Diesel fuel system specialist
- Shop foreman
- Heavy equipment mechanic
- Truck fleet mechanic
- Industrial equipment mechanic
- Marine engine service technician

EMPLOYMENT STATISTICS
Employment and continuing education rate of 97 percent – 97 percent are employed.

RELATED PROGRAMS
Autobody Repair
Automotive Service Technician
Mechanical Engineering Technology
Welding Technology

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra

TECHNICAL STANDARDS
It is essential that students in this degree program are able to participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory experiences required for completion of the program. Students in this degree program should be able to:

1. Lift 50 pounds to industry standard automotive lift height
2. Effectively communicate with a person six (6) to ten (10) feet away.
3. Visually decipher small images on a monitor or digital display.
4. Distinguish sounds associated with mechanical failures.
5. Comprehend written information found in service repair resources.
6. Possess a valid motor vehicle driver’s license.
7. Function in a safe manner, not placing themselves, faculty, staff, other students, or property in jeopardy.
8. Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.

CERTIFICATION OR LICENSURE
Students may take Automotive Service Excellence (ASE) certification exams in eight areas and the ADS TechCert test. Students are eligible for New York State inspection certification upon successful completion of their freshman year. In their senior year, students may take the test for certification in Basic Engine Theory through the Association of Diesel Specialists.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

HEAVY EQUIPMENT, TRUCK AND DIESEL TECHNICIAN - AOS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

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<th>First</th>
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<td>AUTO 1219</td>
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<td>AUTO 2169</td>
<td>AUTO 3609</td>
<td>AUTO 4669</td>
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<td>AUTO 4623</td>
<td>AUTO 4613</td>
<td>AUTO 4603</td>
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<td>Truck Brake, Steer &amp; Sus Sys</td>
<td>Diesel Fuel System Service</td>
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<tr>
<td>Trk Insp, Maint, AC, Cng/Hng</td>
<td>Truck Electrical, Fuel &amp; Emiss</td>
<td>Heavy Duty Drive Train</td>
<td>Heavy Duty HVAC</td>
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<td></td>
<td></td>
<td></td>
<td>Heavy Duty Hydraulic Systems</td>
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<td></td>
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<td></td>
<td>Heavy Duty Electrical Systems</td>
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</tbody>
</table>

CONTINUING STUDENTS
Students successfully completing the heavy equipment, truck & diesel technician program receive first priority for space if they wish a third year (senior year) in automotive service technician. They may be admitted to autobody repair with the department chair’s approval.
GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
HUMAN SERVICES
AS DEGREE – CODE #1175
Dr. Jill Priest Amati, Department Chair and Program Coordinator
Email address: amatijp@alfredstate.edu

The human services program is a broadly based, applied program emphasizing both professional course work in the human services and course work in the social sciences and liberal arts. As a student, you will take courses that provide you with the skills and knowledge to be successful when working in a variety of human services agencies. You will also have the opportunity to take electives in specialty areas such as education, substance abuse, criminal justice, and gerontology.

PROGRAM STUDENT LEARNING OUTCOMES
• Apply critical thinking skills in the context of professional practice.
• Perform the basic operations of personal computer use, as well as employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
• Communicate effectively and appropriately in oral and written forms.
• Demonstrate ethical professional behaviors.
• Identify the components of one’s own belief systems and the assumptions underlying them.
• Analyze the impact of social policies on client systems, workers, and agencies.
• Identify the bio-psycho-social variables that affect individual and group development and behavior.
• Examine the role of diversity in the human services field.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State human services graduates may enter directly into either the human services management BS, the interdisciplinary studies BTech, or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
The human services program offers excellent transfer potential in fields such as psychology, human services, human services management, education, social work, sociology, criminal justice, gerontology, and communications. Among the colleges to which recent graduates have successfully transferred are: Alfred University, Mansfield University, Hilbert College, SUNY at Brockport, University of Buffalo, and SUNY at Stony Brook.

INTERNSHIP OPPORTUNITIES
In Practicum (HUSR 1074) students complete a substantial internship providing direct service to clients at one local/regional human services agency. Agencies include Accord Corp., Alfred Montessori School, Allegany County ARC, Allegany County Department of Health, Allegany County Office of the Aging, Allegany Rehabilitation Associates, Inc., Catholic Charities, Hornell Area Concern for Youth, Trapping Brook House, and the YMCA of Hornell.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

OCCUPATIONAL OPPORTUNITIES
• Early childhood programs
• Education
• Social services
• Youth services
• Elderly services
• Criminal justice
• Disability services
• Substance abuse programs
• Activity directors

EMPLOYMENT STATISTICS
Employment and continuing education rate of 75 percent – 25 percent are employed; 50 percent continued their education.

RELATED PROGRAMS
Human Services Management
Individual Studies
Interdisciplinary Studies
Liberal Arts & Sciences: Social Science

FORMATION OF NECESSARY ACTIVITIES
Required: Algebra
Recommended: Geometry, Biology

Technical Standards - Human Services
These technical standards have been established to inform students of the skills and standards necessary for completion of the human services program and as a professional in the field of human services.

ABILITY
STANDARD
EXAMPLES of necessary activities (not all-inclusive)

Physical Demands/Motor Skills
Students must possess physical ability to navigate in the classroom, intern site, and community.
Attend and perform safely and satisfactorily in the classroom and in a human/social services agency/organization.
Meet the physical demands of internship placement, including demands related to the use of sensory and motor skills.
Accurately observe clients to effectively assess their situations.
Have sensory abilities to carry out necessary assessment activities.

Critical Thinking/Observation/
Sensory/Reasoning Skills
Demonstrate remembering, understanding, applying, analyzing, and evaluating human services-related skills.

Emotional and Mental
Demonstrate emotional and mental regulation.

Behavioral/Social Skills and Professionalism
Capacity to work with individuals, families, groups, and colleagues from a variety of social/emotional, agencies/organizations that support them.

Care of clients, class activities, and internship placements.

Communication Skills
Communication skills sufficient to communicate in class and in human service agencies/organizations.

Technical Standards - Human Services
These technical standards have been established to inform students of the skills and standards necessary for completion of the human services program and as a professional in the field of human services.

ABILITY
STANDARD
EXAMPLES of necessary activities (not all-inclusive)

Emotional and Mental
Demonstrate emotional and mental regulation.

Behavioral/Social Skills and
Professionalism
Capacity to work with individuals, families, groups, and colleagues from a variety of social/emotional, agencies/organizations that support them.

Care of clients, class activities, and internship placements.

Communication Skills
Communication skills sufficient to communicate in class and in human service agencies/organizations.
Students must sign a document indicating they understand that if they have a felony conviction they may not pass a background check for employment in human services.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

HUMAN SERVICES - AS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

| First | | | | |
|-------|-------|------------------|---|
| COMP  | 1503  | Freshman Composition | 3 |
| PSYC  | 1013  | General Psychology | 3 |
| SOCI  | 1163  | General Sociology | 3 |
| HUSR  | 2083  | Introduction to Human Services | 3 |
| GLST  | 2113  | Global & Diverse Perspectives | 3 |
| HPED  | xxx1  | Physical Education | 1 |

HUSR 2083 fall only

| Second | | | | |
|--------|-------|------------------|---|
| PSYC   | 1023  | Human Development | 3 |
| PSYC   | 1063  | Basic Helping Skills | 3 |
| HUSR   | 4033  | Issues in Human Services | 3 |
| XXX    | xxx3  | Liberal Arts Elective | 3 |
| MATH   | 1113  | Statistical Concepts | 3 |
| MATH   | 1123  | Statistics I | 3 |

HUSR 4033 spring only

| Third | | | | |
|-------|-------|------------------|---|
| SOCI  | 1223  | Power, Privilege, & Difference | 3 |
| LITR   | xxx3  | Literature Elective | 3 |
| XXXX   | xxx3  | Department Elective | 3 |
| XXXX   | xxx3  | Natural Science | 3 |
| SPCH   | 1083  | Effective Speaking | 3 |

| Fourth | | | | |
|--------|-------|------------------|---|
| SOCI   | 1183  | Contemporary Social Problems | 3 |
| HUSR   | 1074  | Practicum in Human Services | 4 |
| XXXX   | xxx3  | American History Elective | 3 |
| XXXX   | xxx3  | Liberal Arts Elective | 3 |
| XXXX   | xxx3  | Open Elective | 3 |

Also required: One credit hour of physical education.

PRACTICUM (HUSR 1074) PREREQUISITES
- Good academic standing (cumulative GPA of 2.0 or higher)
- Completion of PSYC 1063 and either HUSR 2083 or HUSR 4033 with a "C" or higher grade
- Submission of HUSR 1074 practicum application form to the departmental practicum coordinator
- Approval of the department faculty
- Ability to pass any agency required background check

GRADUATION REQUIREMENTS
- Good academic standing (cumulative GPA of 2.0 or higher)
- Successful completion of all courses in the prescribed four-semester plan
- "C" average or higher needed in HUSR 2083, HUSR 4033, and PSYC 1063
- HUSR 1074 with a "B" or higher
Dr. Jill Priest Amati, Department Chair and Program Coordinator
Email address: amatijp@alfredstate.edu

The US Bureau of Labor Statistics expects demand for bachelor-prepared human services professionals to grow faster than average through the next decade, especially in rural areas that already face a significant shortage of human services professionals.

The baccalaureate degree (BS) program in human services management will prepare you as a generalist who can work with clients in a wide range of human services agencies and also can employ sound management practices. This interdisciplinary program will not only instruct you on how to offer direct service to clients, but also how to build a strong foundation in the basics of program management and supervision. The program requires you to take lower- and upper-level courses in the human services and additional courses in management, accounting, and leadership.

ADVANTAGES
- Internship opportunities are available. See details below.
- Graduate-level programs exist in areas including human services, human services administration, social work, social work administration, business administration, and non-profit public administration.
- An accelerated three-year option exists for highly motivated and academically talented students.

PROGRAM STUDENT LEARNING OUTCOMES
- Apply critical thinking skills in the context of professional practices.
- Perform the basic operations of personal computer use and employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
- Communicate effectively and appropriately in oral and written forms.
- Apply a core set of management skills in human resources, finance, operations, and leadership.
- Apply a core set of generalist practice skills in planning, implementing, and evaluating client interventions.
- Adhere to professional ethical standards and value diversity in all areas of practice, including the supervised field practicum, academic experiences, and community involvement.
- Analyze and design intervention strategies to improve social policies impacting client systems at individual, organizational, and community levels.
- Construct a professional portfolio to prepare for employment or graduate study.

FUTURE EDUCATIONAL OPPORTUNITIES
Graduate-level programs in areas including human services, human services administration, social work, social work administration, business administration, and non-profit public administration.

OCCUPATIONAL OPPORTUNITIES
- Case, program, or residential manager
- Human services supervisor
- Aftercare coordinator
- Quality assurance specialist
- Outreach coordinator
- Grants management and organizational development specialist
- Program planner

EMPLOYMENT STATISTICS
Employment and continuing education rate of 90 percent - 70 percent employed; 20 percent decided to continue their education.

The US Bureau of Labor Statistics expects demand for bachelor-prepared human services professionals to grow faster than average through the next decade, especially in rural areas that already face a significant shortage of human services professionals.
accommodations are encouraged to contact OAS as early as possible.

Meet the physical demands of internship placement, including demands related to the use of sensory and motor skills. Accurately observe clients to effectively assess their situations.

Critical Thinking/Observation/Sensory/Reasoning Skills

- Demonstrate remembering, understanding, applying, analyzing, and evaluating human services-related skills.
- Have sensory abilities to carry out necessary assessment activities.
- Think critically, analyze, and interpret objective and subjective data.
- Apply effective problem-solving skills.

Emotional and Mental

- Demonstrate emotional and mental regulation.
- Demonstrate appropriate coping mechanisms when managing life-stressors.
- Use appropriate self-care.
- Evaluate and appropriately modify behavior for medical or emotional problems that interfere with academic and internship performance.

Behavioral/Social Skills and Professionalism

- Capacity to work with individuals, families, groups, and colleagues from a variety of social/emotional agencies/organizations that support them.
- Adhere to the Ethical Standards for Human Services Professionals (NOHS).
- Resolve ethical dilemmas that may occur among classmates, during class projects, and while at practicum sites.
- Comply with applicable ethical and legal standards of privacy and confidentiality as they relate to clients, class activities, and internship placements.
- Adhere to college policies on academic integrity and code of conduct.
- Ability to pass a background check.*
- Communicate effectively with other students, faculty, clients, and other professionals.
- Have a willingness to listen attentively.
- Communicate effectively through presentations, written assignments, small group settings, and through electronic means.
- Perceive and interpret nonverbal communication.
- Demonstrate competency in writing skills.

- Students must sign a document indicating they understand that if they have a felony conviction they may not pass a background check for employment in human services.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

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<td>(Minimum 400 hours field work, three-hour weekly seminar.)</td>
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**ONLINE OPTION (FOR LAST TWO YEARS)**

| Fifth      | BUAD 3153   | Fundamentals of Management          | 3       |
|           | HUSR 5003   | Community Organizations             | 3       |
|           | PSYC 5013   | Counseling Theory                   | 3       |
|           |             |                                     | 9       |
|           | SOCI 5023   | Research Methods                    | 3       |

| Sixth      | BUAD 5043   | Business Ethics                     | 3       |
|           | BUAD 5013   | Principles of Leadership            | 3       |
|           | HUSR 5103   | Social Policy & Human Services      | 3       |
|           |             |                                     | 6       |

| Winter     | BUAD 5043   | Business Ethics                     | 3       |
|           | BUAD 5023   | Human Resource Management           | 3       |
|           | XXXX XXXX3  | Liberal Arts Elective               | 3       |
|           |             |                                     | 6       |

| Summer     | XXXX XXXX3  | Liberal Arts Elective               | 3       |
|           |             |                                     |         |

| Seventh    | BUAD 5003   | Management Communications           | 3       |
|           |             |                                     |         |

| Eighth     | BUAD 5043   | Accounting Perspectives            | 3       |
|           | PSYC 5103   | Industrial/Orgnztnl Psychology     | 3       |
|           |             |                                     | 6       |
ACCELERATED 3-YEAR PROGRAM

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<td>Human Svcs Field Pract &amp; Sem (Spring only. Grade of “B” or higher required. Minimum 400 hours field work, three-hour weekly seminar)</td>
</tr>
</tbody>
</table>

**For all human services management programs: Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.**

Note:

- * Any non-required course designated as "Liberal Arts and Sciences" in the college catalog.
- ** Any non-required course taught in the Department of Social & Behavioral Sciences.
- *** HUSR 1074 requires a “C” or higher between PSYC 1063 and either HUSR 2083 or HUSR 4033.
- **** One of HIST 1143 (American History I), HIST 2143 (American History II), PLSC 1043 (American Government) or GEAH 9100.

GRADUATION REQUIREMENTS

- Good academic standing (cumulative GPA of 2.0 or higher)
- Successful completion of all courses in the prescribed eight-semester plan
- Grade of "B" or higher in HUSR 1074 and HUSR 5314
- Completion of HUSR 5003, HUSR 5103, HUSR 5203, and HUSR 5213 with a "C" or higher grade in each course
- Submission of the college’s degree application form
- Grade of “C” or higher in HUSR 2083, HUSR 4033, and PSYC 1063
- Grade of "C" or higher in all upper-level courses

Practicum (HUSR 1074) Prerequisites

- Good academic standing (cumulative GPA of 2.0 or higher)
- Completion of PSYC 1063 and either HUSR 2083 or HUSR 4033 with a grade of "C" or higher
- Submission of HUSR 1074 practicum application form to the departmental practicum coordinator
- Approval of the department faculty
- Ability to pass any agency required background check
Practicum (HUSR 5314) Prerequisites

- Good academic standing (cumulative GPA of 2.0 or higher)
- Completion of at least three of the following four courses - HUSR 5003, HUSR 5103, HUSR 5203, HUSR 5213 - with a "C" or higher grade in each of the three
- Submission of HUSR 5314 practicum application form to the departmental practicum coordinator
- Approval of the department faculty
- Ability to pass any required background check
- Completion of HUSR 1074 with a grade of "B" or higher
The Imaging Science (BTech) program is designed to provide an upper-level, online vehicle by which students or working professionals who have earned an associate degree, or a certificate of completion from JCERT accredited program, can pursue baccalaureate degree credentialing. It targets those individuals currently working as radiologic technologists who wish to advance into professional positions in management or healthcare administration in addition to advancing their clinical imaging skills. Academic delivery of required coursework will be accomplished through flexibly scheduled online courses.

As an upper-level bachelor’s degree completion program, applicants will need to possess an associate degree in a healthcare related area (or have accumulated a minimum of 60 credits therein), ARRT certification, and have completed a minimum of 20 LAS credits that include fulfillment of the specifically required general education categories. Applicants must submit an official transcript and their acceptance will be an admissions determination, in consultation where needed with the Allied Health Department chair.

To further increase clinical competencies in imaging science, matriculated students will be required to select and complete an upper-level certificate that will allow students to gain additional credentials or certifications. Alfred State has developed two on-year certificates in computed tomography (CT) and magnetic resonance imaging (MRI). These two certificates, including their clinicals, have been registered in distance education format by the New York State Education Department. These two certificate programs have already been reviewed and approved by SUNY and NYSED. Completion of the certificates in CT or MRI will allow graduates that already hold radiologic technology credentials (ARRT) the ability to sit for the certification exam in either area through the ARRT. Additional imaging certificates may be added as BTech degree options as they are developed and approved by SUNY and the NYS Department of Education.

Complementing the certificate requirement will include an emphasis on developing career-specific managerial skills through core management courses that encompass specific exposure to the area of healthcare.

Management electives in support of that objective will include options in healthcare finance/accounting; human resource; communications; employment law, ethics and policies; information systems; marketing; and quality control.

ADVANTAGES

The imaging science (BTech) program is designed to provide an upper-level, online vehicle by which students or working professionals who have earned an associate degree (AAS), or a certificate of completion for a JCERT accredited program, can pursue bachelor degree credentialing. It targets those individuals currently working as radiologic technologists who wish to advance into professional positions such as management and healthcare administration, teaching, or sales in addition to advancing their clinical imaging skills. The BTech in imaging science will provide convenient access for working adults through flexible online courses. It is supported by regional and state allied health care industry needs.

This program allows current students to expand their education within Alfred State College and further facilitate obtaining of professional goals with a higher degree earned for their specialty.

PROGRAM STUDENT LEARNING OUTCOMES

Graduates from this program will be able to:

- Apply an understanding of individual and group dynamics, specifically in regards to decision making process and team interaction.
- Discuss and apply the methods used to plan, organize, and lead quality control within a healthcare setting.
- Analyze and explain the application of regulations and laws in the healthcare setting.
- Illustrate effective written communication methods and apply them utilizing current technology.
- Perform statistical analysis.
- Synthesize theory and concepts from the liberal education domain in radiology and healthcare.

Specific to the CT track:

- Demonstrate correct positioning skills.
- Select proper technical factors.
- Utilize appropriate radiation protection techniques.
- Exhibit patient-centered skills.
- Critique images to determine diagnostic quality.
- Display proper work ethics.
- Adapt standard procedures for non-routine patients.
- Apply written communication skills to the construction of documents of record that are established professional guidelines.
- Apply oral communication skills to the explanation of ideas and scientific terminology.
- Use technological resources effectively and appropriately, synthesize theory and concepts from the liberal education domain and other professions into computed tomography.

Specific to the Healthcare Management track:

- Apply an understanding of self, as well as an understanding of the dynamics of group and team interaction.
- Discuss and apply the methods used to plan, organize and lead a healthcare facility.
- Analyze and use the appropriate skills and techniques needed for problem solving and decision making.
- Analyze and explain the application of employment laws and the legal system to the healthcare environment.
- Communicate effectively: Oral, written, and nonverbal, using current technology where appropriate.
- Illustrate basic accounting methods and apply them using current technology.
- Discuss the uses of and be able to prepare a comprehensive healthcare marketing plan.

Specific to the MRI track:

- Demonstrate correct positioning skills.
- Select proper technical factors.
- Utilize appropriate radiation protection techniques.
- Exhibit patient-centered skills.
- Critique images to determine diagnostic quality.
- Display proper work ethics.
- Adapt standard procedures for non-routine patients.
- Apply written communication skills to the construction of documents of record that are established professional guidelines.
- Apply oral communication skills to the explanation of ideas and scientific terminology.
- Using technological resources effectively and appropriately, synthesize theory and concepts from the liberal education domain and other professions into MRI.

CONTINUING EDUCATION OPPORTUNITIES

Graduates with this BTech degree can transfer directly into a master of business administration (MBA) or masters of health administration program (MHA) at another college.

OCCUPATIONAL OPPORTUNITIES

- Hospitals (government and private)
- Nursing homes
- Private clinics
- Surgical centers
- Diagnostic centers
- Private physician offices
- Education
- Sales
- Application specialist

EMPLOYMENT STATISTICS

The United States Department of Labor, Bureau of Labor Statistics does not differentiate computed tomography (CT) technicians from magnetic resonance imaging (MRI) technicians for reporting purposes. Employment of magnetic resonance imaging clinicians is projected to grow 13% from 2016 to 2026.
much faster than the average for all occupations. Nation-wide in 2016 there were 241,700 employed noted by the United States Bureau of Labor Statistics.

According to the United States Department of Labor, Bureau of Labor Statistics there were 352,200 jobs nationally in 2016. This is expected to grow 20% in 2016-2026 nationally. This is considered to be faster than average growth.

**RELATED PROGRAMS**
- Computed Tomography
- Diagnostic Medical Sonography
- Radiologic Technology

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**
Applicants for the imaging science program must possess either a recognized Associate of Applied Science (AAS) degree in radiologic technology or possess a certificate of completion from a Joint Review Committee on Education in radiologic technology (JRCERT) program. They must also have American Registry of Radiologic Technologists (AART) certification.

**REQUIRED EQUIPMENT**
A tier 1 laptop computer is required for students entering the accounting program. Laptop specifications are available at [http://www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

**OFFICE OF ACCESSIBILITY SERVICES**
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**IMAGING SCIENCE - BTECH**

**TYPICAL FOUR-SEMESTER PROGRAM**

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INDIVIDUAL STUDIES
AS DEGREE – CODE #0688
Matt Hollis Department Chair
Email address: hollism@alfredstate.edu

This program offered on campus or online will give you the opportunity to
explore majors, career options, and futures. It is also excellent preparation
for transfer into four-year programs or various colleges and universities, and
can be tailored to fulfill a career goal that cannot be met by traditional program
offerings.

ADVANTAGES
• Flexibility to choose online courses that fit your needs.
• Ability to sample or select courses from different fields.
• Excellent preparation for transfer or tailoring to specific goals.

PROGRAM STUDENT LEARNING OUTCOMES
• Create written communication (including the appropriate use of
technology) appropriate for degree type and level that meets standards of
style, clarity, and grammatical correctness as described in the Writing
Rubric.
• Demonstrate oral communication proficiency.
• Demonstrate foundational knowledge required to be an informed citizen in
a global community by successfully completing (“D” or better) seven of the
10 SUNY General Education skill areas.
• Complete 15 credit hours in a career area concentration and describe their
coherent sequence of study and transfer focus.
• Critical thinking (problem-solving, reasoning skills appropriate to degree
level and type).
• Use library, online, and other resources to locate and evaluate scholarly
articles and other research materials. Perform the basic operations of
personal computer use, understand and use basic research techniques
and locate, evaluate, and synthesize information from a variety of sources.
• Demonstrate competence in arithmetic, algebra, geometry, data analysis,
and quantitative reasoning. Employ basic problem-solving strategies.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State individual studies graduates may enter directly into either the
interdisciplinary studies BTech or the technology management BBA degree
program.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 60 percent are
employed; 40 percent continued their education.

RELATED PROGRAMS
Business Administration
Liberal Arts and Sciences: Adolescent Education - Teacher Education Transfer
Liberal Arts and Sciences: Humanities
Liberal Arts and Sciences: Math and Science
Liberal Arts and Sciences: Social Science
Undeclared

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra
Recommended: Geometry, Biology

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to
properly participate in this program may contact Melanie Ryan in the
Office of Accessibility Services. This office may be contacted by email
at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind
that some accommodations may take time to implement, so students seeking
accommodations are encouraged to contact OAS as early as possible.
INFORMATION TECHNOLOGY: APPLICATIONS SOFTWARE DEVELOPMENT

BTECH DEGREE – CODE #1502

Evan Enke, Program Coordinator
Email address: enkeeg@alfredstate.edu

The Bachelor of Technology degree in information technology: applications software development at Alfred State is designed to prepare you to enter the workforce as an IT professional with a special emphasis in the fast-moving field of programming and database applications. From database application to programming language sequences, including C#, Java, and C++, our expert faculty have created a curriculum to help you meet your career goals. You will also receive a sound foundation in web development, networking, and microcomputer systems. And a full-semester internship will give you the hands-on experience employers are looking for.

ADVANTAGES

Due to the solid foundation in all the major fields of information technology, the job opportunities for graduates are wide and numerous.

PROGRAM STUDENT LEARNING OUTCOMES

- Produce object-oriented application software with current development programming languages.
- Produce functional databases with current DBMS such as Oracle, MySQL, Access, etc.
- Use the appropriate database design methodologies.
- Perform the full life cycle of software development.
- Develop an outline for an information system project.
- Install, configure, and troubleshoot basic hardware.
- Identify and utilize business principles and problem-solving techniques.
- Demonstrate and use managerial principles of business.
- Demonstrate knowledge of multiple areas within the liberal arts arena.
- Apply accumulated knowledge and skills in an actual industry environment.

CONTINUING EDUCATION OPPORTUNITIES

Articulation agreements have been established with many community colleges and additional agreements are in development. It is possible, with careful selection of courses, to transfer from a variety of associate degrees, including computer information systems, information technology, computer science, and others. Upon completion of the bachelor's degree, students will be prepared to pursue a graduate degree in information technology. The computer information systems degree (AAS) at Alfred State is especially well suited for transfer into the bachelor's degree at the junior level.

OCCUPATIONAL OPPORTUNITIES

Organizations of all types and sizes need computer professionals. The primary employment field includes database administrators, programmers, and systems analysts. Due to the solid foundation in all the major fields of information technology, the job opportunities for graduates are wide and numerous. They include database administrators, software developers, network support, project managers, user support, web developers, IT managers, technical sales, and technical support staff, to name a few.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS

- Computer Engineering Technology
- Computer Information Systems
- Computer Science
- Cyber Security
- Information Technology: Network Administration
- Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2

REQUIRED EQUIPMENT

A tier 2 laptop computer is required for students entering the information technology: applications software development program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
### INFORMATION TECHNOLOGY: APPLICATIONS SOFTWARE DEVELOPMENT - BTECH DEGREE

#### TYPICAL EIGHT-SEMESTER PROGRAM

**First**

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*If not required, take LAS elective to complete degree requirements of three credits; otherwise take free elective.

GPA of 2.5 or higher required in major courses; GPA of 2.0 minimum overall; internship is student-initiated.

Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.

### GRADUATION REQUIREMENTS

- 124 credit hours
- 39 credit hours in major field required courses
- 24 credit hours in professional courses
- 18 credit hours in core concentration
- 30 credit hours in liberal arts courses
- A 2.5 grade point average in the major is needed for the required internship
- Other requirements as stated in college academic regulations
- Seven general education areas are required, including three of the following five: art, language, other world civilizations, American history, or western civilization
The Bachelor of Technology degree in information technology: network administration at Alfred State is designed to prepare you to enter the workforce as an IT professional with a special emphasis in the growing field of networking. After completing the course work, you will have a strong foundation to obtain professional certification in: Cisco Certified NetworkAssociation (CCNA), CCNA Security, Microsoft Certified Technology Specialist, CompTIA A+, and Network+. Core courses will also provide you with a foundation in other essential areas, including web server administration, programming, database applications, and microcomputer systems. And a full-semester internship will give you the hands-on experience employers are looking for.

ADVANTAGES
Due to the solid foundation in all the major fields of information technology, the job opportunities for graduates are wide and numerous.

PROGRAM STUDENT LEARNING OUTCOMES
• Demonstrate troubleshooting strategies and techniques with a variety of networking problems.
• Identify and configure a variety of networking topologies and protocols.
• Demonstrate effective network operation and management.
• Install and configure both client and server networking software.
• Demonstrate effective network design for LAN and WAN.
• Install and configure web, database, file, and application servers.
• Develop and implement effective security and disaster recovery systems and policies.
• Develop and maintain technical documentation and procedures for network management.
• Demonstrate knowledge of multiple areas within the liberal arts arena.
• Apply accumulated knowledge and skills in an actual industry environment.
• Identify and utilize business principles and problem-solving techniques.

CONTINUING EDUCATION OPPORTUNITIES
Articulation agreements have been established with many community colleges and additional agreements are in development. It is possible, with careful selection of courses, to transfer from a variety of associate degrees, including computer information systems, information technology, computer science, and others. The computer information systems degree (AAS) at Alfred State is especially well suited for transfer into this degree at the junior level.

OCCUPATIONAL OPPORTUNITIES
Organizations of all types and sizes need computer professionals. Due to the solid foundation in all the major areas of computer information technology and systems, job opportunities for graduates are wide and numerous. They include network administrators, systems analysts, project managers, user support, web developers, security specialists, IT managers, and technical support staff, to name just a few.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS
Computer Engineering Technology
Computer Information Systems
Computer Science
Cyber Security
Information Technology: Applications Software Development
Information Technology: Web Development

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the information technology: network administration program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the information technology: network administration program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
INFORMATION TECHNOLOGY: NETWORK ADMINISTRATION

TYPICAL EIGHT-SEMESTER PROGRAM

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*If not required, take LAS elective to complete degree requirements of three credits; otherwise take free elective.

**BUAD 5003 or BUAD 6113 recommended.

GPA of 2.5 or higher required in major courses; GPA of 2.0 minimum overall; internship is student-initiated.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

GRADUATION REQUIREMENTS

- 124 credit hours
- 29 credit hours in major field required courses
- 24 credit hours in professional courses
- 30 credit hours in liberal arts/general education courses
- 18 credit hours in core concentration
- A 2.5 grade point average in the major is needed for the required internship
- Other requirements as stated in college academic regulations
- Seven general education areas are required, including three of the following five: art, language, other world civilizations, American history, or western civilization

GPA of 2.5 or higher required in major courses; GPA of 2.0 minimum overall; internship is student-initiated.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

GRADUATION REQUIREMENTS

- 124 credit hours
- 29 credit hours in major field required courses
- 24 credit hours in professional courses
- 30 credit hours in liberal arts/general education courses
- 18 credit hours in core concentration
- A 2.5 grade point average in the major is needed for the required internship
- Other requirements as stated in college academic regulations
- Seven general education areas are required, including three of the following five: art, language, other world civilizations, American history, or western civilization

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.
INFORMATION TECHNOLOGY: WEB DEVELOPMENT

BTECH DEGREE – CODE #1506
Evan Enke, Department Chair and Program Coordinator
Email address: enkeeg@alfredstate.edu

The Bachelor of Technology degree in information technology: web development at Alfred State is designed to prepare you to enter the workforce as an IT professional with a special emphasis in web development and applications. Web publishing, programming, and web server administration constitute the upper level of courses. Additionally, the web is integrated across the entire program, beginning with the very first course. Through core courses, you will also be given an essential foundation in programming, database administration, networking, and microcomputer systems. And a full-semester internship will give you the hands-on experience employers are seeking.

ADVANTAGES
Due to the solid foundation in other areas, graduates will find that job opportunities are wide and numerous.

PROGRAM STUDENT LEARNING OUTCOMES
- Produce dynamically functional software with web development and scripting languages.
- Perform full life cycle of web software development.
- Create and use a database with appropriate web design principles.
- Produce functional web applications using web composing software.
- Analyze and create interface design.
- Install, configure, and troubleshoot basic hardware.
- Identify and utilize business principles and problem-solving techniques.
- Demonstrate and use managerial principles of business.
- Demonstrate knowledge of multiple areas within the liberal arts arena.
- Apply accumulated knowledge and skills in an actual industry environment.

CONTINUING EDUCATION OPPORTUNITIES
Articulation agreements have been established with many community colleges and additional agreements are in development. It is possible, with careful selection of courses, to transfer from a variety of associate degrees, including computer information systems, information technology, computer science, and others. Upon completion of the bachelor’s degree, students will be prepared to pursue a graduate degree in information technology. The computer information systems degree (AAS) at Alfred State is especially well suited for transfer into this bachelor’s degree at the junior level.

OCCUPATIONAL OPPORTUNITIES
Organizations of all types and sizes need computer professionals. The primary employment field includes web administrators and developers. Due to the solid foundation in other areas, graduates will not be limited to these areas; thus, the job opportunities are wide and numerous. They include database administrators, programmers, systems analysts, network support, project managers, user support, IT managers, technical sales, and technical support staff, to name just a few.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS
Computer Engineering Technology
Computer Information Systems
Computer Science
Cyber Security
Digital Media and Animation
Information Technology: Applications Software Development
Information Technology: Network Administration

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry, Algebra 2

REQUIRED EQUIPMENT
A tier 2 laptop computer is required for students entering the information technology: web development program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
### Information Technology: Web Development - BTECH Degree

#### Typical Eight-Semester Program

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*If not required, take LAS elective to complete degree requirements of three credits; otherwise take free elective.

** Recommended: BUAD 5003 or BUAD 6113

*** Recommended: CISY 5233 - Human Computer Interaction or CISY 4053 Linux/Unix Admin & Scripting

GPA of 2.5 or higher required in major courses; GPA of 2.0 minimum overall; internship is student-initiated.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship and complete the program.

**Graduation Requirements**

- 124 credit hours
- 39 credit hours in major field required courses
- 24 credit hours in professional courses
- 18 credit hours in core concentration
- 30 credit hours in liberal arts/general education courses
- A 2.5 grade point average in the major is needed for the required internship
- Other requirements as stated in college academic regulations
- Seven general education areas are required, including three of the following five: art, language, other world civilizations, American history, or western civilization
The Bachelor of Technology in interdisciplinary studies program is designed to provide a four-year curriculum in which students are empowered to personalize, within specified core and concentration areas, their technology-based program of study. The program is founded in academic flexibility by providing two sets of broad-based academic options. Students start with a core set of courses selected for years one and two of the program and two concentration areas for years three and four. The general academic categories are as follows:

YEARS ONE AND TWO CORE AREAS (SELECT ONE):
- Science/Technology/Engineering/Math (STEM)
- Management
- Design
- Health/Agriculture/Science (HAS)
- Humanities/Social Sciences
- Technical Communication

YEARS THREE AND FOUR CONCENTRATION AREAS (SELECT TWO):
- Science/Technology/Engineering/Math (STEM)
- Management
- Technical Communication/Design
- Humanities/Social Sciences
- Health/Science

ADVANTAGES
- Students must complete 18 credit hours in a core area during the first two years of the program; most associate degrees will satisfy this.
- Students must also satisfy a minimum of 12 credit hours in each of two academic concentrations during the junior and senior years. Courses satisfying these requirements are identified and categorized by prefix.
- The program affords students the opportunity to design and complete a rigorous, yet flexible interdisciplinary course of study in technology-based disciplines.
- The program will provide an avenue by which students can pursue precise career interests that cannot be accommodated within typical majors.
- With appropriate advisement, graduates will be well prepared to enter and succeed in a wide range of technology-based careers.

PROGRAM STUDENT LEARNING OUTCOMES
- Evaluate the value of the lower-level courses and analyze the relationship of those in the context of the interdisciplinary nature of the degree.
- Synthesize two or more upper-level concentration areas within an approved interdisciplinary course of study.
- Employ written communication skills (including the appropriate use of technology) appropriate for the degree type and level that meets standards of style, clarity, and grammatical correctness.
- Employ oral communication skills (including the appropriate use of technology) appropriate for the degree type and level that meets standards of style, clarity, and grammatical correctness.
- Employ problem solving, reasoning and critical thinking skills to a situation relevant to the concentration choices.
- Demonstrate foundational knowledge required to be an informed citizen in a global community. (VED)
- Use library, online, and other resources to locate and evaluate scholarly articles and other research materials.
- Competently employ computer technology to present and manage data.

OCCUPATIONAL OPPORTUNITIES
The nature of the program allows for many occupational opportunities. Some of the more common interest areas are as follows:
- Purchasing manager (i.e., for a hospital)
- Health and safety engineer
- Cost estimator
- Training and development specialist
- Computer systems analyst
- Occupational health and safety specialist
- Graphic designer
- Self-employed

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 100 percent are employed; 0 percent continued their education.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, second year of advanced math, two units of science

OFFICE OF ACCESSIBILITY SERVICES
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INTERDISCIPLINARY STUDIES - BTECH DEGREE
TYPICAL EIGHT-SEMESTER PROGRAM

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**GRADUATION REQUIREMENTS – BT DEGREE**

- 124 total semester credit hours
- 30 semester credit hours of liberal arts
- 30 semester credit hours of general education from seven of 10 SUNY General Education categories (will include math, written and oral communication, natural science and diversity/global awareness).
- 48 upper-division credit hours from the approved list
- Good academic standing and at least a 2.0 cumulative grade point average
- Approval of the advising committee
INTERIOR DESIGN
AAS DEGREE – CODE #0656
Kevin Hofmann, Program Coordinator
Email address: hofmankn@alfredstate.edu

The AAS interior design program is designed to provide students with knowledge and skills for entry-level positions in the interior design discipline. The program consists of a core graphics sequence with additional courses in appropriate technical areas. Digital tools are integrated throughout the four-semester program.

ADVANTAGES
- The faculty consists of experienced interior designers, as well as licensed architects and engineers.
- Students develop the ability to think creatively, visually, and volumetrically, exhibiting a variety of ideas, approaches, and concepts when designing interior projects.
- Students gain an understanding of how design solutions affect and are impacted by construction systems, power and mechanical, lighting and ceiling systems, acoustics, building methods, materials, and regulatory requirements.

PROGRAM STUDENT LEARNING OUTCOMES
- Think creatively, visually and volumetrically, exhibiting a variety of ideas, approaches, and concepts when designing interior projects.
- Understand and utilize color principles, theories, and systems in design projects.
- Demonstrate competent design skills in selection of interior finishes, layout of furniture, lighting, and decorative elements.
- Demonstrate understanding of ergonomics and the relationship between human behavior and the built environment.
- Demonstrate understanding of the history of art, architecture, interiors, and furnishings.
- Apply 2- and 3-dimensional design principles and elements in the development of the spatial envelope.
- Demonstrate programming skills, including identifying the problem, client and user needs, and gathering and analyzing information.
- Demonstrate competence in manual and computer-aided graphic presentation of interior design projects.
- Express ideas clearly in oral presentations and critiques, and communicate clearly in writing concept statements, reports, and research.
- Understand that design solutions affect and are impacted by construction systems.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State interior design graduates may enter directly into the technology management BBA or the interdisciplinary studies BTech degree program.

CONTINUING EDUCATION OPPORTUNITIES
An articulation agreement exists between Alfred State and Villa Maria College (with placement based on a portfolio review and an interview).

CAREER OPPORTUNITIES
- Interior designer (after successfully passing the NCIDQ and completing internship requirements)
- Kitchen and bath designer
- Space planner
- Product showroom manager
- Product specifier
- Manufacturer’s representative
- Facilities manager

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 25 percent are employed; 75 percent continued their education.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry
Recommended: Algebra 2

TYPICAL PROGRAM
In the first and second years, a typical day consists of two one-hour lectures and a two-hour studio. Students can expect to spend additional time working on projects and course work out of studio.

GENERAL NOTES
Entry level of student into math and composition/literature sequences is a function of student’s high school preparation and mathematics and English placement examinations.

Minimum of “C” is required to continue from one studio course to the next. (This includes: ARCH 1184, ARCH 2394, DSGN 2204, and DSGN 2304).

GRADUATION REQUIREMENTS
A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative index of 2.0, which is equivalent to a “C” average.

REQUIRED EQUIPMENT
All students in both the architecture and interior design programs are required to purchase a laptop computer in addition to other equipment. A tier 2 laptop computer is required for students entering this degree program. Typically the costs of these purchases can be covered using financial aid. Please consult a financial aid counselor for further details. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
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INTERIOR DESIGN - AAS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

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Required: Algebra, Geometry
Recommended: Algebra 2
This transfer program will prepare you to enter into baccalaureate programs in adolescent education at public and private colleges and universities. As a graduate, you will have satisfied all of SUNY’s general education knowledge requirements and will have completed two courses in a foreign language, one course in adolescent development, one in foundations of education, and at least four courses in one of six concentrations – history/social studies, biology, chemistry, English, math, or physics.

ADVANTAGES
- Students have the benefit of small classes taught by expert faculty who take an interest in each student’s success and are advised by faculty within their concentration area.
- The US Department of Labor expects employment for secondary school teachers to grow 8 percent through 2026.

PROGRAM STUDENT LEARNING OUTCOMES
- Apply critical thinking skills to the analysis of typical issues in education.
- Perform the basic operations of personal computer use and employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
- Communicate effectively and appropriately in written and oral forms.
- Demonstrate competence of subject matter in the content area of specialization.
- Identify the basic concepts and theories in adolescent development.
- Identify basic pedagogical terms and theories.
- Demonstrate competence in all 10 general education knowledge areas defined by SUNY.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State liberal arts and sciences: adolescent education (teacher education transfer) graduates may enter directly into either the interdisciplinary studies BTech or the technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES
Transfer requirements for students in adolescent education vary across public and private colleges and universities. Therefore, students should work closely with their faculty adviser to ensure that they meet the particular entrance requirements of their transfer college of choice. The minimum cumulative grade point average for admission as a transfer student in adolescent education to SUNY colleges and universities varies from 2.5 to 3.0, with some transfer colleges also setting minimum grade point averages in concentration courses and in courses in adolescent development and foundations of education.

EMPLOYMENT STATISTICS
Employment and continuing education data not available

RELATED PROGRAMS
- Biological Science
- Interdisciplinary Studies
- Liberal Arts and Sciences: Humanities
- Liberal Arts and Sciences: Math and Science
- Liberal Arts and Sciences: Social Science

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
- Biology and Chemistry concentrations: Algebra, Geometry, Algebra 2, Biology, Chemistry required
- History/Social Studies and English concentrations: Algebra required
- Math and Physics concentrations: Algebra, Geometry, Algebra 2, Biology, and Chemistry or Physics required

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## TYPICAL FOUR-SEMESTER PROGRAM

### HISTORY/SOCIAL STUDIES CONCENTRATION

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LIBERAL ARTS & SCIENCES: HUMANITIES

AA DEGREE – CODE #0201

Travis Matteson, Department Chair and Program Manager
Email address: mattestw@alfredstate.edu

If you're planning on continuing your education at another four-year college or university, the liberal arts and sciences: humanities program might be for you. By careful selection of elective credits, you will be qualified to enter a baccalaureate program as a third-year student in a wide variety of fields. The program also serves an exploratory function if you have not decided on a field of study or a specific career.

ADVANTAGES

- The liberal arts and sciences: humanities program prepares students for life by stressing the importance of reading, writing, and thinking while developing in them an appreciation of the arts and the wisdom of great minds.
- Colleges, universities, and large corporations are increasingly emphasizing the importance of a liberal arts education upon which to build a career.

PROGRAM STUDENT LEARNING OUTCOMES

- Create written communication appropriate for audience and purpose and that meets standards of style, clarity, and grammatical correctness as described in the Writing Rubric.
- Create oral communication appropriate for audience and purpose and which meets standards of presentation as described in the Effective Speaking Rubric.
- Construct and recognize arguments in both written and oral formats that are free from logical defects, as described in the Critical Thinking Rubric.
- Use library, online, and other resources to locate and evaluate scholarly articles and other research materials.
- Create research-based prose in literature, history, philosophy, or the arts.
- Articulate the relevance of the humanities to the self and society.
- Complete eight of the 10 SUNY General Education requirements and meet the two infused competencies.
- Evaluate self and demonstrate sensitivity to others of different cultures or perceptions to work constructively in a pluralistic society.
- Analyze and appraise moral and ethical dilemmas.
- Analyze and evaluate the obligations of knowledge to promote common good.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State liberal arts and sciences: humanities graduates may enter directly into technical communication and emergent media BS, the interdisciplinary studies BTech or the technology management BBA degree program.

EMPLOYMENT STATISTICS

Employment and continuing education stats not reported.

RELATED PROGRAMS

Health Information Technology
Human Services
Individual Studies
Liberal Arts and Sciences: Math and Science
Liberal Arts and Sciences: Social Science
Nursing

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra
Recommended: Geometry, Biology

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

LIBERAL ARTS & SCIENCES: HUMANITIES - AA DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<td></td>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
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<tr>
<td></td>
<td>PHIL xxx3</td>
<td>Philosophy Elective</td>
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<td>HPEO xxx1</td>
<td>Physical Education Elective</td>
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<td>16</td>
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<tr>
<td>Second</td>
<td>LITR 2603</td>
<td>Introduction to Literature</td>
<td>3</td>
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<tr>
<td></td>
<td>COMP 2703</td>
<td>Into to Tech Comm &amp; Emer. Med</td>
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<tr>
<td></td>
<td>MATH xxx3</td>
<td>Mathematics Elective</td>
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<tr>
<td></td>
<td>HIST xxx3</td>
<td>American History I or II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>XXXX xxx3</td>
<td>General Psych. or Sociology (GE)</td>
<td>3</td>
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<td>15</td>
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<tr>
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<td>LITR xxx3</td>
<td>Gen Ed - Literature Elective</td>
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<td>HIST 1113</td>
<td>Hist of West Civil Since 1648</td>
<td>3</td>
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<td></td>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
<td>3</td>
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<td></td>
<td>XXXX xxx3</td>
<td>Gen Ed - Nat Sci Elective</td>
<td>3</td>
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<td></td>
<td>COMP 3603</td>
<td>Writing for Emergent Media</td>
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<td>SPCH 4003</td>
<td>Intercultural Communication</td>
<td>3</td>
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<td></td>
<td>XXXX xxx3</td>
<td>Natural Science Elective</td>
<td>3</td>
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<td></td>
<td>XXXX xxx3</td>
<td>Open Elective</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMP 2903</td>
<td>English in a Global Context</td>
<td>3</td>
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<tr>
<td></td>
<td>XXXX xxx3</td>
<td>Humanities Elective</td>
<td>3</td>
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<td>15</td>
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</table>

Humanities electives can be chosen from among the following course prefixes: COMP, FNAT, ITAL, LITR, PHIL, RELG, SPAN, or SPCH.

GRADUATION REQUIREMENTS

Each student must successfully complete 61 credit hours with a minimum grade point average of 2.0.

All student must pass COMP 1503 with a "C" or better.

Liberal arts and sciences: humanities (430) students must satisfy the writing portfolio requirement.
The mathematics and science emphasis will provide you with a solid foundation in mathematics and/or science, perfect for transferring and entering into career programs that depend on those skills.

**PROGRAM STUDENT LEARNING OUTCOMES**

- Demonstrate competence in arithmetic, algebra, geometry, data analysis, and quantitative reasoning.
- Demonstrate methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis.
- Employ proficient written and verbal communication skills.
- Students will identify, analyze, and evaluate arguments as they occur in their own and others' work and develop well-reasoned arguments.
- Students will perform the basic operations of personal computer use, understand and use basic research techniques and locate, evaluate, and synthesize information from a variety of sources.
- Students will successfully transfer to a bachelor's or terminal associate degree.

**DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS**

Alfred State liberal arts and sciences: math and science graduates may enter directly into either the interdisciplinary studies BTech or the technology management BBA degree program.

**CONTINUING EDUCATION OPPORTUNITIES**

This program is designed in such a way that the student and adviser work together to match courses at Alfred State with first- and second-year courses at the desired transfer school so that the student may enter a baccalaureate program as a full third-year student. Some typical fields of study that graduates choose to enter are mathematics, statistics, math or science education, physical education, biology, chemistry, physics, physical therapy, athletic training, engineering, pre-med, pre-vet, dentistry, or pharmacy.

**EMPLOYMENT STATISTICS**

Employment and continuing education rate of 100 percent – 100% are employed; 0% continued their education.

**RELATED PROGRAMS**

- Biological Science
- Forensic Science Technology
- Individual Studies
- Liberal Arts and Sciences: Humanities
- Liberal Arts and Sciences: Social Science
- Pre-Environmental Science and Forestry

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Required: Algebra, Geometry, and Algebra 2; Biology; Chemistry or Physics

Recommended: Both Chemistry and Physics

**OFFICE OF ACCESSIBILITY SERVICES**

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
This transfer program emphasizes course work in the social and behavioral sciences and in the liberal arts. By careful selection of electives, you will be well placed to enter baccalaureate programs at the third-year level with all your general education requirements met.

**ADVANTAGES**

- Students have the benefit of small classes taught by expert faculty who take an interest in each student’s success, and are advised by faculty within their concentration area.
- Students interested in education, criminal justice, psychology, sociology, history, or political science may enroll in advanced courses at Alfred University through cross-registration at no extra cost.

**PROGRAM STUDENT LEARNING OUTCOMES**

- Apply critical thinking skills to the analysis of topical issues in the social sciences.
- Perform the basic operations of personal computer use, as well as employ basic research techniques to locate, evaluate, and synthesize information from a variety of sources.
- Communicate effectively and appropriately in oral and written forms.
- Discuss the social, psychological, and historical influences on human behavior.
- Identify the steps of the scientific method and discuss the research methods employed by social scientists.
- Recognize the effects of globalization.
- Identify the terminology related to theories of and research in the social sciences.

**DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS**

Alfred State liberal arts and sciences: social science graduates may enter directly into either the interdisciplinary studies BTech or the technology management BBA degree program.

**CONTINUING EDUCATION OPPORTUNITIES**

Graduates are qualified to enter baccalaureate programs in a variety of academic disciplines such as psychology, sociology, anthropology, history, and political science, as well as professional fields such as early childhood/childhood education, adolescent education, criminal justice, pre-law, human services management, and business administration. Among the colleges to which recent graduates have successfully transferred are Alfred University, University of Buffalo, Cornell University, SUNY Cortland, SUNY Fredonia, SUNY Geneseo, and St. Bonaventure University.

**EMPLOYMENT STATISTICS**

Employment and continuing education rate of 100 percent – 0 percent are employed; 100 percent continued their education.

**RELATED PROGRAMS**

- Criminal Justice
- Human Services
- Human Services Management
- Individual Studies
- Interdisciplinary Studies
- Liberal Arts and Sciences: Adolescent Education (Teacher Education Transfer)
- Liberal Arts and Sciences: Humanities
- Liberal Arts and Sciences: Math and Science

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Required: Algebra

Recommended: Geometry, Biology

**OFFICE OF ACCESSIBILITY SERVICES**

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

**LIBERAL ARTS AND SCIENCES: AA DEGREE - TYPICAL FOUR-SEMESTER PROGRAM**

**First**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COMP 1503</td>
<td>Freshman Composition</td>
</tr>
<tr>
<td>PSYC 1013</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOCI 1163</td>
<td>General Sociology</td>
</tr>
<tr>
<td>MATH xxx3</td>
<td>Gen Ed Math Elective</td>
</tr>
<tr>
<td>HPED xxx1</td>
<td>Phys Ed Elective</td>
</tr>
<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
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</tbody>
</table>

16

**Second**

<table>
<thead>
<tr>
<th>Course</th>
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<tr>
<td>PSYC 1023</td>
<td>Human Development</td>
</tr>
<tr>
<td>LITR 2603</td>
<td>Introduction to Literature</td>
</tr>
<tr>
<td>SOCI xxx3</td>
<td>Sociology Elective</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>Open Elective</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>Gen Ed American</td>
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<tr>
<td>XXXX xxx3</td>
<td>History Elective</td>
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**Third**

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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>SOCI 1183</td>
<td>Contemporary Social Problems</td>
</tr>
<tr>
<td>PSYC xxx3</td>
<td>Psychology Elective</td>
</tr>
<tr>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
</tr>
<tr>
<td>XXXX xxxx</td>
<td>Natural Science Elective</td>
</tr>
<tr>
<td>XXXX xxxx</td>
<td>Applied Open Elective</td>
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</table>

15-16

**Fourth**

<table>
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<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>HIST 1113</td>
<td>Hist of West Civil Since 1648</td>
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<tr>
<td>XXXX xxxx</td>
<td>Natural Science Elective</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>Open Elective</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>Open Elective</td>
</tr>
<tr>
<td>SOCI 1223</td>
<td>Power, Privilege, &amp; Difference</td>
</tr>
</tbody>
</table>

15-16

Also required: One credit hour of physical education.

**GRADUATION REQUIREMENTS**

- Good academic standing (2.0 cumulative GPA) or higher
- Successful completion of all courses in the prescribed four-semester plan
- Submission of the college’s degree application form
The certificate program in magnetic resonance imaging (MRI) is an upper-level, online program that will produce graduates, who are capable of working under the supervision of a physician, and who are proficient in the application of magnetic resonance imaging equipment and techniques to gather critical radiologic data to enable the diagnosis of a variety of conditions and diseases.

The program targets the acquisition of specialized MRI certification by place-bound college graduates currently employed in the medical field as licensed radiological technologists. It will consist of 15 credits total, delivered online, over a minimum of two academic semesters.

The curriculum will include: Instruction in pathologic data recording; magnetic resonance imaging data processing; magnetic resonance imaging equipment operation; and professional standards and ethics. Students in the program will complete didactic courses online, as well as clinical rotations at designated hospitals and imaging centers.

**ADVANTAGES**

The MRI certificate program targets existing radiologic technologists who wish to expand and diversify their clinical skills within the healthcare market place. With the exception of the clinical requirement, the program is designed to be an online experience.

**PROGRAM STUDENT LEARNING OUTCOMES**

Graduates of the magnetic resonance imaging (MRI) will be able to:

- Demonstrate correct positioning skills.
- Select proper technical factors.
- Utilize appropriate radiation protection techniques.
- Exhibit patient-centered skills.
- Critique images to determine diagnostic quality.
- Display proper work ethics.
- Adapt standard procedures for non-routine patients.
- Apply written communication skills to the construction of documents of record that are established professional guidelines.
- Apply oral communication skills to the explanation of ideas and scientific terminology.
- Using technological resources effectively and appropriately, synthesize theory and concepts from the liberal education domain and other professions into MRI.
- Upon successful completion of the program, students will be eligible to sit for the national certification examination of the American Registry of Radiologic Technologists (ARRT).

**CONTINUING EDUCATION OPPORTUNITIES**

Students may transfer directly into one of our own BS or BTech degree programs or to another college.

**EMPLOYMENT STATISTICS**

Employment of magnetic resonance imaging employment statistics not available for this new program

**RELATED PROGRAMS**

- Health Sciences
- Interdisciplinary Studies
- Healthcare Management

**ENTRANCE REQUIREMENTS/RECOMMENDATIONS**

Required: Associate degree in radiologic technology from an accredited program or certificate of completion from JRCERT program. Must provide proof of ARRT certification.

**OFFICE OF ACCESSIBILITY SERVICES**

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

**REQUIRED EQUIPMENT**

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops).

**MAGNETIC RESONANCE IMAGING - CERTIFICATE**

**TWO-SEMESTER PROGRAM**

<table>
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<tr>
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<tr>
<td>IMSC</td>
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<tr>
<td>IMSC</td>
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<tr>
<td>IMSC</td>
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<tr>
<td>IMSC</td>
<td>5603</td>
</tr>
<tr>
<td>IMSC</td>
<td>6303</td>
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</tbody>
</table>

**GRADUATION REQUIREMENTS**

- 16 total semester credit hours
- 2.0 minimum cumulative grade point average
- Approval of department faculty
MARKETING

AAS DEGREE – CODE #0633

Susan Gorman, Program Coordinator
Email address: gormansf@alfredstate.edu

The American Marketing Association defines marketing as “the process of planning and executing the conception, promotion, and distribution of ideas, goods, and services to create exchanges that satisfy individual and organizational objectives.” Marketing is a fast-moving, diverse field that includes the numerous business activities required to satisfy the needs of both the consumer and the industrial buyer. Our program will help you develop a strong background in communication, management, accounting, advertising, consumer behavior, industrial marketing, and salesmanship. And the degree’s liberal arts foundation will provide you with a solid basis for the human relations elements in the study of marketing.

ADVANTAGES

Students gain a thorough understanding of many areas, including the design and implementation of a sales presentation, consumer-buying behavior, the use of technology in marketing communications, and much more.

PROGRAM STUDENT LEARNING OUTCOMES

- Recognize the primary theories within the principle functional areas of business.
- Demonstrate professional business communication.
- Illustrate critical thinking and effective decision-making within the principle functional areas of marketing.
- Identify ethical issues within marketing.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State marketing graduates may enter directly into the marketing BBA, the interdisciplinary studies BTech, or the business administration BBA program.

CONTINUING EDUCATION OPPORTUNITIES

Students may transfer directly into one of our four-year marketing degree program, which results in a BBA degree.

OCCUPATIONAL OPPORTUNITIES

- Consumer and industrial sales
- Service institutions
- Banks
- Advertising agencies
- Financial and credit agencies
- Insurance companies
- Recreational businesses
- Tourist bureaus

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS

Accounting
Business Administration (AS)
Business Administration (BBA)
Financial Planning
Technology Management

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra
Recommended: Geometry, Algebra 2

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering the marketing program. Laptop specifications are available at http://www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

MARKETING - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

First

MKTG 2073 Principles of Marketing 3
XXX xxx3 Gen Ed Natural Science Elective 3
CISY xxx3 Info Technology Elective 3
COMP 1503 Freshman Composition 3
MATH xxx3 Gen Ed Math Elective 3
15

Second

LITR 2503 Identity and Literature 3
BUAD 2033 Business Communication 3
MKTG 1063 Principles of Sales 3
MATH xxx3 Math Elective 3
GLST 2113 Global & Diverse Perspectives 3
15

Third

BUAD 3043 Business Law I 3
ECON 1013 Principles of Macroeconomics 3
MKTG 1033 Advertising Principles 3
BUAD 3153 Fundamentals of Management 3
ACCT 1124 Financial Accounting 4
16

Fourth

BUAD 4053 Business Law II 3
ECON 2023 Principles of Microeconomics 3
ACCT 2224 Managerial Accounting 4
MKTG 3203 Digital Marketing Fundamentals 3
BUAD 4203 Intro Personal Financial Plan 3
15

GRADUATION REQUIREMENTS

62 semester hours with a 2.0 cumulative index

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in MKTG 3153 Web Design & Marketing. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $23 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
### ADVANTAGES
- Prepares graduates for the new digital marketing environment with application of the latest technology software to design, write copy, and produce full content for web, social media, and mobile digital platforms.
- Create marketing advertising campaigns that tackle important topics of DEI, corporate sustainability, and international issues.
- Develop fundamental analytics skills using key tools such as GA4 (Google Analytics).
- Discover how digital marketing results in data analysis and performance and value to our economy.
- Learn key strategies to deliver effective marketing management communication plans.
- The BBA degree in marketing is designed to allow students to enter as first-year students or to transfer in after earning their AAS or AS in marketing or business.

### OCCUPATIONAL OPPORTUNITIES
- Marketing manager
- Website creative content developer
- Marketing analyst
- Graphic designer for digital media
- Digital media developer
- Advertising account executive
- E-commerce/business analyst
- Sales/marketing positions
- Marketing brand/design manager
- Social media manager
- Marketing project manager

### EMPLOYMENT STATISTICS
According to the Bureau of Labor Statistics occupations in advertising, promotions, and marketing managers have a growth rate of 10% whereas marketing research analysts are expected to exceed that at 19%.

### RELATED PROGRAMS
- Marketing (AAS)
- Business Administration (AS/BBA)
- Graphic and Media Design (AS/BS)
- Technical Communication and Emergent Media (BS)

### ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry
Recommended: Algebra 2

### REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. [Laptop specifications are available at www.alfredstate.edu/required-laptops.](http://www.alfredstate.edu/required-laptops)

### OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

### MARKETING - BBA DEGREE

#### TYPICAL EIGHT-SEMESTER PROGRAM

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<tbody>
<tr>
<td><strong>First</strong></td>
<td>MATH xxx3 Gen. Ed Elective 3</td>
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<td>CISY xxx3 Computer Elective 3</td>
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<td></td>
<td>COMP 1503 Freshman Composition 3</td>
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<td></td>
<td>GENB xxx3 Gen. Ed Natural Science 3</td>
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<td></td>
<td>MKTG 2073 Principles of Marketing 3</td>
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<tr>
<td><strong>Second</strong></td>
<td><strong>Fourth</strong></td>
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<tr>
<td></td>
<td>MATH xxx3 Stats I or Stat Method 4</td>
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<tr>
<td></td>
<td>BUAD 2003 Business Law I 3</td>
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<td></td>
<td>LITR 2503 Identity and Literature 3</td>
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<td>GLST 2113 Global &amp; Diverse Perspectives 3</td>
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<td></td>
<td>MKTG 1063 Principles of Sales 3</td>
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<td>BUAD 1013 Principles of Management 3</td>
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<td>BUAD 3004 Business Ethics 3</td>
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<td>ACCT 1124 Financial Accounting 4</td>
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<td>MKTG 1033 Advertising Principles 3</td>
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<td>BUAD 3004 Business Law II 3</td>
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<td>BUAD 4013 Principles of Macroeconomics 3</td>
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<td>BUAD 2003 Principles of Management 3</td>
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<td>MKTG 7203 Digital Marketing Development 3</td>
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<td>MKTG 7203 Digital Marketing Development 3</td>
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GRADUATION REQUIREMENTS

- 123 credit hours
- 7 out of 10 General Education Silos must be completed
- Cumulative overall index of a 2.0, GPA and a 2.0 required for all major courses

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in MKTG 8204 Marketing Management Capstone. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $45 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional. Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
MASONRY

AOS DEGREE – CODE #0401

Clinton Gray, Department Chair
Email address: GrayCJ@alfredstate.edu

Stephen Richard, Program Coordinator
Email address: richarsb@alfredstate.edu

Each year, more and more students and employers have asked for additional instruction and skills-based training in masonry beyond what is provided by the building construction program. Our masonry program was designed with these desires in mind. It will provide you with extensive instruction after completing the common first-year building construction curricula.

PROGRAM STUDENT LEARNING OUTCOMES

• Estimate, layout, and build various masonry and concrete flatwork systems and explain how to supervise people.
• Properly choose and implement personal and job site safety and access equipment.
• Read and interpret construction drawings and specifications.
• Communicate construction details and estimates with written documents and scale shop drawings.
• Lay out, prepare, and install various concrete flatwork, block work, stone work, and brick work.
• Use the computer to access trade-related specifications.
• Perform computer-based research and communication.
• Demonstrate effective oral communication.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State masonry graduates may enter directly into the construction supervision BTech or technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the baccalaureate program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES

• Brick or stone salesman
• Kiln mason
• Construction foreman
• Estimator
• Salesperson
• Private or commercial remodeler
• Maintenance supervisor
• Construction superintendent
• Concrete foreman
• Expediter
• Contractor
• Mason

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

RELATED PROGRAMS

Heating, Ventilation, and Air Conditioning
Building Trades: Building Construction
Electrical Construction and Maintenance Electrician

REQUIRED TOOLS/EQUIPMENT

A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENCEANCE REQUIREMENTS/RECOMMENDATIONS

Recommended: Algebra and Geometry

TECHNICAL STANDARDS

It is crucial that all student applicants in this degree program must be able to meet the following requirements, with or without reasonable accommodation. Students who are enrolled in this degree program should have the physical capabilities to be able to engage in all training, field, and laboratory environments in a safe and ethical manner. Students must be able to:

• Lift and carry up to or 50 pounds of building materials/equipment without accommodations.
• Perform and function in a safe manner in all laboratory and classroom environments and off campus job site locations.
• Effectively communicate with classmates and instructional staff using appropriate visual and/or auditory communication from a distance of 20 feet.
• Physically setup, move, or climb ladders, scaffolding, etc., unaided, using the designated safety method.
• Identify and react to safety alarms which include, but not limited to, fire alarms, back up alarms and those meant for emergencies.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
## MASONRY - AOS DEGREE

### TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>First</strong></td>
<td>BLCT 1202</td>
<td>Portable Tools &amp; Fastening Sys</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1002</td>
<td>Intro to Construction Safety</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1212</td>
<td>Foundation Systems &amp; Layout</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1222</td>
<td>Construction Math</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1232</td>
<td>Framing I</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1242</td>
<td>Framing II</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 1206</td>
<td>Building Construction Lab I</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits:** 18

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Second</strong></td>
<td>BLCT 2202</td>
<td>Insulation and Drywall</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2212</td>
<td>Exterior Building Envelope</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2232</td>
<td>Siding and Cornices</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2242</td>
<td>Wood Products &amp; Fabrication</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2252</td>
<td>Intro to Print Reading &amp; Estim</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2262</td>
<td>Masonry</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 2206</td>
<td>Building Construction Lab II</td>
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</tbody>
</table>

**Total Credits:** 18

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Third</strong></td>
<td>BLCT 3702</td>
<td>Residential Foundations</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3712</td>
<td>Building Stone</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3722</td>
<td>Fireplace &amp; Hearth</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3732</td>
<td>Masonry Restoration</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3742</td>
<td>Sustainability w/ Masonry Const</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3752</td>
<td>All Weather Masonry</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 3706</td>
<td>Masonry Construction Lab III</td>
<td>6</td>
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</tbody>
</table>

**Total Credits:** 18

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fourth</strong></td>
<td>BLCT 4502</td>
<td>ACI Concrete Testing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4512</td>
<td>Masonry Stairs &amp; Ramps</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4522</td>
<td>Hardscaping with Masonry</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4532</td>
<td>Print Reading for Masonry</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4542</td>
<td>MasonrySketching &amp; Detailing</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4552</td>
<td>Business Planning Masonry/Conc</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>BLCT 4506</td>
<td>Masonry Construction Lab IV</td>
<td>6</td>
</tr>
</tbody>
</table>

**Total Credits:** 18

### GRADUATION REQUIREMENTS

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
MECHANICAL ENGINEERING TECHNOLOGY

AAS DEGREE - CODE #0493

Aric Bryant, Department Chair and AAS Program Coordinator
Email address: bryantam@alfredstate.edu

As a mechanical engineering technology program graduate, you will be well prepared to be a mechanical engineer (B.S.) or technician (AAS) for the industry in engineering-related areas, including automotive component design; heating, ventilation, and air conditioning (HVAC); process and component design; mechanical systems design; energy systems; product development; and technical support and sales. You will be able to design, specify, test, analyze, and install mechanical systems. This broad content exposure occurs through the development of analytical skills and theory in the classroom and experience working with engines, complete energy systems, compressors, fans, pumps, controls, instrumentation, engineering graphics, and material testing.

ADVANTAGES

- “The AAS program is accredited by the Engineering Technology Accreditation Commission(s) of ABET, https://www.abet.org, under the General Criteria and the Mechanical Engineering Technology and Similarly Named Program Criteria.”

PROGRAM STUDENT LEARNING OUTCOMES (PSLOS) - AAS DEGREE

- An ability to apply the knowledge, techniques, skills, and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
- An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;
- An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
- An ability to conduct standard tests and measurements, and experiments and to analyze and interpret the results; and
- An ability to function effectively as a member of a technical team.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State mechanical engineering technology AAS graduates may enter directly into the construction supervision B.Tech, the interdisciplinary studies B.Tech, the mechanical engineering technology B.S., or the technology management B.A degree program.

CONTINUING EDUCATION OPPORTUNITIES

A cooperative/transfer program involving one year of appropriate study in either mechanical engineering technology or engineering science at selected regional community colleges, together with a second year of study at Alfred State, will result in the awarding of the AAS degree to qualified graduates.

Graduates from the associate-level mechanical engineering technology program are eligible to continue their education by enrolling in a baccalaureate degree program in mechanical or related engineering technology at Alfred State or elsewhere. Our mechanical engineering technology AAS two-year degree program is the same as the first two years of the mechanical engineering technology B.S. four-year degree program.

OCCUPATIONAL OPPORTUNITIES

<table>
<thead>
<tr>
<th>Automotive industry</th>
<th>Sales and applications</th>
</tr>
</thead>
<tbody>
<tr>
<td>HVAC &amp; R industry</td>
<td>Manufacturing</td>
</tr>
<tr>
<td>Development/design</td>
<td>Petroleum industry</td>
</tr>
<tr>
<td>Field service</td>
<td>Engineering aide</td>
</tr>
<tr>
<td>Installation supervision</td>
<td>Test technicians</td>
</tr>
<tr>
<td>Aerospace industry</td>
<td>Process equipment</td>
</tr>
<tr>
<td>Utility companies</td>
<td>MEMS and Microfabrication</td>
</tr>
<tr>
<td>Defense Industry</td>
<td>Energy Industry</td>
</tr>
</tbody>
</table>

EMployment STATISTICS

Employment and continuing education rate:

Mechanical engineering technology (AAS degree): 100 percent – 33 percent are employed; 67 percent continued their education.

RELATED PROGRAMS

Mechatronics Technology

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>AAS Degree</th>
<th>Enrollment (based on Fall census)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2022</td>
<td>25</td>
</tr>
<tr>
<td>2021</td>
<td>8</td>
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<tr>
<td>2020</td>
<td>35</td>
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Degrees Awarded

<table>
<thead>
<tr>
<th>Period</th>
<th>Number</th>
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</thead>
<tbody>
<tr>
<td>2021-2022</td>
<td>9</td>
</tr>
<tr>
<td>2020-2021</td>
<td>11</td>
</tr>
<tr>
<td>2019-2020</td>
<td>11</td>
</tr>
</tbody>
</table>

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

Courses that repeat or significantly overlap those taken in the student's associate degree program cannot be taken for upper-level credit. If the associate degree covered the subject matter in one of the required baccalaureate courses, a different course must be substituted and approved by the faculty adviser.

TECHNICAL STANDARDS

It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:

- Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
- Appropriately use hand and power tools.
- Appropriately use test, analysis, and measurement equipment
- Maintain professional integrity in the classroom and laboratory setting
- Communicate effectively, orally and written
- Perform experiments safely in a laboratory environment
- Visually decipher lab equipment digital or analogue displays
- Understand and retain information found in equipment manuals, data sheets, and lab instructions
- Comprehend written and oral directions; act on those directions safely
- Visually identify and select hardware components
- Visually distinguish computer software user interface elements
- Interpret software outputs to analyze data
- Have sufficient dexterity to finely adjust equipment settings
- Interpret complex data tables and graphs

REQUIRED EQUIPMENT

A tier 3 laptop computer is required for students entering the mechanical engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
MECHANICAL ENGINEERING TECHNOLOGY - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
<th>Second</th>
<th>Third</th>
<th>Fourth</th>
</tr>
</thead>
<tbody>
<tr>
<td>MECH 1203 Materials Science 3</td>
<td>MECH 1663 Manufacturing Processes 3</td>
<td>MECH 3334 Statics 4</td>
<td>MECH 4024 Dynamics 4</td>
</tr>
<tr>
<td>MECH 1603 Graphics/CAD 3</td>
<td>MECH 4003 Solid Modeling 3</td>
<td>MECH 3223 Mechanical Design Principles 3</td>
<td>MATH 2074 Technical Calculus II 4</td>
</tr>
<tr>
<td>COMP 1503 Freshman Composition 3</td>
<td>MECH 4523 Control System Fundamentals 3</td>
<td>MATH 1063 Technical Calculus I 3</td>
<td>MECH 1024 General Physics II 3</td>
</tr>
<tr>
<td>MATH 1033 College Algebra 3</td>
<td>PHYS 2043 College Trigonometry 3</td>
<td>PHYS 1083 Effective Speaking 3</td>
<td>SPCH 1013 General Psychology 3</td>
</tr>
<tr>
<td>GLST 2113 Global &amp; Diverse Perspectives 3</td>
<td>PHYS 1024 General Physics I 4</td>
<td>SPCH xxx3 Effective Speaking Equivalent 3</td>
<td>MATH 1063 Technical Calculus II 4</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MECH xxx4 Tech. Elective 4</td>
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<td>MECH xxx4 Tech. Elective 4</td>
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</tbody>
</table>

If not required to take MATH 1033 and MATH 2043, take LAS elective(s) to complete degree requirements.

GRADUATION REQUIREMENTS

- 63 credits
- 20 credits of liberal arts and sciences
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
- Four of 10 General Education areas

Typical Liberal Arts/Science Electives:

<table>
<thead>
<tr>
<th>HIST 1113 Hist of West Civil Since 3</th>
<th>HIST 143 Surv of American History I 3</th>
<th>HIST 2153 Surv of American History II 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIST 1143 Surv of American History I 3</td>
<td>PLSC 1053 International Relations 3</td>
<td>PSYC 1013 General Psychology 3</td>
</tr>
<tr>
<td>FNAT 1023 Introduction to Theatre 3</td>
<td>SOCI 1163 General Sociology 3</td>
<td>FNAT 1313 An History 3</td>
</tr>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>
MECHANICAL ENGINEERING TECHNOLOGY BS

BS DEGREE - CODE #0235
Dr. Matthew Lawrence, BS Program Coordinator
Email address: lawrenmj@alfredstate.edu

As a mechanical engineering technology program graduate, you will be well prepared to be a mechanical engineer, for the industry in engineering-related areas, including automotive component design; heating, ventilation, and air conditioning (HVAC); process and component design; mechanical systems design; energy systems; product development; and technical support and sales. You will be able to design, specify, test, analyze, and install mechanical systems. This broad content exposure occurs through the development of analytical skills and theory in the classroom and experience working with engines, complete energy systems, compressors, fans, pumps, controls, instrumentation, engineering graphics, and material testing.

ADVANTAGES
• The BS program is accredited by the Engineering Technology Accreditation Commission(s) of ABET, http://www.abet.org, under the General Criteria and the Mechanical Engineering Technology and Similarly Named Program Criteria.
• The Bachelor of Science in mechanical engineering technology is recognized as a “professional degree” that qualifies for experience/education credit toward Professional Engineering (PE) licensure.

Program Student Learning Outcomes (PSLOs) - BS Degree
• An ability to apply knowledge, techniques, skills, and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline;
• An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly-defined engineering problems appropriate to the discipline;
• An ability to design solutions for well-defined technical problems and assist with the engineering design of systems, components, or processes appropriate to the discipline;
• An ability to design systems, components, or processes meeting specified needs for broadly-defined engineering problems appropriate to the discipline;
• An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
• An ability to apply written, oral, and graphical communication in broadly-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature;
• An ability to conduct standard tests and measurements, and experiments and to analyze and interpret the results;
• An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes;
• An ability to function effectively as a member of a technical team; and
• An ability to function effectively as a member as well as a leader on technical teams.

OCCUPATIONAL OPPORTUNITIES
Automotive industry
HVAC & R industry
Development/design
Field service
Installation supervision
Aerospace industry
Utility companies
Defense Industry
Sales and applications
Manufacturing
Petroleum industry
Engineering aide
Process equipment
MEIMS and Microfabrication
Energy Industry

EMPLOYMENT STATISTICS
Employment and continuing education rate:
Mechanical Engineering Technology (BS degree): 97 percent – 97 percent are employed.

RELATED PROGRAMS
Mechatronics Technology

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>BS Degree</th>
<th>Enrollment (based on Fall census)</th>
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<tr>
<td>2021</td>
<td>129</td>
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<tr>
<td>2020</td>
<td>166</td>
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<tr>
<td>Degrees Awarded</td>
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<tr>
<td>2021-2022</td>
<td>30</td>
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<tr>
<td>2020-2021</td>
<td>32</td>
</tr>
<tr>
<td>2019-2020</td>
<td>35</td>
</tr>
</tbody>
</table>

CERTIFICATION OR LICENSURE
The Bachelor of Science in mechanical engineering technology is recognized as a “professional degree” that qualifies for experience/education credit toward Professional Engineering (PE) licensure. Graduates from Alfred State’s program are allowed six years of the required 12 years of education/experience credit and are eligible to take the Fundamentals of Engineering (FE), formerly called Engineer-in-Training (EIT), examination upon graduation.

Be advised that a prior felony conviction may impede a student’s ability to receive licensure.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (BS)
Required: Algebra, Geometry, Algebra 2
Recommended: Physics

Courses that repeat or significantly overlap those taken in the student’s associate degree program cannot be taken for upper-level credit. If the associate degree covered the subject matter in one of the required baccalaureate courses, a different course must be substituted and approved by the faculty adviser.

TECHNICAL STANDARDS
It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:
• Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
• Appropriately use hand and power tools.
• Appropriately use test, analysis, and measurement equipment
• Maintain professional integrity in the classroom and laboratory setting
• Communicate effectively, orally and written
• Perform experiments safely in a laboratory environment
• Visually decipher lab equipment digital or analogue displays
• Understand and retain information found in equipment manuals, data sheets, and lab instructions
• Comprehend written and oral directions; act on those directions safely
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• Visually distinguish computer software user interface elements
• Interpret software outputs to analyze data
• Have sufficient dexterity to finely adjust equipment settings
• Interpret complex data tables and graphs

REQUIRED EQUIPMENT
A tier 3 laptop computer is required for students entering the mechanical engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
# Typical Eight-Semester Program

<table>
<thead>
<tr>
<th></th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>First</td>
<td>MECH 1203</td>
<td>Materials Science</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MECH 1603</td>
<td>Graphics/CAD</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>COMP 1503</td>
<td>Freshman Composition</td>
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</tr>
<tr>
<td></td>
<td>MATH 1033</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
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<tr>
<td></td>
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<td></td>
<td>15</td>
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<tr>
<td>Second</td>
<td>MECH 1663</td>
<td>Manufacturing Processes</td>
<td>3</td>
</tr>
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<td>MECH 4003</td>
<td>Solid Modeling</td>
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<td></td>
<td>MECH 4523</td>
<td>Control System</td>
<td>3</td>
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<td></td>
<td>MATH 2043</td>
<td>College Trigonometry</td>
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<td>PHYS 1024</td>
<td>General Physics I</td>
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<tr>
<td>Third</td>
<td>MECH 3334</td>
<td>Statics</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MECH 3223</td>
<td>Mechanical Design Principles</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>MATH 1063</td>
<td>Technical Calculus I</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PHYS 2023</td>
<td>General Physics II</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>XXXX xxx3</td>
<td>Gen. Ed. Elective (per Advisement for BS Degree)</td>
<td>3</td>
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<tr>
<td></td>
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<td>16</td>
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<tr>
<td>Fourth</td>
<td>MECH 4024</td>
<td>Dynamics</td>
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</tr>
<tr>
<td></td>
<td>MATH 2074</td>
<td>Technical Calculus II</td>
<td>4</td>
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<tr>
<td></td>
<td>MECH xxx4</td>
<td>Tech. Elective</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MECH xxx4</td>
<td>Tech. Elective</td>
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**BS Degree Graduation Requirements:**

- Completion of above courses
- 126 credit hours
- 45 upper-division credit hours
- 60 credit hours of liberal arts and sciences
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
- Seven of 10 General Education areas

If not required to take MATH 1033 and MATH 2043, take LAS elective(s) to complete degree requirements.
MECHATRONICS TECHNOLOGY AAS

AAS DEGREE – CODE #2729
Timothy Cochran, Program Coordinator
Email address: cochranj@alfredstate.edu

Mechatronics interweaves electrical, mechanical, and computer engineering technology with applications in automated industrial processes and robotics. Mechatronics professionals are the technicians and engineers who design and maintain automated equipment. Technicians and engineers conduct their work in laboratories, offices or on-site at manufacturing plants. These professionals work toward the same goal of producing safe and efficient automated equipment. While technicians primarily maintain machinery, engineers are more concerned with the design and development of components and products. A mechatronics technology graduate will design, adapt, and troubleshoot electro-mechanical systems that are controlled by programmable digital devices.

ADVANTAGES
- Combines strength in electrical and mechanical engineering technology.
- Broad background to fit many possibilities and small employers.
- Learn in laboratories outfitted with excellent electronic test equipment.
- Hands-on metal and circuit board fabrication facilities.
- Program different devices to perform electromechanical tasks.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State mechatronics technology AAS graduates may enter directly into the construction supervision BTech, the interdisciplinary studies BTech, the mechatronics technology BS, or technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES
- Robotics Testing Technician
- Mechatronics Technician
- Industrial Robotics Mechanic
- Programmable Logic Controller Assembler
- Electromechanical Technician

Employment and continuing education rate of 100 percent:

Mechatronics technology (AAS degree): 100 percent – 100 percent continued their education.

RELATED PROGRAMS
Computer Engineering Technology
Electrical Engineering Technology
Mechanical Engineering Technology

ENROLLMENT AND GRADUATION DATA

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ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Applicants for the mechatronics technology program must possess a recognized high school diploma or its equivalent. Specific high school course requirements and recommendations are:

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

TECHNICAL STANDARDS

It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:

- Maintain ethical standards as defined by professional societies such as ASME and IEEE (non-exhaustive list)
- Appropriately use hand and power tools.

- Appropriately use test, analysis, and measurement equipment
- Maintain professional integrity in the classroom and laboratory setting
- Communicate effectively, orally and written
- Perform experiments safely in a laboratory environment
- Visually decipher lab equipment digital or analogue displays
- Understand and retain information found in equipment manuals, data sheets, and lab instructions
- Comprehend written and oral directions; act on those directions safely
- Visually identify and select hardware components
- Visually distinguish computer software user interface elements
- Interpret software outputs to analyze data
- Have sufficient dexterity to finely adjust equipment settings
- Interpret complex data tables and graphs

REQUIRED EQUIPMENT

A tier 3 laptop computer is required for students entering the mechatronics technology program. Laptop specifications are available at www.alfredstate.edu/recommended-laptops. Some courses may require specialized tools and/or electronic components.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

MECHATRONICS TECHNOLOGY AAS

TYPICAL FOUR-SEMESTER PROGRAM

- First Semester
  - ELET 1133 Digital Logic
  - ELET 1111 Digital Logic Laboratory
  - COMP 1503 Freshman Composition
  - MATH 1033 College Algebra
  - GLST 2113 Global & Diverse Perspectives
  - ELET 1202 intro to Electrical Eng Tech
  - ELET 1001 Seminar

- Second Semester
  - MECH 4003 Solid Modeling
  - ELET 1142 Electronic Fabrication
  - MATH 2043 College Trigonometry
  - PHYS 1024 General Physics I
  - MCET 2423 Circuits Fundamentals
  - MCET 2461 Circuits Fundamentals Lab

- Third Semester
  - ELET 2103 Electronics Theory I
  - ELET 2151 Electronics Laboratory I
  - MECH 3334 Statics
  - MECH 2143 Embedded Controller Fundamts
  - MATH 1063 Technical Calculus I
  - XXXX xxx3 Technical Elective

- Fourth Semester
  - PHYS 2023 General Physics II
  - XXXX 2074 Technical Calculus II
  - SPCH 1083 Effective Speaking
  - SPCH xxx3 Approved Gen Ed Equivalent

If not required to take math due to placement scores, take LAS electives to complete degree requirements of LAS credits.

ASSOCIATE DEGREE GRADUATION REQUIREMENTS

- 62 semester credit hours
- Minimum of 20 credit hours of liberal arts and sciences
- Four of 10 SUNY General Education categories
- 2.0 cumulative grade point average and a grade of "C" or better in the core courses
- Approval of department faculty
MECHATRONICS TECHNOLOGY BS

BS DEGREE - CODE #2882

Timothy Cochran, Program Coordinator
Email address: cochran@alfredstate.edu

Mechatronics interweaves electrical, mechanical, and computer engineering technology with applications in automated industrial processes and robotics. Mechatronics professionals are the technicians and engineers who design and maintain automated equipment. Engineers and technicans conduct their work in laboratories, offices or on-site at manufacturing plants. These professionals work toward the same goal of producing safe and efficient automated equipment. While technicans primarily maintain machinery, engineers are more concerned with the design and development of components and products. A mechatronics technology graduate will design, adapt, and troubleshoot electro-mechanical systems that are controlled by programmable digital devices.

ADVANTAGES
• Combines strength in electrical and mechanical engineering technology.
• Broad background to fit many possibilities and small employers.
• Learn in laboratories outfitted with excellent electronic test equipment.
• Hands-on metal and circuit board fabrication facilities.
• Program different devices to perform electromechanical tasks.

OCCUPATIONAL OPPORTUNITIES
• Robotics Testing Technician
• Mechatronics Technician
• Industrial Robotics Mechanic
• Programmable Logic Controller Assembler
• Electromechanical Technician

Employment and continuing education rate of 100 percent:

Mechatronics technology (BS degree): 100 percent – 97 percent are employed; 3 percent continued their education.

RELATED PROGRAMS
Computer Engineering Technology
Electrical Engineering Technology
Mechanical Engineering Technology

ENROLLMENT AND GRADUATION DATA

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ENTRANCE REQUIREMENTS/RECOMMENDATIONS (BS)
Required: Algebra, Geometry, Algebra 2.
Recommended: Physics

TECHNICAL STANDARDS
It is essential that students are able to fully participate, with or without a reasonable accommodation, in engineering technology lab and test procedures. Engineering technology students should be able to:
• Have sufficient dexterity to finely adjust equipment settings
• Interpret complex data tables and graphs

REQUIRED EQUIPMENT
A tier 3 laptop computer is required for students entering the mechatronics technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses may require specialized tools and/or electronic components.

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Mechatronics Technology - BS Degree

TYPICAL EIGHT-SEMESTER PROGRAM

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If not required to take math due to placement scores, take LAS electives to complete degree requirements of LAS credits.

**BS DEGREE GRADUATION REQUIREMENTS**

- Completion of above courses
- 125 credit hours
- 52 upper-division credit hours
- 60 credit hours of liberal arts and sciences
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average
- Approval of department faculty
- Seven of 10 General Education areas
MOTORSPORTS TECHNOLOGY
AOS DEGREE - CODE #1619
Jeffrey Stevens, Department Chair and Program Coordinator
Email address: stevenjs@alfredstate.edu

This specialization includes 1,800 hours of practical experience and classroom training designed to prepare you for the exciting, fast-paced motorsports field. Our high-tech program includes brake systems, alignment procedures, electronic controls, engine overhaul, and transmission overhaul. Ever dream of learning how to work on real race vehicles alongside industry experts? A major component of our curriculum involves the fabrication and set-up of various types of these incredible machines.

ADVANTAGES
• Students may take Automotive Service Excellence (ASE) certification exams.
• First-year courses are certified by NATEF (National Automotive Technicians Educational Foundation, Inc.).
• Students successfully completing the motorsports technology program may return for a third year (senior year) in the automotive service technician program and earn a second associate degree.

PROGRAM STUDENT LEARNING OUTCOMES
• Demonstrate a focused, coherent, organized written report.
• Perform mathematic calculations required for entry-level automotive employment.
• Demonstrate a functional ability to read and retain/apply written instructions and specifications relevant to their work environment.
• Demonstrate the ability to describe operation of, diagnose, and repair race automotive drive train systems.
• Demonstrate the ability to describe operation of, diagnose, and repair race engines.
• Demonstrate the ability to describe operation of, diagnose, and repair race automotive steering, brakes, and suspension systems.
• Demonstrate the ability to fabricate materials required to build and maintain race vehicle chassis, bodies, and components.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State motorsports technology graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
• Chassis specialist
• High performance motorsport technician
• Crew foreman
• Pit crew member
• Engine builder
• Transmission builder

EMPLOYMENT STATISTICS
Employment and continuing education rate of 83 percent – 83 percent are employed.

RELATED PROGRAMS
Autobody Repair
Automotive Service Technician
Mechanical Engineering Technology
Welding Technology

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/admissions/accepted-students/required-tools-supplies.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: Algebra

TECHNICAL STANDARDS
It is essential that students in this degree program are able to participate fully and safely, with or without reasonable accommodation, in all classroom and laboratory experiences required for completion of the program. Students in this degree program should be able to:
1. Lift 50 pounds to industry standard automotive lift height
2. Effectively communicate with a person six (6) to ten (10) feet away.
3. Visually decipher small images on a monitor or digital display.
4. Distinguish sounds associated with mechanical failures.
5. Comprehend written information found in service repair resources.
6. Possess a valid motor vehicle driver’s license.
7. Function in a safe manner, not placing themselves, faculty, staff, other students, or property in jeopardy.
8. Appropriately and safely use standard laboratory equipment, materials, and instrumentation to include possession of fine motor skills and mobility.

CERTIFICATION OR LICENSURE
Students may take Automotive Service Excellence (ASE) certification exams.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

MOTORSPORTS TECHNOLOGY - AOS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First</th>
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<tbody>
<tr>
<td>AUTO 1109</td>
<td>Brakes, Steering &amp; Suspend Sys</td>
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<tr>
<td>AUTO 1169</td>
<td>Auto Electric, Fuel &amp; Emission</td>
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| 9 |
| 18 |

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<tr>
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<tbody>
<tr>
<td>AUTO 3409</td>
<td>Engine Service</td>
</tr>
<tr>
<td>AUTO 4449</td>
<td>Drive Train Service</td>
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| 9 |
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<tbody>
<tr>
<td>AUTO 3506</td>
<td>Introduction to Motorsports</td>
</tr>
<tr>
<td>AUTO 3545</td>
<td>Motorsport Fabrication I</td>
</tr>
<tr>
<td>AUTO 3514</td>
<td>Racing Suspension Dynamics</td>
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<tr>
<td>AUTO 3535</td>
<td>Hgh Prfmnce Engine Building</td>
</tr>
<tr>
<td>AUTO 3544</td>
<td>Motorsports Aerodynamics</td>
</tr>
<tr>
<td>AUTO 3534</td>
<td>Hgh Prfmnce Sterng/ Bks/Chassis</td>
</tr>
<tr>
<td>AUTO 3524</td>
<td>Hgh Prfmnce Tune-up/ Electrics</td>
</tr>
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| 4 |

| 17 |

GRADUATION REQUIREMENTS
A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative grade point average of 2.0 in major courses.
NURSING

AAS DEGREE - CODE #0622

Jody Blankenship, Department Chair
Email address: NursingDepartment@alfredstate.edu

The nursing AAS program will prepare you to become a registered nurse — one of the fastest-growing fields in the country. Courses are sequential and progress from simple to more complex situations, with specialized content in obstetrics, mental health, and pediatric nursing. Learning is enhanced through the use of skill practice for a hands-on approach to gain expertise.

During the first year, there is a seven-hour per week clinical experience. During the second year, the clinical experience increases in time and complexity. Simulation is incorporated into the laboratory experience.

Clinical experience, an essential part of each nursing course, further enables students to gain technical competence to apply theoretical knowledge with practice. Clinical experiences are gained through a variety of health care facilities.

ADVANTAGES
• The associate degree in nursing (AAS) is currently being offered in different educational pathways:
  o Traditional two-year program (AAS)
  o Dual-degree format (AAS to BS in Nursing)
• Graduates of the AAS degree may directly enroll in the RN-BS in Nursing program after filling out the “Joint Intent to Enroll” form.
• Graduates of the AAS degree are eligible to apply for licensure as a registered nurse.

FACILITIES
Facilities used for clinical experiences may include: Cuba Memorial Hospital, Elderwood, Guthrie Healthcare Hospital, Highland Park Rehabilitation & Nursing Center, Jones Memorial Hospital, Noyes Memorial Hospital, Olean General Hospital, St. James Hospital, Unity Hospital, Wyoming County Community Hospital, Hornell Gardens, as well as other area facilities and community sites.

PROGRAM STUDENT LEARNING OUTCOMES
• Patient-centered care — Acquires self-empowerment to provide holistic care to a diverse population while providing health education using learner-centered focused principles.
• Teamwork and collaboration – Demonstrates accountability and effective interpersonal relationships with clients and members of the health care team, and works collaboratively in professional practice.
• Evidence-based practice – Implements evidence-based practice to promote a caring environment that ensures client’s safety, comfort, dignity, and self-esteem consistent with his/her developmental stage in an effective and efficient manner.
• Quality improvement – Demonstrates responsibility for continued learning and further growth.
• Safety – Manages care for clients while evaluating own performance to improve professional practice, quality of care, and safety in a timely and cost-effective manner.
• Informatics – Applies technology and information management skills to retrieve data, communicate, support decision making, and submit information.

Reference: Quality and Safety Education for Nurses, 2019

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State nursing graduates may enter directly into either the healthcare management BTech, the interdisciplinary studies BTech, the BS in Nursing, or the technology management BBA degree program.

PROFESSIONAL OPPORTUNITIES
• Ambulatory settings
• Health insurance providers
• Hospitals
• Long-term care facilities
• Schools
• Clinics
• Home health care
• Industry
• Physician offices
• Visiting nurses’ agencies

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent - 60 percent are employed; 40 percent continued their education.

NCLEX-RN FIRST-TIME CANDIDATE PASS RATE

<table>
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<tr>
<th>Year</th>
<th>Pass Rate 2019</th>
<th>Pass Rate 2020</th>
<th>Pass Rate 2021</th>
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</thead>
<tbody>
<tr>
<td>Alfred State College</td>
<td>82.8%</td>
<td>81.8%</td>
<td>70.69%</td>
</tr>
<tr>
<td>New York State</td>
<td>86.4%</td>
<td>83.17%</td>
<td>76.97%</td>
</tr>
<tr>
<td>National Average</td>
<td>86.0%</td>
<td>86.56%</td>
<td>83.76%</td>
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STUDENT COMPLETION OF THE DUAL DEGREE NURSING PROGRAM

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<thead>
<tr>
<th>Program</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
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</thead>
<tbody>
<tr>
<td>AAS Program</td>
<td>73% (11/15)</td>
<td>73% (11/15)</td>
<td>81% (17/21)</td>
</tr>
</tbody>
</table>

**students who complete the program within 1.5 times of the length of program

RELATED PROGRAMS

Biological Science
Diagnostic Medical Sonography
Health Information Technology
Health Science
Human Services
Liberal Arts and Sciences: Humanities

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

• Required: Algebra, Biology, and Chemistry
• Recommended: 980 combined reading/writing and math SAT score or composite ACT score of 19
• Required: It is essential that students are able to fully participate, with or without a reasonable accommodation, in clinical caring for clients as assigned. Nursing students should be able to:
  o Ambulate in a sufficient manner in order to appropriately and safely perform patient care.
  o Lift at least 35 pounds.
  o Function in a safe manner, not placing clients in jeopardy.
  o Maintain confidentiality in regard to professional practice.
  o Appropriately use standard medical equipment.
  o Interpret data from electronic devices in a health care setting for the purpose of client care.
  o Maintain professional composure at all times.
  o Communicate effectively orally and in writing.

LICENSURE

Graduates are eligible to apply for licensure in any state as well as sit for the NCLEX-RN. Completion of the AAS nursing program does not assure licensure as a registered nurse. Graduates of this AAS nursing program meet the education requirements for admittance to the NCLEX-RN licensure exam; however, there is a requirement that the applicant be of “good moral character” and a fee must be paid for the test and license.

To be licensed and registered as a RN in New York State, you must:
• Be of good moral character
• Be at least eighteen years of age
• Graduate from a nursing education program acceptable to NYSED
• Pass the National Council Licensure Examination for Registered Nurses (NCLEX-RN) or another license examination acceptable to NYSED
• Apply for a RN License with NYSED

On the application for New York State licensure, the applicant is required to truthfully answer the following questions:
• Have you ever been found guilty after trial, or pleaded guilty, no contest, or nolo contendere to a crime (felony or misdemeanor) in any court?
• Are criminal charges pending against you in any court?
Laptop specifications are available at www.alfredstate.edu/required-laptops. Further system requirements will be sent via a downloading program. Software must have the capability to turn on from a handheld pocket-sized electronic device (i.e., smartphone) for Microsoft Office; internet access is required. In addition, a tier 1 laptop computer is required for students entering this degree program, as it will be needed for on-campus exams and other educational purposes.

**REQUIRED EQUIPMENT**

A tier 1 laptop computer is required for students entering this degree program, as it will be needed for on-campus exams and other educational purposes. Microsoft Office is required; internet access is required. In addition, a handheld pocket-sized electronic device is required (i.e., smart phone) for downloading program software. The device must have the capability to turn off both phone and camera. Further system requirements will be sent via a newsletter in early June to newly admitted, transfer, and continuing students. Laptop specifications are available at www.alfredstate.edu/required-laptops.

### ACCREDITATION

- The AAS nursing program at Alfred State College located in Alfred, NY is accredited by the Accreditation Commission for Education in Nursing (ACEN) 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 phone 404-975-5000.
- The most recent accreditation decision made by the ACEN Board of Commissioners for the AAS nursing program is Continuing Accreditation.
- View the public information disclosed by the ACEN regarding this program at http://www.acenursing.com/accreditedprograms/programsearch.htm.
- The AAS nursing program is registered by the New York State Education Department.

### GENERAL NOTES:

A zero-tolerance for incivility is in effect at Alfred State nursing. Furthermore, if a student's behavior compromises or threatens the health or safety of others, including clients, peers, faculty, and staff, the student may be denied enrollment or continuation in the program. A policy regarding chemical impairment is publicized to enrolled nursing students.

Background checks may be required by affiliating agencies. Background checks will be at the expense of the student. Any costs associated with clinical work would be the responsibility of the student.

Nursing students are required to provide documentation of an annual two-step PPD and a self-report health assessment. Hepatitis B vaccine, flu vaccine, Covid vaccinations, and other requirements may be specified by affiliating agencies. CPR certification is required before taking Nursing I and must remain active throughout the nursing program.

Specific policies related to progression in the nursing program and readmission to the nursing program are publicized to enrolled nursing students in the Nursing Student Handbook.

### RN TRANSFER PROGRAM

Alfred State students may transfer to most New York State baccalaureate programs consistent with NYS transfer agreement.

### OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

### REGISTERED NURSE PROGRAM NURSING - AAS DEGREE

#### TYPICAL TWO-YEAR PROGRAM

**First**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>COMP 1503</td>
<td>Freshman Composition</td>
</tr>
<tr>
<td>BIOL 1404</td>
<td>Anatomy &amp; Physiology I</td>
</tr>
<tr>
<td>NURS 1055</td>
<td>Nursing I</td>
</tr>
<tr>
<td>NURS 1133</td>
<td>Nursing 1 Lab</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Min. of "C+" is required in BIOL 1404 to progress
Min. of a "C" grade is required for Nursing I

**Second**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>PSYC 1013</td>
<td>General Psychology</td>
</tr>
<tr>
<td>BIOL 2504</td>
<td>Anatomy &amp; Physiology II</td>
</tr>
<tr>
<td>NURS 2055</td>
<td>Nursing II</td>
</tr>
<tr>
<td>NURS 2133</td>
<td>Nursing II Lab</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

Min. of "C+" is required in BIOL 2504 to progress
Min. of a "C" grade is required for Nursing II

**Third**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td>BIOL 4254</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>NURS 3055</td>
<td>Nursing III</td>
</tr>
<tr>
<td>NURS 3155</td>
<td>Nursing III Lab</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
</tr>
</tbody>
</table>

BIOL 4254 is a prerequisite for NURS IV. A min. grade of "C+" is required for BIOL 4254.

Min. of a "C+" grade is required for NURS 4055 and NURS 4155.

**Fourth**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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<tbody>
<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
</tr>
<tr>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
</tr>
<tr>
<td>NURS 4055</td>
<td>Nursing IV</td>
</tr>
<tr>
<td>NURS 4155</td>
<td>Nursing IV Lab</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>16</strong></td>
</tr>
</tbody>
</table>

Min. of a "C+" grade is required for Nursing IV

Be advised that a prior felony conviction may impede a student's ability to participate in a required professional practice experience.

**See our nursing website for full disclosure documentation at www.alfredstate.edu/nursing**

### GRADUATION REQUIREMENTS

- 63 credit hours
- 36 credits of nursing (Nursing I, II, III, IV)
- 12 credits of natural science (Anatomy & Physiology I and II, Microbiology)
- 6 credits of social science (General Psychology, Human Development)
- 6 credits of Humanities (Freshman Composition, Effective Speaking)
- Three credits of other world civilization (Global Perspectives)
- A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative GPA of 2.0 which is equivalent to a C average.
NURSING

BS IN NURSING DEGREE - CODE #0291

Jody Blankenship, Department Chair
Email address: NursingDepartment@alfredstate.edu

The demand for nurses with bachelor's degrees or higher has never been greater. To maintain licensure as a registered nurse (RN) in New York State, RNs must have attained a baccalaureate degree or higher in nursing within 10 years of initial licensure. To meet those needs, Alfred State offers a Bachelor of Science degree in nursing (BS in Nursing). This upper-division completion program will enhance your knowledge and skills foundation to function more autonomously and interdependently in diverse, complex, and dynamic health care environments.

The program will serve as a solid academic foundation for advanced study in nursing. The BS in Nursing program is offered in an online format, providing flexibility and learning style choices for the adult student and working professional.

The graduate will be prepared to assume a leadership role in the health care delivery system using gained experience, research, and technology for evidence-based decision making. The baccalaureate graduate will be able to deliver, design, and coordinate care for a variety of individuals from diverse backgrounds to improve client outcomes.

The core foundation nursing courses are arranged to increase the student's knowledge base and skill level for the expanded role as a baccalaureate-prepared practitioner.

A professional capstone course (NURS 8013) is required as a culminating educational experience of the BS in Nursing program. To further advance the student's knowledge base and skill level, there are clinical components integrated within the program.

Meeting the needs of registered nurses seeking a bachelor's degree, the BS in Nursing program is offered primarily as an online format. This provides flexibility and learning style choices for the adult student and working professional.

A computer with internet access, webcam, and Microsoft Office is required for the nursing program. Written work must be submitted in Word and APA format.

Students are permitted to repeat an upper-level (5000 or higher) nursing core course one time only. If a student is unsuccessful in the same nursing course twice, they will be unable to progress in the nursing program.

Bachelor-level students are expected to write at a BS level proficiency, using APA format. Writing proficiency, grammar, spelling, and APA formatting are all essential elements of every nursing course. Failure to write at a BS level may result in failure of nursing course work.

It is strongly recommended that clinical site affiliations are submitted at least two months prior to taking the course to ensure a clinical site agreement is in place. Clinical components will be required in the following courses:

- NURS 6003 - Nursing Leadership and Management
- NURS 6413 - Health Assessment and Promotion Across the Lifespan
- NURS 7004 - Population Focused Care in the Community

ADVANTAGES

The BS in nursing program can be taken entirely online, allowing the student to progress at their own pace. Articulation agreements are in place between multiple regional community colleges and Alfred State for the BS in Nursing program.

STUDENT ACHIEVEMENT DATA

The completion rate for the May 2019 graduates is 76 percent.

PROGRAM STUDENT LEARNING OUTCOMES

- Integrate leadership principles to design, manage, and coordinate care for individuals and populations in complex and changing health care delivery systems.
- Appraise issues related to health promotion and disease prevention to promote healthy life for individuals, families, groups, and populations across the life span, with attention to rural communities, maintenance, and end of life.
- Apply knowledge of informatics to foster inter- and intra-professional communication and collaboration in the delivery of safe, quality health care.
- Create a philosophy as a foundation for commitment to the profession, advancement, and lifelong learning.
- Use a variety of methods to communicate in written and oral form throughout the program.

PROFESSIONAL OPPORTUNITIES

Leadership, management, research, education, and practice opportunities exist in a variety of health care settings and institutions throughout New York State and the US.

EARN A DOCTOR OF NURSING PRACTICE (DNP) WITHOUT LEAVING ALFRED

Once you've gained a BS in Nursing at ASC, we offer a dynamic pathway to advance your career. Alfred State is a partner with the University at Buffalo's Post-BS to DNP Program. Doctoral studies are mostly online with limited face-to-face requirements on the Alfred campus and in surrounding hospitals. ASC proudly announced this partnership that increases access to healthcare in rural areas.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed; 0 percent are continuing their education.

ADMISSIONS REQUIREMENTS

Admission to the BS in Nursing program requires graduation from an accredited or state-approved associate degree in nursing or certified diploma program in nursing, and plans to secure licensure as a registered professional nurse by completion of the first semester in the program. The minimum GPA requirement for admission is 2.00. The applicant's associate degree course work must include the following:

- A minimum of 30 credits of nursing
- A minimum of 24 hours of liberal arts and sciences credit
- A minimum of three of 10 SUNY General Education categories
- Eight credits of anatomy and physiology (taken at the same school in a classroom setting)
- A lab course in microbiology in the classroom
- A minimum of three SUNY General Education categories
- Course work in composition, global studies or other world civilization, and psychology

It is essential that students are able to fully participate, with or without a reasonable accommodation, in clinical caring for clients as assigned. Nursing students should be able to:

- Function in a safe manner, not placing clients in jeopardy
- Maintain confidentiality in regard to professional practice
- Appropriately use standard medical equipment
- Interpret data from electronic devices in health care setting for the purpose of client care
- Maintain professional composure at all times
- Communicate effectively, orally and in writing

Students must have an active, unencumbered state license to progress into the second semester of BS in Nursing courses.

ACCREDITATION/CERTIFICATION

- Alfred State College is accredited by the Middle States Commission on Higher Education (MSCHE), 3624 Market St., Philadelphia, PA 19104; 215-662-5606, http://www.msche.org. The MSCHE is an institutional accrediting agency recognized by the U.S. Secretary of Education and the Council for Higher Education Accreditation (CHEA). Effective February 29, 2022 the Alfred State College BS in Nursing program is a
candidate for initial accreditation by the Accreditation Commission for Education in Nursing. The candidacy status expires on February 28, 2024. Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 (404) 975-5000 http://www.acenursing.com/candidates/candidacy.asp. Note: Upon granting of initial accreditation by the ACEN Board of Commissioners, the effective date of initial accreditation is the date on which the nursing program was approved by the ACEN as a candidate program that concluded in the Board of Commissioners granting initial accreditation.

- The baccalaureate degree program in nursing at The State University of New York College of Technology at Alfred is accredited by the Accreditation Commission for Education in Nursing (ACEN) 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326. Phone 404-975-5000

- The BS in Nursing program is registered by the NYS Education Department.

General Notes: A zero tolerance for incivility is in effect at Alfred State nursing. Furthermore, if a student's behavior compromises or threatens the health or safety of others, including clients, peers, faculty, and staff, the student may be denied enrollment or continuation in the program. A policy regarding chemical impairment is publicized to enrolled nursing students. Background checks may be required by affiliating agencies. Background checks will be at the expense of the student. Any costs associated with clinical would be the responsibility of the student. Nursing students are required to provide health related documentation or other requirements to the affiliating agencies. Student are permitted to repeat an upper-level (5000 or higher) nursing core course one time only. If a student is unsuccessful in any upper-level nursing course twice, they will be unable to progress in the nursing program. Bachelor-level students are expected to write at a BS level proficiency, using APA format. Writing proficiency, grammar, spelling, and APA formatting are all essential elements of every nursing course. Failure to write at a BS level may result in failure of nursing course work.

ARTICULATION AGREEMENTS
Articulation agreements are between multiple regional community colleges and Alfred State for the BS in Nursing program.

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

NURSING - BS IN NURSING
TYPICAL TWO-YEAR UPPER-LEVEL COMPLETION PROGRAM

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<tr>
<td>NURS</td>
<td>7004*</td>
</tr>
<tr>
<td>NURS</td>
<td>8013</td>
</tr>
<tr>
<td>ANTH</td>
<td>5113</td>
</tr>
<tr>
<td>XXXX</td>
<td>xxx3</td>
</tr>
<tr>
<td>XXXX</td>
<td>xxx3</td>
</tr>
</tbody>
</table>

A minimum of a “C” grade in all upper-level nursing courses is required

Second

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 6413*</td>
<td>3</td>
<td>Health Assessment/Promotion*</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>3</td>
<td>LAS Elective - Upper Level</td>
</tr>
<tr>
<td>BIOL 6403</td>
<td>3</td>
<td>Advanced Pathophysiology</td>
</tr>
<tr>
<td>SOCI 1163</td>
<td>3</td>
<td>General Sociology</td>
</tr>
<tr>
<td>MATH 1123</td>
<td>3</td>
<td>Statistics I</td>
</tr>
<tr>
<td>MATH 2124</td>
<td>4</td>
<td>Statistical Methods &amp; Analysis</td>
</tr>
</tbody>
</table>

A minimum of a “C” grade in all upper-level nursing courses is required

Third

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 6003*</td>
<td>3</td>
<td>Nursing Leadership/Management</td>
</tr>
<tr>
<td>NURS 7003</td>
<td>3</td>
<td>Nursing Research</td>
</tr>
<tr>
<td>NURS xxx3</td>
<td>3</td>
<td>Nursing Elective - Upper</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>3</td>
<td>Liberal Arts Elective - Upper</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>3</td>
<td>GenEd (FA, FL, WC, or AH)</td>
</tr>
</tbody>
</table>

A minimum of a “C” grade in all upper-level nursing courses is required

Fourth

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 7004*</td>
<td>4</td>
<td>Population Focused Care in Com</td>
</tr>
<tr>
<td>NURS 8013</td>
<td>3</td>
<td>Professional Capstone</td>
</tr>
<tr>
<td>ANTH 5113</td>
<td>3</td>
<td>Cross-Cultural Encounters</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>3</td>
<td>Liberal Arts Elective - Upper</td>
</tr>
<tr>
<td>XXXX xxx3</td>
<td>3</td>
<td>Liberal Arts Elective - Upper</td>
</tr>
</tbody>
</table>

A minimum of a “C” grade in all upper level nursing courses is required

Be advised that a prior felony conviction may impede a student’s ability to participate in a required professional practice experience.

*Course has a 45-hour clinical immersion experience.

**See our nursing website for full disclosure documentation at www.alfredstate.edu/nursing

GRADUATION REQUIREMENTS

- 124 credit hours
- 28 credits of upper-level nursing credits (36 hours from prior AAS degree)
- Three credits of natural science (nutrition) (12 from prior AAS degree: Anatomy & Physiology I and II, Microbiology)
- Three credits of social science (General Sociology) (six from prior AAS degree: General Psychology, Human Development)
- Three credits of humanities (literature elective)
- Three credits of math (Statistics I or Statistical Methods)
- A minimum of a “C” grade in all upper-level nursing courses
- Three credits of a general education elective in American History, Western Civilization, Foreign Arts, or Foreign Language. From prior degree: Basic communication. A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative GPA of 2.0 which is equivalent to a C average.
NURSING DUAL DEGREE PROGRAM

DUAL DEGREE PROGRAM - CODE #2373

Jody Blankenship, Department Chair
Email address: NursingDepartment@alfredstate.edu

The demand for nurses with bachelor's degrees has never been greater. According to the Health and Medicine Division's (HMD) Future of Nursing: Leading Change, at a minimum, 80 percent of nurses should have at least a bachelor's degree by 2020. To maintain licensure as a registered nurse (RN) in New York State, RNs must have attained a baccalaureate degree or higher within 10 years of initial licensure. To meet this need, Alfred State now offers a dual degree.

The new dual degree nursing program is a model to meet the high demand for bachelor's degrees in nursing, while allowing the student to earn both an associate and baccalaureate degree over four years. The graduates of the associate program are eligible to sit for the NCLEX-RN exam at the end of the third year. The nursing program will prepare you to become a registered nurse- one of the fastest-growing professions in the country. Courses are sequential and progress from simple to more complex situations, with specialized content in obstetrics, mental health, and pediatrics integrated into the program. Clinical experience, an essential part of each nursing course, further enables you to gain technical competence to apply theoretical knowledge with practice.

ADVANTAGES

Both the AAS and BS in nursing programs are registered by NYS Education Department. Graduates of the AAS degree are eligible to apply for licensure as a registered nurse and sit for the NCLEX-RN (RN National Boards) in any state.

Graduates of the AAS degree are eligible to apply for licensure as a registered nurse and sit for the NCLEX-RN in any state.

The BS in nursing program can be taken entirely online, allowing the student to progress at their own pace. The BS in nursing Program is registered by the NYS Education Department.

Articulation agreements are in place between multiple regional community colleges and Alfred State for the BS in Nursing program.

FACILITIES

Facilities used for clinical experiences may include: Cuba Memorial Hospital, Elderwood, Guthrie Healthcare Hospital, Unity Hospital, FF Thompson Hospital, Highland Park Rehabilitation & Nursing Center, Jones Memorial Hospital, Noyes Memorial Hospital, Olean General Hospital, St. James Hospital, Wyoming County Community Hospital, Hornell Gardens, as well as other area facilities and community sites.

Students may be placed in day, evening, and night clinical placement, weekend and weekday rotations, and will be responsible for their own transportation.

The upper-division completion program will enhance your knowledge and skills foundation to function more autonomously and interdependently in diverse, complex, and dynamic health care environments. Moreover, the program will enhance your potential to expand your responsibilities in practice to become a leader, coordinator, and manager of care. Lastly, the program will serve as a solid academic foundation for advanced study in nursing at the graduate level. Some of the BSN core courses will begin to be offered in both an on-campus setting (for residential students), while online opportunities will be available for students not living on or near campus, providing flexibility and learning style choices for the adult student and working professional.

It is strongly recommended that clinical site affiliations are submitted at least two months prior to taking the course to ensure that a clinical site agreement is in place.

Clinical components will be required in the following courses:

- NURS 6003 - Nursing Leadership and Management
- NURS 6413 - Health Assessment and Promotion Across the Lifespan
- NURS 7004 - Population Focused Care in the Community

As a graduate of this program, you will be prepared to assume a leadership role in the health care delivery system using gained experience, research, and technology for evidence-based decision making. You will be equipped to deliver, lead, and coordinate care for a variety of individuals from diverse backgrounds to improve client outcomes.

PROGRAM STUDENT LEARNING OUTCOMES - AAS

- Patient-centered care – Acquires self-empowerment to provide holistic care to a diverse population while providing health education using learner-centered focused principles.
- Teamwork and collaboration – Demonstrates accountability and effective interpersonal relationships with clients and members of the health care team, and works collaboratively in professional practice.
- Evidence-based practice – Implements evidence-based practice to promote a caring environment that ensures client's safety, comfort, dignity, and self-esteem consistent with his/her developmental stage in an effective and efficient manner.
- Quality improvement – Demonstrates responsibility for continued learning and further growth.
- Safety – Manages care for clients while evaluating own performance to improve professional practice, quality of care, and safety in a timely and cost-effective manner.
- Informatics – Applies technology and information management skills to retrieve data, communicate, support decision making, and submit information.

Reference: Quality and Safety Education for Nurses, 2019

PROGRAM STUDENT LEARNING OUTCOMES - BS IN NURSING

- Synthesize theory and concepts from nursing, the liberal education domain, and other professions to expand knowledge.
- Create a plan to foster social justice through civic engagement.
- Apply principles of critical reflection, inquiry, and evidence-based practice to resolve nursing issues.
- Integrate leadership principles to design, manage, and coordinate care for individuals and populations in complex and changing health care delivery systems.
- Appraise issues related to health promotion and disease prevention to promote healthy life for individuals, families, groups, and populations across the lifespan, with attention to rural communities.
- Apply knowledge of informatics to foster inter- and intra-professional communication and collaboration in the delivery of safe, quality health care.
- Create a philosophy as a foundation for commitment to the profession, advancement, and lifelong learning.
- Use a variety of methods to communicate in written and oral form throughout the program.

PROFESSIONAL OPPORTUNITIES

- Hospitals
- Clinics
- Long-term care facilities
- Physician offices
- Industry
- Ambulatory settings
- Visiting nurses' agencies
- Schools
- Home health care
- Health insurance providers
- Leadership, management, research, education, and practice opportunities exist in a variety of health care settings and institutions throughout New York State and the US.

EARN A DOCTOR OF NURSING PRACTICE (DNP) WITHOUT LEAVING ALFRED

Once you’ve gained a BS in Nursing at ASC, we offer a dynamic pathway to advance your career. Alfred State is a partner with the University at Buffalo's Post-BS to DNP Program. Doctoral studies are mostly online with limited face-to-face requirements on the Alfred campus and in surrounding hospitals. ASC proudly announced this partnership that increases access to healthcare in rural areas.
NYCLEX-RN FIRST-TIME CANDIDATE PASS RATE

<table>
<thead>
<tr>
<th>Year</th>
<th>2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfred State College</td>
<td>82.8%</td>
<td>81.8%</td>
<td>70.69%</td>
</tr>
<tr>
<td>New York State</td>
<td>86.4%</td>
<td>83.17%</td>
<td>78.97%</td>
</tr>
<tr>
<td>National Average</td>
<td>86.0%</td>
<td>86.56%</td>
<td>83.76%</td>
</tr>
</tbody>
</table>

STUDENT COMPLETION OF THE DUAL DEGREE NURSING PROGRAM

<table>
<thead>
<tr>
<th>Dual Degree (AAS/BS) 2019</th>
<th>2020</th>
<th>2021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Completion Rates** NA NA</td>
<td>45% (39/87)</td>
<td>Fall 2016 Cohort tracked for 5 years. Full 1.5 times is 6 years.</td>
</tr>
</tbody>
</table>

**students who complete the program within 1.5 times of the length of program

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent - 100 percent are employed; 0 percent continued their education

Related Programs

Biological Science
Diagnostic Medical Sonography
Health Information Technology
Health Sciences
Human Services
Liberal Arts and Sciences: Humanities
Radiologic Technology

ENTRANCE REQUIREMENTS

Required: Algebra, Biology, Chemistry

Required: It is essential that students are able to fully participate, with or without a reasonable accommodation, in clinical caring for clients as assigned.

Nursing students should be able to:

- Ambulate in a sufficient manner in order to appropriately and safely perform patient care.
- Lift at least 35 pounds.
- Function in a safe manner, not placing clients in jeopardy.
- Maintain confidentiality in regard to professional practice.
- Appropriately use standard medical equipment.
- Interpret data from electronic devices in a health care setting for the purpose of client care.
- Maintain professional composure at all times.
- Communicate effectively orally and in writing.

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program, as it will be needed for on-campus exams and other educational purposes. Microsoft Office is required; internet access is required. In addition, a handheld pocket-sized electronic device is required (i.e. smart phone) for downloading program software. The device must have the capability to turn off both phone and camera. Further system requirements will be sent via a newsletter in early June to newly admitted, transfer, and continuing students. Laptop specifications are available at www.alfredstate.edu/required-laptops.

LICENSENCE

Upon completion of the AAS degree portion of the dual degree program, graduates are eligible to apply for licensure. Completion of the AAS nursing program does not assure licensure as a registered professional nurse. Graduates of this portion of the dual degree nursing program meet the education requirements for admittance to the RN licensure exam; however, there is a requirement that the applicant be of "good moral character" and a fee must be paid for the test and license.

To be a licensed and registered as an RN in New York State, you must:

- Be of good moral character
- Be at least 18 years of age
- Graduate from a nursing education program acceptable to NYSED
- Complete New York State required infection control coursework and child abuse reporting coursework

- Pass the National Council Licensure Examination for Registered Nurses (NCLEX_RN) or another license examination acceptable to NYSED
- Apply for an RN license with NYSED

On the application for New York State licensure, the applicant is required to truthfully answer the following questions:

- Have you ever been found guilty after trial, or pleaded guilty, no contest, or nolo contendere to a crime (felony or misdemeanor) in any court?
- Are criminal charges pending against you in any court?
- Has any licensing or disciplinary authority refused to issue you a license or ever revoked, annulled, canceled, accepted surrender of, suspended, placed on probation, refused to renew a professional license or certificate held by you now or previously, or ever fined, censured, reprimanded, or otherwise disciplined you?
- Are charges pending against you in any jurisdiction for any sort of professional misconduct?
- Has any hospital or licensed facility restricted or terminated your professional training, employment of privileges, or have you ever voluntarily or involuntarily resigned or withdrawn from such association to avoid imposition of such measures?

ACCREDITATION/CERTIFICATION

- The AAS nursing program at Alfred State College located in Alfred, NY is accredited by the Accreditation Commission for Education in Nursing (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 404-975-5000, www.acenursing.org
  - The most recent accreditation decision made by the ACEN Board of Commissioners for the AAS nursing program is Continuing Accreditation
  - View the public information disclosed by the ACEN regarding this program at http://www.acenursing.com/accreditedprograms/programssearch.htm
- The Alfred State College BS in nursing program is accredited by the Accreditation Commission for Education in Nursing. (ACEN), 3390 Peachtree Road NE, Suite 1400, Atlanta, GA 30326 (404) 975-5000 http://www.acenursing.com/candidates/candidacy.asp
- Both the AAS and BS in Nursing Programs are registered by the NYS Education Department.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

DUAL DEGREE PROGRAM NURSING – AAS TO BS IN NURSING DEGREE

TYPICAL FOUR-YEAR PROGRAM

For the AAS Nursing courses students must earn a "C" in Nursing I (NURS 1055 and NURS 1133) and Nursing II (NURS 2055 and NURS 2133) and a "C+" in Nursing III ((NURS 3055 and 3155) and Nursing IV (NURS 4055 and NURS 4155) to progress in the nursing program. Competency in medication clinical computation is required each semester and is tested as part of each nursing semester.

NOTE: BIOL 1404 Anatomy & Physiology I and BIOL 2504 Anatomy & Physiology II have to be completed with a "C+" and must be taken in the classroom with lab component at the same college in a face-to-face environment. Microbiology must be taken in the classroom with lab component at the same college in a face-to-face environment.
Specific policies related to progression in the nursing program and readmission to the nursing program are publicized to enrolled nursing students in the Nursing Student Handbook.

**First**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 1404</td>
<td>Anatomy &amp; Physiology I</td>
</tr>
<tr>
<td>COMP 1503</td>
<td>Freshman Composition</td>
</tr>
<tr>
<td>PSYC 1013</td>
<td>General Psychology</td>
</tr>
<tr>
<td>SOCI 1163</td>
<td>General Sociology</td>
</tr>
<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
</tr>
</tbody>
</table>

Minimum of "C+" is required in BIOL 1404 to progress. Minimum of "C" grade is required for Nursing I.

**Second**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>BIOL 2504</td>
<td>Anatomy &amp; Physiology II</td>
</tr>
<tr>
<td>LTR 3003</td>
<td>Literature Elective</td>
</tr>
<tr>
<td>PSYC 1023</td>
<td>Human Development</td>
</tr>
<tr>
<td>BIOL 1313</td>
<td>Nutrition</td>
</tr>
<tr>
<td>MATH 1123</td>
<td>Statistics I</td>
</tr>
<tr>
<td>MATH 2124</td>
<td>Statistical Methods &amp; Analysis</td>
</tr>
</tbody>
</table>

Minimum of "C+" is required in BIOL 2504 to progress. Minimum of "C" grade is required for Nursing II.

**Third**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 1055</td>
<td>Nursing 1</td>
</tr>
<tr>
<td>BIOL 4254</td>
<td>General Microbiology</td>
</tr>
<tr>
<td>ANTH 5113</td>
<td>Cross-Cultural Encounters</td>
</tr>
<tr>
<td>NURS 1133</td>
<td>Nursing 1 Lab</td>
</tr>
</tbody>
</table>

NURS 4254 is a prerequisite for NURS IV. A minimum grade of "C+" is required for BIOL 4254. Minimum of a "C+" grade is required for NURS 4055 and NURS 4155.

**Fourth**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 2055</td>
<td>Nursing II</td>
</tr>
<tr>
<td>NURS 2133</td>
<td>Nursing II Lab</td>
</tr>
<tr>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
</tr>
<tr>
<td>XXXX 3003</td>
<td>Gen Ed Elective</td>
</tr>
</tbody>
</table>

A minimum of a "C" grade is required for all upper-level nursing courses.

**Fifth**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 3055</td>
<td>Nursing III</td>
</tr>
<tr>
<td>NURS 3155</td>
<td>Nursing III Lab</td>
</tr>
<tr>
<td>NURS 8003</td>
<td>Informatics/Tech App in Health Care</td>
</tr>
<tr>
<td>NURS 5023</td>
<td>Contemporary Nursing</td>
</tr>
</tbody>
</table>

A minimum of a "C" grade is required in all upper-level nursing courses.

**Sixth**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 4055</td>
<td>Nursing IV</td>
</tr>
<tr>
<td>NURS 4155</td>
<td>Nursing IV Lab</td>
</tr>
<tr>
<td>BIOL 6403</td>
<td>Advanced Pathophysiology</td>
</tr>
<tr>
<td>NURS 6413</td>
<td>Health Assmt &amp; Promotion Across</td>
</tr>
</tbody>
</table>

A minimum of a "C" grade in all upper-level nursing courses is required.

**Seventh**

<table>
<thead>
<tr>
<th>Course</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>NURS 5003</td>
<td>Ethical Issues in Health Care</td>
</tr>
<tr>
<td>NURS 6003</td>
<td>Nursing Leadership/Management</td>
</tr>
<tr>
<td>XXXX 7003</td>
<td>Nursing Research</td>
</tr>
<tr>
<td>XXXX 3003</td>
<td>Liberal Arts Elective (Upper Level)</td>
</tr>
</tbody>
</table>

Any student wishing for more information should contact the Nursing Department.

**NURSING DUAL DEGREE PROGRAM**

A minimum of a "C" grade for all upper-level nursing courses is required.

**Eighth**

- Evidence of RN Licensure required prior to progression into NURS 7004 Population Focused Care.
- NURS 7004 Population Focused Care in Com
- NURS 8013 Professional Capstone
- NURS XXX Liberal Arts Elective (Upper Level)
- XXXX XXX Liberal Arts Elective (Upper Level)

A minimum of a "C" grade in all upper-level nursing courses is required.

*See our nursing website for full disclosure documentation at www.alfredstate.edu/nursing*

**GRADUATION REQUIREMENTS**

**AAS**

- 63 credit hours
- 36 credits of nursing (Nursing I, II, III, IV)
- 12 credits of natural science (Anatomy & Physiology I and II, Microbiology)
- 6 credits of social science (General Psychology, Human Development)
- 6 credits of humanities (Freshman Composition, Effective Speaking)
- 3 credits of other world civilization (Global Perspectives)

A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative GPA of 2.0 which is equivalent to a C average.

**BS in nursing degree credits**

- 124 credit hours
- 28 credits of upper-level nursing credits (36 hours from prior AAS degree)
- 3 credits of natural science (Nutrition) (12 from prior AAS degree: Anatomy & Physiology I and II, Microbiology)
- 3 credits of social science (General Psychology, Human Development)
- 3 credits of mathematics (Statistics I or Statistical Methods)
- 3 credits of a general education elective in American History, Western Civilization, Foreign Arts, or Foreign Language. From prior degree: Basic communication. A student must successfully complete all courses in the prescribed four-semester program and earn a minimum cumulative GPA of 2.0 which is equivalent to a C average.

Any student wishing for more information should contact the Nursing Department.
Environmental science and forestry is a diverse field requiring professionals of many specialties. That’s why we’ve designed this program to prepare you to enter into several areas—from environmental science to paper science engineering to forestry and natural resource conservation.

ADVANTAGES

- This program prepares graduates for the Bachelor of Science degree program in environmental science and/or the associate degree in forestry and natural resource conservation from the SUNY College of Environmental Science and Forestry (ESF).
- After the first two years of study at Alfred State, transfers to ESF may apply to a variety of programs. These include: the biological sciences (botany and forestry pathology, entomology, zoology, wildlife biology, and pest management); chemistry (natural and synthetic polymers, biochemistry, and natural products, environmental); forest engineering; paper science engineering; wood products engineering; and forestry (resource management, forest resource science, management science, environmental education and communications, urban forestry, world forestry, and applied resource management). The program in landscape architecture leads to a baccalaureate degree after one additional year, a Bachelor of Landscape Architecture degree (BLA).
- A student taking the pre-ESF 1+1 ranger option, forest technology, natural resources conservation, or land surveying, completes one year of required liberal arts and sciences courses at Alfred State, and then spends the second year at the Wanakena Campus of ESF. Successful completion of this program leads to an AAS degree in forest technology.

PROGRAM STUDENT LEARNING OUTCOMES

- **MATHEMATICS:** Demonstrate competence in arithmetic, algebra, geometry, data analysis, and quantitative reasoning.
- **NATURAL SCIENCES:** Demonstrate understanding of the methods scientists use to explore natural phenomena, including observation, hypothesis development, measurement and data collection, experimentation, evaluation of evidence, and employment of mathematical analysis.
- **COMMUNICATION & INFORMATION:** Employ proficient written and verbal communication skills, including the appropriate uses of technology.
- **REASONING:** Identify, analyze, and evaluate arguments as they occur in their own and others’ work, and develop well-reasoned arguments.
- **INFORMATION MANAGEMENT:** Perform the basic operations of personal computer use; understand and use basic research techniques; and locate, evaluate, and synthesize information from a variety of sources.
- **TRANSFERABILITY:** Students will successfully transfer to a bachelor’s or associate degree.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM

Alfred State pre-environmental science and forestry graduates may enter directly into the interdisciplinary studies BTech or technology management BBA degree program.

CONTINUING EDUCATION OPPORTUNITIES

Students in this program spend two years at Alfred State, and then generally transfer to the SUNY College of Environmental Science and Forestry (ESF) at Syracuse. Those students who complete, with a “C” or better, the lower-division sequences prescribed by ESF, gain admission to ESF 1 with full junior status. An articulation agreement is available with SUNY ESF at Syracuse.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent - 100 percent are employed.

RELATED PROGRAMS

- Agricultural Business
- Agricultural Technology
RADIOLOGIC TECHNOLOGY
AAS DEGREE - CODE #0628
Jenna Zetwick, Program Director
Email address: zetwick@alfredstate.edu

Radiologic technology is a two-year AAS degree program preparing qualified students to become health care professionals who administer ionizing radiation to produce photographic and digital anatomical images for diagnostic, therapeutic, and research applications. The program coordinates on-campus didactic and laboratory classes and clinical experiences at area hospitals to which students are responsible for their own transportation. Students must be able to demonstrate technical standards and pass clinical competencies as described by the American Registry of Radiologic Technologists (ARRT) and the Joint Review Committee on Education in Radiologic Technology (JRCERT), recognized by the United States Department of Education as the national accreditation agency of programs for radiographers. Upon graduation, students are prepared to take the American Registry Certification Exam administered by ARRT and be granted New York State licensure through the New York State Department of Health.

Clinical education is assigned to provide experiences consistent with the student’s level of achievement in different hospital environments. Through clinical assignments, students have opportunities to work with the most modern and specialized equipment available and knowledgeable staff with a wealth of experience in imaging. Clinical education assignments include eight clinical hours per week during the second semester of study and 24 clinical hours per week the third and fourth semesters. In addition, a 15-week (40 hours per week) summer session is required and provides valuable experience in developing clinical competency skills. Clinical placements are in hospitals near Alfred State, so students completing the summer session will require housing close enough to their clinical placements to travel there on a daily basis. For those who need it, summer housing is available at Alfred State; contact the Office of Residential Services for details.

The program currently admits 35 students each year, with a fall semester start date only. Four student placements are reserved for an on-campus curriculum and 31 placements being filled by Admissions.

ADVANTAGES
- Prepares the student for the American Registry of Radiologic Technologists’ certification examination and New York State licensure.
- Energized laboratory on campus.
- Low student-to-faculty ratio.
- Major emphasis in the required courses is gaining proficiency in the technical skills necessary for radiologic technology.
- Extensive clinical experience in area hospitals.

PROGRAM GOALS
- To develop competent practitioners capable of functioning in the highly technical and dynamic field of radiologic technology.
- To develop competent practitioners who demonstrate proficiency in communication skills.
- To develop competent practitioners who demonstrate proficiency in critical thinking skills and problem-solving skills.
- To develop practitioners who model professionalism.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS
Alfred State radiologic technology graduates who pass their ARRT exam may enter directly into the imaging sciences B Tech with the option of either computed tomography, MRI, or healthcare management concentration.

ACCREDITATION/CERTIFICATION
The radiologic technology program at Alfred State is fully accredited by JRCERT (the Joint Review Committee on Education in Radiologic Technology) through 2025. JRCERT is the only agency recognized by the US Department of Education for accreditation of educational programs in radiologic technology.

JRCERT
20 N. Wacker Drive, Suite 2850
Chicago, IL, 60606-3182
Phone: 312-704-5300
Fax: 312-704-5304
Email: mail@jrcert.org
http://www.jrcert.org

PROGRAM EFFECTIVENESS DATA

ARRT Examination Pass Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Students Attempting Exam</th>
<th>Number of Students Passing Exam on First Attempt</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>11</td>
<td>8</td>
<td>73%</td>
</tr>
<tr>
<td>2018</td>
<td>16</td>
<td>13</td>
<td>81%</td>
</tr>
<tr>
<td>2019</td>
<td>14</td>
<td>14</td>
<td>100%</td>
</tr>
<tr>
<td>2020</td>
<td>14</td>
<td>11</td>
<td>79%</td>
</tr>
<tr>
<td>2021</td>
<td>17</td>
<td>14</td>
<td>82%</td>
</tr>
<tr>
<td>Five Year Average</td>
<td></td>
<td></td>
<td>83.3%</td>
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Program Completion Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Students Beginning the Program</th>
<th>Number of Students Graduating From the Program</th>
<th>Percent Completion</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>13</td>
<td>11</td>
<td>85%</td>
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<tr>
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<td>20</td>
<td>16</td>
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<tr>
<td>2020</td>
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<td>14</td>
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<td>2021</td>
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<tr>
<td>Five Year Average</td>
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<td>82.3%</td>
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Job Placement Rate

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Students Actively Seeking Employment</th>
<th>Number of Students Employed Within 12 Months</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>2017</td>
<td>11</td>
<td>11</td>
<td>100%</td>
</tr>
<tr>
<td>2018</td>
<td>15</td>
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<tr>
<td>2019</td>
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<td>100%</td>
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<tr>
<td>2020</td>
<td>12</td>
<td>12</td>
<td>100%</td>
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<tr>
<td>2021</td>
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<td>16</td>
<td>98.6%</td>
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<tr>
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</table>

The job placement rate is the number of graduates employed in the radiologic sciences compared to the number of graduates actively seeking employment in the radiologic sciences within twelve months of graduating.

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 93 percent are employed; 7 percent continued their education.
ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Applicants for the radiologic technology program must possess a recognized high school diploma or its equivalent. A standardized test (SAT or ACT) is not required but recommended. Specific high school course requirements and recommendations are:

Required: Algebra, Geometry, Algebra 2, Biology, Interview with the academic department.
Recommended: Chemistry and Physics

Applicants with previous college experience must submit an official college transcript, as their success at the college level will be an admissions consideration. Due to the technical and science rigor, entrance requirements are higher than those of the institution.

TECHNICAL STANDARDS
To participate in the program, the applicant must possess specific non-academic skills. The technical standards described below are consistent with the duties of an entry-level sonographer in a professional position and are required in order to provide adequate patient care and produce a diagnostic image.

The applicant should have the:

- Ability with reasonable accommodation, if necessary, to reach and position the patients on the exam table.
- Ability with reasonable accommodation, if necessary, to move, adjust, and manipulate equipment to perform imaging procedures.
- Ability to review and evaluate recorded images to determine the quality of the image with reasonable accommodation.
- Ability to communicate effectively with patients, doctors, and other personnel so that the patient is not placed in an “at-risk” situation.
- Ability to make proper decisions involving patient and co-worker safety.
- Ability with reasonable accommodation, if necessary, to hear sounds that are necessary to assess patient’s health status.

FACILITIES
The program is located in the radiologic technology suite, which includes two lecture classrooms connected to a non-energized and an energized radiology laboratory. Clinical experience is at various local hospitals and clinic sites.

CONTINUING EDUCATION OPPORTUNITIES
The program allows graduates to transfer to a two-year program in radiologic science such as ultrasound, advanced radiologic imaging, nuclear medicine, and radiation therapy.

OCCUPATIONAL OPPORTUNITIES

- Hospital Radiology Department staff technologist
- Advanced imaging modalities - CT, cardiovascular intervention, mammography
- Radiology education
- Radiology Department management
- Industry
- Private physician offices

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

RADIOLOGIC TECHNOLOGY - AAS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

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<td>Fundamentals of Radiologic Science</td>
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<td>Radiographic Procedures I</td>
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<td>Second</td>
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<td>Radiological Protection</td>
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<td>RADT 3013</td>
<td>Radiographic Procedures II</td>
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<td>Radiographic Procedures II Lab</td>
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<td>BIOL 2504</td>
<td>Anatomy &amp; Physiology II</td>
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<td>RADT 1003</td>
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<tr>
<td>Summer</td>
<td>RADT 2044</td>
<td>Radiology Clinical II</td>
<td>4</td>
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<td>Third</td>
<td>RADT 3023</td>
<td>Diagnostic Imaging I</td>
<td>3</td>
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<tr>
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<td>Freshman Composition</td>
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<td></td>
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<td>Diagnostic Imaging II</td>
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<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
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<td>General Psychology</td>
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<td>Effective Speaking</td>
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</tr>
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<td></td>
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<td>15</td>
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</table>

POLICY: ACADEMIC STANDARDS AND GRADING
Students who do not maintain at least a C+ grade in all RADT and BIOL courses will not meet program requirements and will be unable to progress further into the program. Students are subject to warnings, probation, mandatory remedial study and/or dismissal if multiple failures (two or more courses) exist. A student will not be able to continue in the program until the prerequisites for the previous class have been successfully completed. Student support services and counseling are available for all students.

Grading Scale

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<th>Description</th>
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<td>B</td>
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<td>C+</td>
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<tr>
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<tr>
<td>D</td>
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<td>60</td>
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<tr>
<td>F</td>
<td>60 and below</td>
<td>0</td>
</tr>
</tbody>
</table>

Be advised that a prior felony conviction may impede a student’s ability to participate in a required clinical experience.

GRADUATION REQUIREMENTS
The AAS degree in radiologic technology has finely prescribed courses reflective of accreditation standards for students to be prepared for admission to the American Registry of Radiologic Technologists’ Certification Examination and New York State licensure granted by the Department of Health. Specific graduation requirements are:

- 64 total semester credit hours
• Minimum of 20 credit hours of liberal arts and sciences from three of the 10 SUNY General Education categories
• 2.0 cumulative GPA and a grade of "C+" or better in the core science courses (RADT and BIOL prefixes)
• Approval of department faculty
SPORT MANAGEMENT

AS DEGREE - CODE #1396

Brandon Harrison, Program Coordinator
Email: harrisbg@alfredstate.edu

The growing emphasis on athletics, coupled with the increasing amount of leisure time the public now enjoys, has made the world of sports one of the fastest-growing segments of American business. The sports industry requires a great variety of people with expertise in business. The goal of this program is to prepare you — using both hands-on and theory-based training — for a career in many areas of sport management and administration.

ADVANTAGES

Students obtain a holistic and in-depth understanding in many areas, such as principles of facility management, the unique aspects of sports marketing, promotions, finance, sport law, media relations, ticket sales, and sponsorship.

PROGRAM STUDENT LEARNING OUTCOMES

- Recognize the primary theories within the principle functional areas of business and sport management.
- Demonstrate professional business communication.
- Illustrate critical thinking and effective decision-making within the principle functional areas of sport management.
- Identify ethical issues within sport management
- 2020-2021 SLO Matrix

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS

Alfred State sport management graduates may enter directly into the business administration BBA, the interdisciplinary studies BTech, the sport management BBA, or the technology management BBA program.

CONTINUING EDUCATION OPPORTUNITIES

Students may transfer directly into our four-year sport management program, which results in a BBA degree.

OCCUPATIONAL OPPORTUNITIES

- Professional sports
- College sports
- Minor league sports
- Olympic organizations
- Recreational sport organizations
- Philanthropic sport organizations
- International sport organizations
- Ticket sales
- Sports marketing and promotions
- Sports sponsorship
- Media relations and sports broadcasting
- Sports law and sports agencies
- Facilities and event management

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 67 percent employed; 33 percent continued their education.

RELATED PROGRAMS

Business Administration
Sport Management (BBA)

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry
Recommended: Algebra 2

REQUIRED EQUIPMENT

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

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SPORT MANAGEMENT - AS DEGREE

TYPICAL FOUR-SEMESTER PROGRAM

First

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
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<td>Spmg</td>
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Second

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Third

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Fourth

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<tr>
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<td>xxx3</td>
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</table>

GRADUATION REQUIREMENTS

64 semester hours with a 2.0 cumulative index.

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in SPMG 4123 Sport Facility Management. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $23 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
The growing emphasis on athletics, coupled with the increasing amount of leisure time the public now enjoys, has made the world of sports one of the fastest-growing segments of American business. The sports industry requires a great variety of people with expertise in business. The goal of this program is to prepare you — using both hands-on and theory-based training — for a career in the areas of administration, marketing, sales, fund development, finance, event promotion and management, communication, and facility management.

ADVANTAGES
- BBA students will complete a specialization in marketing and event promotion field experiences during the second year, and a full-semester internship in the senior year.
- Students will study the core body of knowledge in sport management, a sport management specialization, and the required SUNY general education component.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate technical competence in domestic and global environments within the principle functional areas of business.
- Analyze sport-related business problems and devise solutions using critical thinking, decision-making processes, and decision-support tools.
- Formulate solutions to current sport issues by incorporating the major functional areas of business and sport management.
- Incorporate software, technology, and information systems into sport-related operations.
- Identify comprehensive sport management issues and communicate findings and solutions.
- Identify the sport management environment in relation to the current financial, legal, economic, and social environments.
- Analyze the role of ethics, industry-based organizational regulations, and legalities in sport management processes.

OCCUPATIONAL OPPORTUNITIES
- Professional sports
- College sports
- Minor league sports
- Olympic organizations
- Recreational sport organizations
- Philanthropic sport organizations
- International sport organizations
- Ticket sales
- Sports marketing and promotions
- Sports sponsorships
- Media relations and sports broadcasting
- Sports law and sports agencies
- Facilities and event management

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 90 percent are employed; 10 percent continued their education.

RELATED PROGRAMS
- Business Administration (BBA)
- Business Administration (AS)
- Financial Planning (BBA)
- Marketing

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Required: Algebra, Geometry
Recommended: Algebra 2

REQUIRED EQUIPMENT
A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/required-laptops.
## SPORT MANAGEMENT - BBA DEGREE
### TYPICAL EIGHT-SEMESTER PROGRAM

#### First

<table>
<thead>
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<td>Freshman Composition</td>
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<td>Intro to Sport Management</td>
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<tr>
<td>Principles of Marketing</td>
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#### Second

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#### Fourth

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<td>ECON</td>
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<tr>
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<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Principles of Microeconomics</td>
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<tr>
<td>Sport Facility Management</td>
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<td>Field Experience II</td>
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<tr>
<td>Managerial Accounting</td>
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<tr>
<td>Gen Ed/LAS Elective</td>
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<td>Gen Ed/Natural Science Elective</td>
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#### Fifth

<table>
<thead>
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<tbody>
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<tr>
<td>SPMG</td>
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<table>
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<td>Sport Marketing</td>
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<td>Sport Business and Finance</td>
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<table>
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<tbody>
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<td>Licensing and Endorsements</td>
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<td>Event Promotion and Sales</td>
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<tr>
<td>Sport Law</td>
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<td>Principles of Sales</td>
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#### Seventh

<table>
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<tr>
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<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
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<tr>
<td>Strategic Mgmt in Sport Organiz</td>
<td>3</td>
</tr>
<tr>
<td>Sport Management Capstone</td>
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</tr>
<tr>
<td>Open Elective</td>
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<tr>
<td>Open Elective</td>
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<td>Open Elective - Upper</td>
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#### Eighth

<table>
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<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internship</td>
<td>12</td>
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</tbody>
</table>

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**GRADUATION REQUIREMENTS**

- 122 credit hours
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State
- Cumulative overall index of at least 2.0
- Seven of the 10 SUNY approved General Education categories must be fulfilled

**END-OF-PROGRAM EXAM REQUIREMENTS**

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in SPMG 7013 Sport Management Capstone. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $45 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are **required**, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

**How should I prepare for the assessment exam?**

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your discipline. The exam assesses the foundational knowledge areas for your discipline.

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Be advised that a prior felony conviction may impede a student's ability to participate in an internship and complete the program.
SURVEYING AND GEOMATICS ENGINEERING TECHNOLOGY

BS DEGREE - CODE #1046

Richard Carlson, Program Coordinator
Email address: carlsorw@alfredstate.edu

Governmental agencies, private industries, and individuals all benefit from the surveying and mapping of our natural resources and planning of transportation systems, recreational facilities, new cities, and land subdivisions. Using advanced surveying equipment such as the electronic total stations to measure angles and distances, the modern surveyor has learned to increase his/her productivity and measurement accuracy. Particularly exciting about the future of the surveying profession are the emerging technologies of Global Positioning Systems (GPS), Geographic Information Systems (GIS), and Land Information Systems (LIS).

This program will provide you with a thorough understanding of the basic sciences of mathematics and physics, as well as applied subjects such as graphics and computer-aided drafting and design. The knowledge obtained from these basic courses is applied to a well-rounded study of modern surveying theory and practice.

ADVANTAGES

• The student constantly applies theoretical knowledge in meaningful and comprehensive laboratory sessions. Graduates are educated in a two-fold sense, both theoretically and practically.
• Both the surveying engineering technology (AAS) and the surveying and geomatics engineering technology (BS) programs are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

PROGRAM STUDENT LEARNING OUTCOMES

• An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve broadly defined engineering problems appropriate to the discipline.
• An ability to design systems, components, or processes meeting specified needs for broadly defined engineering problems appropriate to the discipline.
• An ability to apply written, oral, and graphical communication in broadly defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
• An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results to improve processes.
• An ability to function effectively as a member and a leader on technical teams.

PROGRAM EDUCATIONAL OBJECTIVES

Program educational objectives were established with the assistance of the Industrial Advisory Committee and are reviewed periodically. The surveying and geomatics engineering technology program produces graduates who:

• Write, read, and orally present technical reports, letters, and projects that meet the standards of the profession.
• Recognize the need for, and an ability to engage in, continued formal education as well as lifelong learning.
• Will be capable of sitting successfully for the Land Surveyor Examination.
• Have the skills to perform a land title survey in all its complexity.
• Will be capable of employing state-of-the-art surveying techniques in leading a survey crew to the accomplishment of its goal.

OCCUPATIONAL OPPORTUNITIES

• Land surveyor (after successfully meeting state requirements)
• Surveying engineering technician
• Project surveyor
• Party chief
• Mapping technologist
• GPS surveyor

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 86 percent are employed; 14 percent continued their education.
### SURVEYING AND GEOMATICS ENGINEERING TECHNOLOGY - BS DEGREE

#### TYPICAL EIGHT-SEMESTER PROGRAM

**First**
- COMP 1503 Freshman Composition 3
- CIVL 1021 Civil Eng Tech 1st Yr Exp 1
- CIVL 1204 Surveying I 4
- CIVL 1182 Civil Tech Graphics 2
- MATH 1033 College Algebra 3

**Second**
- CIVL 2204 Surveying II 4
- PHYS 1024 General Physics I 4
- MATH 2043 College Trigonometry 3
- GLST 2113 Global & Diverse Perspectives 3

**Third**
- CIVL 3204 Legal Asp & Prac of Land Surv 4
- CIVL 3214 Geodesy 4
- PHYS 2023 General Physics II 3
- MATH 1063 Technical Calculus I 3
- LITR xxx3 Literature Elective 3

**Fourth**
- CIVL 4204 Subdivision Theory & Appli 4
- CIVL 4214 Surveying Practicum 4
- CIVL 4243 Surveying Computer Appli 3
- CIVL 4273 Photogrammetry & Image Interpr 3
- SPCH 1083 Effective Speaking 3
- XXXX xxx3 Approved Gen Ed Equivalent 3

**Fifth**
- XXXX xxx3 Upper Level Natural Science 3
- MATH 2074 Technical Calculus II 4
- CIVL 5114 Land Surveying 4
- XXXX xxx3 Gen Ed Elective 3
- BUAD 3043 Business Law I 3

**Sixth**
- XXXX xxx3 Gen Ed Elective 3
- CIVL 6104 Arlys & Adjmnts of Surv Mrrnts 4
- CISY 1113 Computer Programming I 3
- CISY xxx3 Programming Elective 3
- XXXX xxx4 Gen Ed (Upper) (MATH 6114 recommended) 4
- XXXX xxx3 Technical or Business Elective 3

**Seventh**
- MATH 7123 Statistics for Engr Tech & Sci 3
- MATH 7113 Economic Analy for Engr Tech 3
- CIVL 8104 Global Positioning Systems 4
- CIVL 7114 Geographic Information Systems 4
- CIVL 7001 Sr Seminar & Project Design I 1
- COMP 5703 Technical Writing II 3

**Eighth**
- XXXX xxx3 Upper Level Gen Ed Elective 3
- CIVL 8003 Sr Seminar & Project Design 2 3

---

Must meet seven of the 10 General Education areas.

Be advised that a prior felony conviction may impede a student’s ability to receive licensure.

**SUGGESTED TECHNICAL OR BUSINESS ELECTIVES**
- CIVL 6113
- CIVL 7103
- BUAD 5000+
- TMGT 5000+
- ACCT 5000+
SURVEYING ENGINEERING TECHNOLOGY

AAS DEGREE - CODE #1039

Nicholas Ford, Program Coordinator
Email address: fordnb@alfredstate.edu

Governmental agencies, private industries, and individuals all benefit from the surveying and mapping of our natural resources and planning of transportation systems, recreational facilities, new cities, and land subdivisions. Using advanced surveying equipment such as the electronic total stations to measure angles and distances, the modern surveyor has learned to increase his/her productivity and measurement accuracy. Particularly exciting about the future of the surveying profession are the emerging technologies of Global Positioning Systems (GPS), Geodetic Information Systems (GIS), and Land Information Systems (LIS).

This program will provide you with a thorough understanding of the basic sciences of mathematics and physics, as well as applied subjects such as graphics and computer-aided drafting and design. The knowledge obtained from these basic courses is applied to a well-rounded study of modern surveying theory and practice.

A tier 2 laptop computer is required for students entering the surveying engineering technology program. Laptop specifications are available at www.alfredstate.edu/required-laptops.

ADVANTAGES

- The student constantly applies theoretical knowledge in meaningful and comprehensive laboratory sessions. Graduates are educated in a two-fold sense, both theoretically and practically.
- Both the surveying engineering technology (AAS) and the surveying and geomatics engineering technology (BS) programs are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.

PROGRAM STUDENT LEARNING OUTCOMES

- An ability to apply knowledge, techniques, skills and modern tools of mathematics, science, engineering, and technology to solve well-defined engineering problems appropriate to the discipline.
- An ability to design solutions for well-defined technical problems and to assist with the engineering design of systems, components, or processes appropriate to the discipline.
- An ability to apply written, oral, and graphical communication in well-defined technical and non-technical environments; and an ability to identify and use appropriate technical literature.
- An ability to conduct standard tests, measurements, and experiments and to analyze and interpret the results.
- An ability to function effectively as a member of a technical team.

PROGRAM EDUCATIONAL OBJECTIVES

Program educational objectives were established with the assistance of the Industrial Advisory Committee and are reviewed periodically. The surveying engineering technology program produces graduates who:

- Write, read, and orally present technical reports, letters, and projects that meet the standards of the profession.
- Have an understanding of and are able to implement basic field and office survey procedures.
- Are capable of performing elementary research.
- Are competent in surveying techniques.
- Recognize the need for engagement and an ability to engage in continued formal education, as well as lifelong learning.

DIRECT ENTRY INTO BACCAULAUREATE DEGREE PROGRAMS

Alfred State surveying engineering technology AAS graduates may enter directly into the construction supervision BTech, the interdisciplinary studies BTech, the surveying and geomatics engineering technology BS, or the technology management BBA degree program.

OCCUPATIONAL OPPORTUNITIES

- Office assistant
- Instrument person
- Mapping technologist

EMPLOYMENT STATISTICS

Employment and continuing education rate of 100 percent – 100 percent are employed.

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>Year</th>
<th>Enrollment (based on Fall census)</th>
<th>Degrees Awarded</th>
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<tbody>
<tr>
<td>2019</td>
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<td></td>
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<tr>
<td>2020</td>
<td>11</td>
<td>3</td>
</tr>
<tr>
<td>2021</td>
<td>8</td>
<td>5</td>
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</table>

RELAT ed PROGRAMS

- Building Trades: Building Construction
- Construction Engineering Technology
- Construction Management
- Construction Supervision

CERTIFICATION OR LICENSURE

The surveying engineering technology (AAS) program is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org. Accreditation means that the graduates from the AAS program will receive two years of credit toward the total statutory time requirement for licensure as a land surveyor in New York State.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2

Recommended: Physics

Math through technical calculus I must be completed. Freshman composition and introduction to literature must be taken.

TECHNICAL STANDARDS

Students in the surveying engineering technology program must meet the following:

- Students must have the ability to complete field work over natural terrain.
- Students must have the ability to use standard software of the profession.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.
### Surveying Engineering Technology - AAS Degree

#### Typical Four-Semester Program

<table>
<thead>
<tr>
<th>Semester</th>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td><strong>First</strong></td>
<td>COM 1503</td>
<td>Freshman Composition</td>
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<tr>
<td></td>
<td>CIVL 1021</td>
<td>Civil Eng Tech 1st Yr Exp</td>
<td>1</td>
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<tr>
<td></td>
<td>CIVL 1204</td>
<td>Surveying I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>CIVL 1182</td>
<td>Civil Tech Graphics</td>
<td>2</td>
</tr>
<tr>
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<td>MATH 1033</td>
<td>College Algebra</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>xxxx3</td>
<td>Tech./Sci. Elective</td>
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</tr>
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<td></td>
<td></td>
<td>Total Credits</td>
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</tr>
<tr>
<td><strong>Second</strong></td>
<td>CIVL 2204</td>
<td>Surveying II</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>PHYS 1024</td>
<td>General Physics I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>MATH 2043</td>
<td>College Trigonometry</td>
<td>3</td>
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<td></td>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
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<td></td>
<td></td>
<td>Total Credits</td>
<td>14</td>
</tr>
<tr>
<td><strong>Third</strong></td>
<td>CIVL 3204</td>
<td>Legal Asp &amp; Prac of Land Surv</td>
<td>4</td>
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<tr>
<td></td>
<td>PHYS 2023</td>
<td>General Physics II</td>
<td>3</td>
</tr>
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<td></td>
<td>MATH 1063</td>
<td>Technical Calculus I</td>
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</tr>
<tr>
<td></td>
<td>LITR xxxx3</td>
<td>Literature Elective</td>
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<td></td>
<td>CIVL 3214</td>
<td>Geodesy</td>
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<td>Total Credits</td>
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<tr>
<td><strong>Fourth</strong></td>
<td>CIVL 4204</td>
<td>Subdivision Theory &amp; Appl</td>
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<td></td>
<td>CIVL 4214</td>
<td>Surveying Practicum</td>
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<td>CIVL 4243</td>
<td>Surveying Computer Appl</td>
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<td>CIVL 4273</td>
<td>Photogrammetry &amp; Image Interpr</td>
<td>3</td>
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<td></td>
<td>SPCH 1083</td>
<td>Effective Speaking OR</td>
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<tr>
<td></td>
<td>xxxx3</td>
<td>Approved GE Equivalent</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>Total Credits</td>
<td>17</td>
</tr>
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</table>

Students receiving credit for math classes shown in the typical four-semester program may require additional LAS electives to complete degree requirements.

Be advised that a prior felony conviction may impede a student's ability to receive licensure.

### Graduation Requirements

2.0 cumulative grade point average and department requirement of 2.0 grade point average in major courses (CIVL).

### Suggested Technical Electives

- CIVL 1013
- CIVL 2154
- CIVL 6113
- Other technical electives approved by department.
The technical communication and emergent media (BS) program will address the growing demand by industry for strong writing and communication skills in technical areas. Job opportunities in technical communication and emergent media are expanding and expected to grow over the next several years. As skilled professionals trained to clearly communicate technical information and to mediate between expert and non-expert audiences, technical writers typically find employment in a wide variety of sectors including engineering and manufacturing, insurance and financial services, computer technology, and more.

ADVANTAGES
The technical communication and emergent media BS will offer experiential technical education in:

- Composing, managing, analyzing, and delivering technical information to specific audiences in a variety of forms, media, and contexts.
- Creating and analyzing communication in emergent media environments and communities.
- Entering the global marketplace as skilled intercultural communicators, technical practitioners, and scholars.

Additionally the program will prepare students to be technical practitioners and scholars who can communicate about specialized information with technology and project management skills. Students will be equipped to pursue opportunities in a variety of industries by selecting competencies in several potential areas to enhance employability for graduates of the program.

PROGRAM STUDENT LEARNING OUTCOMES (PSLOS)
The TCEM BS holds educational objectives:

- To prepare students to communicate effectively to diverse audiences through a variety of media.
- To prepare students for technical career paths via current technology, theory, and practice.
- To maintain currency in technical communication and emergent media.

Graduates will be able to do the following:

- Demonstrate proficiency in designing, producing, and revising technical communication for multiple audiences.
- Analyze written, oral, and multimodal communication using major theories of new and emergent media.
- Select user-appropriate media for composing, managing, and delivering information.
- Use information literacy skills to locate, evaluate, and synthesize sources in technical documents.
- Demonstrate competency in intercultural communication.
- Evaluate approaches to the ethical challenges of communication, including and especially issues of diversity and social justice.

JOBS OUTLOOK FROM THE U.S. BUREAU OF LABOR STATISTICS
Employment of technical writers is projected to grow 6 percent from 2021 to 2023, about as fast as the average for all occupations.

About 5,400 openings for technical writers are projected each year, on average, over the decade. Many of those openings are expected to result from the need to replace workers who transfer to different occupations or exit the labor force, such as to retire.

EMPLOYMENT STATISTICS
As product innovation continues, technical writers will be needed to convert complex information into a format that nontechnical users of these products understand. The continuing expansion of scientific and technical products and growth in digital product support needs will drive employment demand for these writers.
### TECHNICAL COMMUNICATION AND EMERGENT MEDIA - BS DEGREE

#### TYPICAL EIGHT-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>Semester</th>
<th>Courses</th>
<th>Credits</th>
</tr>
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<tbody>
<tr>
<td><strong>First</strong></td>
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<tr>
<td>COMP 1503</td>
<td>Freshman Composition</td>
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</tr>
<tr>
<td>FNAT xxx3</td>
<td>Fine Arts Gen. Ed. Elective</td>
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<tr>
<td>MATH 1113 OR 1123 OR 2124</td>
<td>Statistical Concepts Statistics I Statistical Math &amp; Analysis</td>
<td>3</td>
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<tr>
<td>ANTH/ECON/PLSC/PSYC/SOCI xxx3</td>
<td>Social Science Gen. Ed. Elective</td>
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<tr>
<td>HPED xxx1</td>
<td>Phys Ed Elective</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16</td>
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<tr>
<td><strong>Second</strong></td>
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</tr>
<tr>
<td>LITR xxx3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SPCH or equivalent 1083 or xxx3</td>
<td>Effective Speaking or equivalent</td>
<td>3</td>
</tr>
<tr>
<td>COMP 2703</td>
<td>Intro. to Technical Communication and Emergent Media</td>
<td>3</td>
</tr>
<tr>
<td>COMP 2903</td>
<td>English in a Global Context</td>
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<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
<td>3</td>
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<tr>
<td><strong>Third</strong></td>
<td></td>
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<tr>
<td>XXXX xxx3</td>
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<tr>
<td>COMP 3603</td>
<td>Writing for Emergent Media</td>
<td>3</td>
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<tr>
<td>SPAN/JAPN/ITAL xxx3</td>
<td>Foreign Language Gen. Ed. Requirement or equivalent</td>
<td>3</td>
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<tr>
<td>AGPS/BIOL/CHEM xxx4</td>
<td>Gen Ed - Nat Sci Elective</td>
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<td>COMP/LITR/SPCH xxx3</td>
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<td><strong>Fourth</strong></td>
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<td>SPCH 4003</td>
<td>Intercultural Communication</td>
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<tr>
<td>COMP/LITR/SPCH xxx3</td>
<td>Major Elective</td>
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</tr>
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<td><strong>Fifth</strong></td>
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<td>SPCH 5003</td>
<td>Mediated Argumentation in Public Spheres</td>
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<td>PHIL 6003</td>
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<td>COMP 6003</td>
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<td>COMP 7603</td>
<td>Writing for Emergent Media II</td>
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<td>COMP 7003</td>
<td>Designing and Editing for Usability and Accessibility</td>
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<tr>
<td>COMP/LITR/SPCH xxx3</td>
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<td>COMP 8003 Capstone Seminar</td>
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<tr>
<td>COMP 8103 Internship</td>
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<td></td>
</tr>
<tr>
<td>COMP/LITR/SPCH xxx3 Major Elective - Upper</td>
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</tr>
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<td>XXXX xxx3 Open Elective - Upper</td>
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<td>Upper Division Major Credits</td>
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</table>
TECHNOLOGY MANAGEMENT

BBA DEGREE - CODE #1318

Susan Gorman, Interim Program Coordinator
Email address: gormansf@alfredstate.edu

The technology management BBA is designed to allow you to take your professional/technical degree to new heights. We’ve constructed this program to provide you with the hands-on business, administrative, and technological course work necessary to advance into management and supervisory positions in your field. That means you’ll have the skills necessary to run a small-to-medium-sized business, manage a department or a division, or own and manage your own business.

In order to earn the bachelor’s degree, students entering the program with an earned associate degree must complete all specified upper-level requirements for the bachelor’s degree, fulfill all required prerequisites for upper-level courses, and earn a minimum of 60 credits beyond the associate degree. The student will take courses that will result in the fulfillment of seven SUNY General Education course areas.

ADVANTAGES

- The technology management degree is designed to allow a student who has earned an associate degree (AAS, AA, AS, or AOS) in a technical or professional area (or at least 60 credits toward such a degree) to complete a bachelor’s degree through this upper-division program.
- The program includes an internship in the final semester of the senior year.
- Graduates of this program are eligible for employment in many industries that require both a technical and business background.
- The college offers technology management courses online, making it possible for students who transfer in credit or attend other colleges to earn their degree from Alfred State in technology management. This approach is perfect for working professionals, adult and returning students, or anyone who needs high flexibility in their academic schedule.

PROGRAM STUDENT LEARNING OUTCOMES

- Demonstrate technical competence in domestic and global environments within the principle functional areas of business.
- Analyze business problems and devise solutions using critical thinking, decision-making processes, and decision-support tools.
- Formulate a strategic plan using effective teamwork while integrating the major functional areas of business and innovation.
- Demonstrate and incorporate software, technology, and information systems into business operations.
- Identify comprehensive business issues and communicate findings and solutions.
- Identify the technology-related business environment in relation to the current financial, legal, economic, and social environments.
- Analyze the role of ethics, government regulations, and legalities in management processes.

EMPLOYMENT STATISTICS

Employment and continuing education rate of 88 percent – 88 percent are employed.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

- Required: Successful completion of an associate degree (AAS, AA, AS, or AOS), or at least 60 transferrable credit hours, and a minimum cumulative GPA of 2.0. Applicants who have gone through a certified apprenticeship program and have obtained a journeyman's card with a recognized trade union may also be considered.
- Recommended: A minimum of 21 credits in liberal arts and sciences, and five different general education fields covered.
- Please note: Students entering this major from an AOS degree program are accepted in the program as ASOP students to facilitate completion of the five bridge courses (15 credits) in Liberal Arts and Sciences/General Education. The Business Department chair will review all college credits earned and will recommend specific courses to complete this bridge.

REQUIRED EQUIPMENT

A tier 1 laptop computer will be required of all students. See laptop specifications at www.alfredstate.edu/required-laptops.

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TECHNOLOGY MANAGEMENT - BBA DEGREE

TYPICAL FIVE- THROUGH EIGHT-SEMESTER PROGRAM

### Fifth Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUAD 5003</td>
<td>Management Communications</td>
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<tr>
<td>ACCT 5043</td>
<td>Accounting Perspectives</td>
</tr>
<tr>
<td>TMGT 7153</td>
<td>Principles of Management</td>
</tr>
<tr>
<td>BUAD 4403</td>
<td>Business Computer Applications</td>
</tr>
<tr>
<td>CISY xxx</td>
<td>Computer Elective</td>
</tr>
<tr>
<td>ECON xxx</td>
<td>Macro or Microeconomics</td>
</tr>
<tr>
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<td>15</td>
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### Sixth Semester

<table>
<thead>
<tr>
<th>Course</th>
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<tbody>
<tr>
<td>BUAD 7023</td>
<td>Legal Environment of Business</td>
</tr>
<tr>
<td>BUAD 6403</td>
<td>Proj Mgmt for Busi Profs</td>
</tr>
<tr>
<td>BUAD 6113</td>
<td>Strategic &amp; Creative Prob Solv</td>
</tr>
<tr>
<td>COMP 5703</td>
<td>Technical Writing II</td>
</tr>
<tr>
<td>MKTG 6003</td>
<td>Strategic Marketing</td>
</tr>
<tr>
<td>GLST 2113</td>
<td>Global &amp; Diverse Perspectives</td>
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### Seventh Semester

<table>
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<tr>
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<tbody>
<tr>
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<td>Business Ethics</td>
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<tr>
<td>BUAD 5023</td>
<td>Human Resource Management</td>
</tr>
<tr>
<td>TMGT 7003</td>
<td>Managing Tech &amp; Innovation Cap</td>
</tr>
<tr>
<td>SPCH 1083</td>
<td>Effective Speaking</td>
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<tr>
<td>SPCH xxx</td>
<td>Effective Speaking Equivalent</td>
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<tr>
<td>XXXX xxx</td>
<td>Gen. Ed. Natural Science</td>
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<td>XXXX xxx</td>
<td>Gen. Ed. Elective</td>
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### Eighth Semester

<table>
<thead>
<tr>
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<tbody>
<tr>
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<td>Tech Management Internship</td>
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<td>XXXX xxx</td>
<td>Professional Elective - Upper</td>
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<tr>
<td>Total</td>
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Students seeking permission to take four upper-level classes in lieu of completing an internship must submit an appeal form with their justification, along with a faculty member’s statement of support. Internship appeal forms should be emailed or hand-delivered to the department secretary and will be reviewed by Business Department faculty. Appeal forms are due no later than Oct. 15 for the fall semester and March 15 for the spring semester.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship.

GRADUATION REQUIREMENTS

- Total minimum credit hours for graduation is 123.
- A cumulative overall index of at least 2.0 is required in order to graduate.
- 30 credit hours of the 45 upper-level credit hours for this degree must be taken at Alfred State.
• Seven of the 10 SUNY approved General Education categories must be fulfilled.

ADDITIONAL PROGRAM INFORMATION

• 12 credit hours may be transferred back within a seven-year period if you leave Alfred State prior to completing your degree.

END-OF-PROGRAM EXAM REQUIREMENTS

All students are required to complete an end-of-program exam. This exam will be taken in the capstone course for the student’s specific program in TMGT 7003 Managing Technology & Innovation Capstone. The end-of-program exam will also be considered an assignment in the capstone course. The benefit of taking the end-of-program exam is to test the student’s knowledge at the time of graduation. Students may include the progress from the end-of-program exams on their resume. Taking the end-of-program exam will have some fees, which are currently $45 per exam. Exams will be taken once and they will impact the student’s capstone course grade by 5%. Please refer to the syllabi for the relevant capstone course to know the grading scale for the end-of-program exam.

The end-of-program exams are required, not optional.

Information on how to take the exams will be given in the course prior to the end-of-program exam.

How should I prepare for the assessment exam?

The comprehensive end-of-program exam covers topics taught throughout the degree program, which are aligned to the topics required for accreditation. The preparation for the exam comes from your educational experience with the school, specifically through the required courses for your degree. The exam assesses the foundational knowledge areas for your discipline.
If you're undecided about your career goals, the undeclared major may be right for you. This program gives you the opportunity to try different options and select a course of study the first two semesters that fits your interests and background. Along the way, you can take advantage of extensive support services, including career planning and counseling, offered by caring faculty and staff throughout the program.

Since the primary goal of the program is to explore various academic areas of interest, individual course schedules will vary. The suggested program includes both a component of core courses (English, math, social science) and a component of electives in support of your interests.

Students enrolled in the undeclared major must transfer to a degree-granting program within two semesters. Depending on the choice of major, students may enter the workforce upon graduation, or continue their education in a bachelor's degree program.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra

Recommended: Biology

OFFICE OF ACCESSIBILITY SERVICES

Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

TYPICAL TWO-SEMESTER PROGRAM

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<td>xxxx</td>
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<td>GLST</td>
<td>2113</td>
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<td>XXXX</td>
<td>xxxx</td>
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<td>XXXX</td>
<td>xxxx</td>
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</table>

*ASOP students will also take other ASDC courses

**Some students may be required to also take COMP 1403 based on placement
Licensed veterinary technicians are indispensable members of the veterinary medical team, capable of providing everything from life support and surgical assistance to physical therapy and nutritional management. Our program is designed to provide you with extensive training in the theory and principles, reinforced with the hands-on technical, animal, and laboratory experience needed to prepare you for this exciting field.

**ADVANTAGES**

- This program has full accreditation status as granted by the American Veterinary Medical Association, Committee on Veterinary Technician Education and Activities, Education and Research Division, [1931 N. Meacham Road, Suite 100, Schaumburg, IL 60173-4360; 847-925-8070].
- Students are eligible to sit for the Veterinary Technician National Exam (VTNE), the state licensing exam for veterinary technicians. Demand for licensed veterinary technicians is strong across the country.

**VETERINARY TECHNICIAN NATIONAL EXAM PERFORMANCE**

<table>
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<tr>
<th>VTNE Accreditation Test</th>
<th>July 1, 2020 – June 30, 2023</th>
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<tbody>
<tr>
<td>Number of first-time candidates that have taken the VTNE</td>
<td>60</td>
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<tr>
<td>Three year VTNE pass percentage</td>
<td>81.67</td>
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</table>

**PROGRAM STUDENT LEARNING OUTCOMES**

- Demonstrate a working knowledge of anatomy and physiology of domestic, laboratory, and exotic animal species encountered in veterinary medicine.
- Successfully perform animal care and husbandry, restraint, imaging, surgical, anesthetic and laboratory specimen analyses commonly encountered in veterinary clinical practice.
- Demonstrate written and oral communication skills appropriate for animal health care professionals.
- Critically think and reason when calculating and administering therapeutic agents used in veterinary medicine.
- Follow and uphold applicable laws and the veterinary technology profession's ethical codes to provide high-quality patient care.
- Troubleshoot and safely utilize all instruments and equipment commonly utilized in veterinary clinical practice.
- Display the knowledge and skills necessary to successfully pass the Veterinary Technician National Exam.

**DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAMS**

Alfred State veterinary technology graduates may enter directly into the interdisciplinary studies BTech, the technology management BBA, or the healthcare management BTech degree program.

**EXPENSES**

Rabies vaccinations are required for all veterinary technology students. Textbooks are the primary annual expense, with the cost averaging $1,000 to $1,200 each year.

**CONTINUING EDUCATION OPPORTUNITIES**

The Alfred State veterinary technology program has an established transfer agreement with Cornell University's College of Agriculture. Students have also successfully transferred into the Purdue University BS veterinary technology program.

**OCCUPATIONAL OPPORTUNITIES**

- Veterinary hospitals (small animal, large animal, mixed animal, and exotic animal)
- Biomedical research institutions
- Zoological parks
- Educational institutions
- Specialized dairy calf or cow management
- Colleges of Veterinary Medicine
Veterinary Technology - AAS Degree

TYPICAL FOUR-SEMESTER PROGRAM

First

<table>
<thead>
<tr>
<th>Course</th>
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<td>1203</td>
<td>Intro to Veterinary Technology</td>
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<tr>
<td>VETS</td>
<td>1214</td>
<td>Anatomy &amp; Physiology of Animals I</td>
<td>4</td>
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<tr>
<td>CHEM</td>
<td>1114</td>
<td>General Chemistry I</td>
<td>4</td>
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<tr>
<td>ANSC</td>
<td>1204</td>
<td>Introduction to Animal Science</td>
<td>4</td>
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<td>MATH</td>
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<td>Quantitative Reasoning, College Algebra, or Higher</td>
<td>3</td>
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<tr>
<td>GLST</td>
<td>2113</td>
<td>Global &amp; Diverse Perspectives</td>
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Second

<table>
<thead>
<tr>
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</thead>
<tbody>
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<td>VETS</td>
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<td>Anatomy &amp; Physiology of Animals II</td>
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<td>VETS</td>
<td>3013</td>
<td>Animal Parasitology</td>
<td>3</td>
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<tr>
<td>VETS</td>
<td>3003</td>
<td>Animal Health Care</td>
<td>3</td>
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<tr>
<td>VETS</td>
<td>3204</td>
<td>Farm Animal Management OR</td>
<td>4</td>
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<tr>
<td>CHEM</td>
<td>1114</td>
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<td>3023</td>
<td>Radiography</td>
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<td>VETS</td>
<td>4103</td>
<td>Laboratory Animal and Exotics</td>
<td>3</td>
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<tr>
<td>BIOL</td>
<td>5254</td>
<td>Principles of Microbiology</td>
<td>4</td>
</tr>
<tr>
<td>VETS</td>
<td>3103</td>
<td>Patho &amp; Pharm of An. Disease I</td>
<td>3</td>
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<tr>
<td>VETS</td>
<td>3022</td>
<td>Anesthesia &amp; Surgical Nog I</td>
<td>2</td>
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<tr>
<td>VETS</td>
<td>3301</td>
<td>Veterinary Technology Precept.</td>
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Fourth

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<th>Title</th>
<th>Credits</th>
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<tbody>
<tr>
<td>VETS</td>
<td>3004</td>
<td>Anesthesia &amp; Surgical Nursing</td>
<td>4</td>
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<tr>
<td>VETS</td>
<td>3024</td>
<td>Clinical Laboratory Techniques</td>
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<tr>
<td>VETS</td>
<td>4403</td>
<td>Veterinary Practice Essentials</td>
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<tr>
<td>VETS</td>
<td>4203</td>
<td>Patho &amp; Pharm of An. Disease 2</td>
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Technical Electives

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<td>Genetics</td>
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<td>Dairy Calf Management</td>
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<td>ANSC</td>
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<td>Dairy Cattle Production I</td>
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<td>Dairy Cattle Production III</td>
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<td>Feeds and Nutrition</td>
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<td>Livestock Mgmt &amp; Production</td>
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<tr>
<td>BIOL</td>
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<td>General Biology I</td>
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<tr>
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<td>VETS</td>
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<tr>
<td>VETS</td>
<td>4202</td>
<td>Small Animal Nutrition</td>
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</table>

Preceptorship* of 240 hours, either during summer or semester break after successful completion of second semester course requirements. Preceptorship hours can be fulfilled through part-time employment at an appropriate facility.

In order to progress in the veterinary technology program, students must earn a “C” or better in each required veterinary technology course, with the exception of VETS 1214 Animal Anatomy and Physiology I, which requires a minimum of a “D” to pass the course. Students receiving an “F” in two or more required courses will be required to change majors.

ASOP students must earn a “C” or better in the Introduction to Veterinary Technology course and the Domestic Animal Anatomy and Physiology course in order to progress to the next level of core veterinary courses.

Be advised that a prior felony conviction may impede a student’s ability to participate in an internship.

GRADUATION REQUIREMENTS*

Students must:
- Successfully complete the prescribed sequence of courses.
- Achieve a minimum of 2.0 in their core courses and a minimum of 2.0 overall.
- Be recommended by the department faculty.
- Complete the 240-hour preceptorship.

*The 240-hour preceptorship is a program requirement and a graduation requirement.

The Admissions and Performance Standards discussed in the following paragraphs define performance expectations that must be met for successful completion of the veterinary technology program at Alfred State. It is the policy of Alfred State to provide reasonable accommodations for those with disabilities as defined under the Americans with Disabilities Act. If you need an accommodation due to a disability under the Americans with Disabilities Act, please contact the Student Success Center office at 607-587-4122. Some accommodations may require up to six weeks to prepare. For progression in the veterinary technology program, students are expected to meet the following performance standards:
### Some Examples of Necessary Activities (not all-inclusive)

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Critical Thinking</strong></td>
<td>Critical thinking sufficient for clinical judgment. Identify cause-effect relationships in clinical situations. Develop nursing care plans. Demonstrate problem-solving skills. Adapt to stressful situations.</td>
</tr>
<tr>
<td><strong>Interpersonal</strong></td>
<td>Interpersonal abilities sufficient to interact with patients, clients, families, and groups from a variety of social, emotional, cultural, and intellectual backgrounds. Establish rapport with patients/clients and colleagues. Recognize appropriate boundaries in relationships with patients/clients and colleagues.</td>
</tr>
<tr>
<td><strong>Communication</strong></td>
<td>Communication abilities for interaction with others orally and in writing. Explain treatment procedures, initiate health teaching, document and interpret nursing actions and patient/client responses. Team building skills.</td>
</tr>
<tr>
<td><strong>Mobility</strong></td>
<td>Physical abilities sufficient to move from room to room, maneuver in small spaces, and provide assistance to patients. Move around in patient and treatment areas. Administer CPR. Provide physical assistance to clients and colleagues to ensure safety within the environment. Ability to prevent or escape injury caused by animals (e.g., biting, kicking, stampeding).</td>
</tr>
<tr>
<td><strong>Motor Skills</strong></td>
<td>Gross and fine motor abilities sufficient to provide safe, effective nursing care in a timely manner. Use of instruments, supplies, safety devices, and communication equipment in the care of patients. Performance of nursing care, surgical assistance, and laboratory techniques.</td>
</tr>
<tr>
<td><strong>Hearing</strong></td>
<td>Auditory ability sufficient to monitor and assess health needs. Auditory ability sufficient to hear ausculatory sounds, monitor alarms, and monitor and assess health emergency signals and cries for help. Hear needs/warning sounds from animals and humans of impending danger/injury.</td>
</tr>
<tr>
<td><strong>Visual</strong></td>
<td>Visual ability sufficient for observation and assessment necessary in nursing care. Observe patients for expected and unexpected physical and emotional responses to nursing and medical treatment regimens. Use of diagnostic equipment such as a microscope, thermometer, refractometer, etc.</td>
</tr>
<tr>
<td><strong>Tactile</strong></td>
<td>Tactile ability sufficient for physical assessment and performance of nursing duties in a timely manner. Perform palpation functions of physical exam, administer oral, intramuscular, subcutaneous, and intravenous medications. Insert and remove tubes and perform wound care management. Surgical assistance.</td>
</tr>
<tr>
<td><strong>Physical Condition</strong></td>
<td>Physical ability and stamina sufficient to restrain, lift, and assist in the care of a variety of species of animals. Ability to stand for extended periods of time. Ability to withstand extreme weather conditions. Immune system competence. Safely lift, position, and restrain animals and supplies for treatment. Surgical assistance. Daily clinical routine. Year-round treatment and care of outdoor animals. Exposure to a wide range of chemical and biological agents.</td>
</tr>
</tbody>
</table>
WELDING TECHNOLOGY
AOS DEGREE - CODE #0666
Bradley Thompson, Department Chair
Email address: thompsonb@alfredstate.edu

This high-tech program focuses on welding processes performed in all positions on both plate and pipe. You will learn proper safety methods, required math, related skills, layout and fit up, welding codes and standards, welding inspection, testing, and drawing/welding symbol interpretation. The first year, students will complete AWS Level I standards for an entry-level welder. The second year will take students toward AWS Level II - advanced welder and expert welder. Additional techniques such as high-pressure vessel and high-pressure pipe will be taught, as well as other advanced welding techniques.

ADVANTAGES
The welding technology program is taught according to the standards set by the American Welders Society (AWS) and is AWS-certified.

PROGRAM STUDENT LEARNING OUTCOMES
- Demonstrate mathematical operations using accepted mathematical applications.
- Practice shop safety and welding safety.
- Perform straight and bevel cuts using manual and automatic oxyfuel and plasma equipment.
- Set up and operate constant current welding equipment.
- Set up and operate constant voltage welding equipment.
- Perform fillet and groove welds in all positions on carbon steel plate.
- Perform fillet and groove welds on pipe in all positions.
- Identify and describe the heat relationship to the grain structure of various metals.
- Maintain and develop testing and inspection records.
- Demonstrate layout and fabrication skills resulting from the previous materials used in program.

DIRECT ENTRY INTO BACCALAUREATE DEGREE PROGRAM
Alfred State welding technology graduates may enter directly into the technology management BBA degree program. Graduates who have credit for freshman composition, statistics, literature, history, and speech may complete the BBA program in two additional years; others may complete the BBA program in two-and-one-half years.

OCCUPATIONAL OPPORTUNITIES
- Industrial welder
- Steel construction
- Equipment repair
- Self-employment
- Fabrication welder
- Structural welder

EMPLOYMENT STATISTICS
Employment and continuing education rate of 100 percent – 83 percent are employed; 17 percent continued their education.

RELATED PROGRAMS
- Autobody Repair
- CNC Manufacturing and Machining
- Heating, Ventilation, and Air Conditioning
- Mechanical Engineering Technology

REQUIRED TOOLS/EQUIPMENT
A list of required tools, equipment, PPE, etc. for all of the programs mentioned above can be found at http://www.alfredstate.edu/tool-lists.

A tier 1 laptop computer is required for students entering this degree program. Laptop specifications are available at www.alfredstate.edu/recommended-laptops.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS
Recommended: In-depth knowledge of basic math skills.

TECHNICAL STANDARDS
It is essential that students in this degree program can participate fully and safely, with or without reasonable accommodations in all classrooms, laboratory, or field experiences required for completion of the program. Students in this degree program:
- Must be able to function in a safe manner, not placing themselves, faculty, staff, or other students in jeopardy.
- Must be able to appropriately and safely use standard laboratory equipment, materials, and instrumentation that requires possession of fine motor skills and mobility.
- Must be able to lift 50 pounds of materials up to 5 ft, on to a standard height work bench.
- Must be able to communicate orally with a person 6 to 10 feet away in a shop environment.
- Must be able to diagnose mechanical failures that are distinguished audibly.
- Must be able to understand and retain information found in service repair manuals and diagnostic flow charts.
- Must be able to visually read all displays on welding equipment.
- Must be able to stand for long periods of time.

OFFICE OF ACCESSIBILITY SERVICES
Students who believe they need a reasonable accommodation to properly participate in this program may contact Melanie Ryan in the Office of Accessibility Services. This office may be contacted by email at oas@alfredstate.edu or by phone at 607-587-4506. Please keep in mind that some accommodations may take time to implement, so students seeking accommodations are encouraged to contact OAS as early as possible.

WELDING - AOS DEGREE
TYPICAL FOUR-SEMESTER PROGRAM

<table>
<thead>
<tr>
<th>First Semester</th>
<th>Second Semester</th>
<th>Third Semester</th>
<th>Fourth Semester</th>
</tr>
</thead>
<tbody>
<tr>
<td>WELD 1105</td>
<td>WELD 1205</td>
<td>WELD 3005</td>
<td>WELD 4425</td>
</tr>
<tr>
<td>Shielded Metl Arc Weld (SMAW)</td>
<td>Shielded Metal Arc Weld (SMAW)</td>
<td>Shielded Metal Arc Weld (SMAW)</td>
<td>GMAW III &amp; GTAW IV</td>
</tr>
<tr>
<td>WELD 1715</td>
<td>WELD 1733</td>
<td>WELD 3015</td>
<td>WELD 4435</td>
</tr>
<tr>
<td>Gas Weld. Cutting &amp; Plasma Cut</td>
<td>Blueprint Reading, Insp &amp; Test</td>
<td>GMAW II, FCAW II</td>
<td>Gas Tungsten Arc Welding</td>
</tr>
<tr>
<td>WELD 1723</td>
<td>WELD 2715</td>
<td>WELD 3025</td>
<td>WELD 4445</td>
</tr>
<tr>
<td>Welders Calculations I</td>
<td>Shield Ml Arc &amp; Fx Crd</td>
<td>Gas Tungsten Arc Welding</td>
<td>Welding Fabrication</td>
</tr>
<tr>
<td>WELD 2725</td>
<td>WELD 2735</td>
<td>WELD 3813</td>
<td>WELD 4013</td>
</tr>
<tr>
<td>Gas Metal Arc Welding</td>
<td>Gas Tungsten Arc Welding</td>
<td>Metlg. Codes, Certs &amp; Inspect</td>
<td>Senior Project</td>
</tr>
<tr>
<td>WELD 1723</td>
<td>WELD 3005</td>
<td>WELD 3015</td>
<td>WELD 4425</td>
</tr>
<tr>
<td>Structural Welder</td>
<td>Shielded Metal Arc</td>
<td>GMAW II, FCAW II</td>
<td>GMAW III &amp; GTAW IV</td>
</tr>
<tr>
<td>WELD 2715</td>
<td>WELD 2725</td>
<td>WELD 2735</td>
<td>WELD 4435</td>
</tr>
<tr>
<td>Shield Ml Arc &amp; Fx Crd</td>
<td>Gas Tungsten Arc</td>
<td>Gas Tungsten Arc Welding</td>
<td>Gas Tungsten Arc Welding</td>
</tr>
</tbody>
</table>

GRADUATION REQUIREMENTS
- A student must successfully complete all courses and earn a minimum cumulative index of 2.0, which is equivalent to a “C” average, in the prescribed four-semester program.
- Students are required to have earned a minimum grade of “C” in both WELD 1723 (Welders Calc) and WELD 4013 (Senior Project) to be eligible for graduation. (Articulation is available in WELD 1723)
Course Descriptions

ACCT - ACCOUNTING

ACCT - 1124 Financial Accounting, 4.00 Credits
Level: Lower
Topics included in this course are the fundamental principles of accounting, the accounting cycle and basic procedures, statement of financial position, determination and reporting of periodic earnings, cash and accrual basis of accounting, accounting for a merchandising firm and inventory valuation, principles of internal control. Other topics will include accounting for the acquisition, depreciation, and disposition of property, plant, and equipment.

ACCT - 2224 Managerial Accounting, 4.00 Credits
Prerequisite(s): ACCT 1124 with D or better
Level: Lower
This course provides an in-depth examination of accounting theory in the treatment of assets, liabilities and stockholder's equity. The accounting cycle is reviewed in detail and a full examination and analysis of financial statement development and usage is undertaken. The course provides an introduction to the fundamental principles of accounting and emphasizes the importance of managing and analyzing financial statements and pertinent production information. The importance of good management (financial and otherwise) to the success of the business will be stressed.

ACCT - 3423 Intermediate Accounting I, 3.00 Credits
Prerequisite(s): ACCT 2224 with D or better
Level: Lower
This course will focus on fundamental income tax concepts related to understanding and completing individual federal income tax returns. Manual and computerized income tax preparation will be required. Coverage will include: income tax formula for individuals, gross income and exclusions, taxation of self-employed individuals, retirement plans, rental properties, standard vs itemized deductions, tax credits and additional taxes, depreciation, and capital gains/losses. Students will apply course theory to a contemporary tax software product through the computed completion of progressively challenging federal tax returns.

ACCT - 4523 Intermediate Accounting II, 3.00 Credits
Prerequisite(s): ACCT 3423 with D or better
Level: Lower
Continuation of ACCT 3423. Topics include: long-term investments, fixed assets, current and long-term debt, and stockholder's equity. Special problems of income determination, statement of cash flow and statements from incomplete records. Students must complete an end-of-program exam hosted by an external vendor.

ACCT - 4663 Actuarial Sys & Computer Appl, 3.00 Credits
Prerequisite(s): ACCT 2224 with D or better
Level: Lower
Applied Learning-Practicum
This course will cover all aspects of accounting for payroll, including the requirements of the Fair Labor Standards Act, calculations relative to gross pay, statutory and non-statutory deductions, employee and employer payroll taxes, general journal entry work relative to payroll, the payroll register, and the individual earnings record. Determining the amount and timing of payroll deposits, and preparing required quarterly and annual reports will also be covered. The course will then apply payroll and other accounting activities to a contemporary accounting software product covering the following topics: creating a new business, establishing a chart of accounts, recording typical business transactions, creating related financial statements, closing the books and employing available business research and evaluation techniques.

ACCT - 5043 Accounting Perspectives, 3.00 Credits
Level: Upper
Applied Learning-Field Study
This course is intended to examine and apply the basic assumptions, principles, concepts, and methods commonly used in the accounting profession. The course is intended more for the users of accounting information than for the originators of it. Debits and credits are virtually ignored. Thus, the student examines the "whys" of accounting to a much greater degree than the "hows." The course is split into two major components. The first half examines financial accounting topics, using the financial statements as a basis of study. The second half of the course examines managerial accounting topics, with the primary emphasis being the fulfillment of the needs of management. The course will be particularly beneficial to individuals in engineering technology, management, marketing, and vocational technology curriculums where the graduate will not actually be expected to do accounting, but will be expected to effectively comprehend accounting reports and statements as well as communicate with accounting personnel. Students will complete a major research project on applying technology to chosen career path.

AGEC - AGRICULTURE ECON/BUS

AGEC - 2111 Farm Records, 1.00 Credit
Level: Lower
This is the second in a two semester series where both the production management and financial management of a rural or farm business are studied. The course emphasizes the skills needed to manage a profitable business including analysis of financial statements, record keeping, key production management areas, leadership and decision-making skills. Aspects and functions of management as well as types of decision making will be introduced. Acquiring and organizing financial management information will be the primary emphasis of the course including constructing and analyzing financial statements and pertinent production information.
AGRI - 3102 Value Added Dairy Products, 3.00 Credits
Prerequisite(s): AGPS 1104 with D or better
Level: Upper
Applied Learning-Entrepreneur. Course Fee $24.00. Upper Level
Students will learn how to site, design, and manage a small-scale vegetable farm using organic and/or other sustainable practices that support niche-marketing strategies. Particular attention will be paid to crop sequences appropriate for the climates and soils of the Northeastern United States. Students will gain hands-on experience in building soil quality, starting transplants, identifying and managing pests, harvesting and marketing of vegetables.

AGRI - 5113 Sustainable Fruit Production, 3.00 Credits
Prerequisite(s): AGPS 1104 with D or better or AGRI 2013 with D or better or BIOL 1304 with D or better or BIOL 1104 with D or better Level: Upper
Applied Learning-Practicum, Upper Level
Students will learn how to site, design and manage a small-scale fruit farm using organic and/or other sustainable practices. Particular attention will be paid to fruit crops that are suitable for the climate and soils of New York. Proper orchard site selection, soil preparation, how to choose appropriate varieties, proper planting, fertilizing and watering, pruning, grafting, common pests and diseases, harvesting and storage of fruit are all topics that will be discussed. Laboratories will include instruction on techniques important to fruit production, such as grafting, pruning and pest control. Field trips to area fruit growers will be used to supplement student learning.

AGPS - 6204 Soil Fertility, 4.00 Credits
Prerequisite(s): AGPS 1104 with D or better Level: Upper
Upper Level
This course is a comprehensive study of the management of plant nutrients in agronomic systems for economic response and environmental protection; diagnosis of nutrient availability and prediction of crop response to fertilizers; interactions between nutrient response and chemical, physical, and biological properties of soils.

AGRI - AGRICULTURE

AGRI - 1001 Farm Practicum I, 1.00 Credit
Level: Lower
Applied Learning-Practicum
Students enrolled in this course will work 45 hours at the college farm. They will learn practical farming skills such as mixing feed, spreading manure, milking cows, and other daily duties as assigned by the farm manager. Students will keep a daily journal of their experiences and develop proficiency in basic farm skills. Formal management and team building training will also be incorporated into the experience.

AGRI - 2001 Farm Practicum II, 1.00 Credit
Level: Lower
Applied Learning-Practicum
Students enrolled in this course will work 45 hours at the college farm. They will learn practical farming skills such as mixing feed, spreading manure, milking cows, and other daily duties as assigned by the farm manager. Students will keep a daily journal of their experiences and develop proficiency in basic farm skills. Formal management and team building training will also be incorporated into the experience.

AGRI - 2013 Organic & Sustainable Ag Tech, 3.00 Credits
Level: Lower
This course will introduce students to environmentally sound methods of agriculture. The goal is to help students understand methods and technologies for using water, soil, pasture and manure resources in ways that create a biologically healthy landscape for animals and society. This course will introduce students to a more natural approach to animal agriculture as well as to explore the synergy of an integrated organic cropping and animal agriculture system.

AGRI - 2101 Sophomore Seminar, 1.00 Credit
Level: Lower
This course enables the student to develop career professionalism, job finding techniques and the personal and social skills necessary for success in the world of work. A job search will be organized, resumes prepared with cover letters, and practice interviews will be conducted. Many types of jobs relating to agriculture will be studied using successful graduates. Professional and personal goals will be discussed.

AGRI - 3001 Farm Practicum III, 1.00 Credit
Level: Lower
Applied Learning-Practicum
Students enrolled in this course will work 45 hours at the college farm. They will learn practical farming skills such as mixing feed, spreading manure, milking cows, and other daily duties as assigned by the farm manager. Students will keep a daily journal of their experiences and develop proficiency in basic farm skills. Formal management and team building training will also be incorporated into the experience.

AGRI - 3102 Value Added Dairy Products, 2.00 Credits
Level: Lower
Applied Learning-Practicum
Students enrolled in this course will learn how to produce, package, and market value added dairy products. They will learn practical skills such as pasteurization, butter, cheese, and yogurt production.

AGRI - 3202 Rabbit Production, 2.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $32.00
Students enrolled in this course will learn how to raise rabbits at a commercial and hobby level. They will learn practical skills such as breeding, feeding and marketing of rabbits.

AGRI - 3301 Live Animal Evaluation, 1.00 Credit
Level: Lower
Applied Learning-Practicum
The efficiency of animal husbandry depends on the ability of an individual to evaluate, judge and select animals based on their productive and reproductive abilities. Communication, both oral and written, makes the judges reasons much more effective.
ANSC - 2002 Dairy Cattle Reprod & AI Tech, 2.00 Credits
Prerequisite(s): ANSC 1204 with D+ or better or VETS 3204 with C or better
Level: Lower
Applied Learning-Practicum, Course Fee $24.00 This course will provide the student with a basic understanding of reproduction and artificial insemination (A.I.) techniques in dairy cattle. The student will gain an understanding of the anatomy of the bovine reproductive tract through examination and palpation of both slaughterhouse specimens and live animal palpations. The student will learn to read sire summaries, use linear scales, and apply recordkeeping approaches and analysis of herd reproductive performance. Common reproductive diseases will be discussed as well as the latest information on heat detection and synchronization programs. The labs and two required field trips provide individual student A.I. training and practice sessions needed for the National Association of Animal Breeders (NAAB) certification.

ANSC - 2114 Dom Animal Anat & Phys, 4.00 Credits
Level: Lower
Applied Learning-Other, Course Fee $24.00, Liberal Arts and Science
This course is a systems approach to the study of anatomy and physiology of common domestic animals, emphasizing Ruminant, Equine, Swine, Canine and Feline as the animal models. The on-line course materials will provide the student with a complete overview of how each body system functions in the maintenance of a normal healthy animal. The on-line course materials will be reinforced in the laboratory where skeletons, models and prosected specimen will allow the student to gain applied perspectives of the gross anatomy and normal physiology. Histologic slides, kodachromes, radiographs and live animals will also be used to enhance student understanding. Computer simulated dissection materials will also be used to provide the opportunity for the students to refine their understanding of the required information.

ANSC - 3003 Feeds and Nutrition, 3.00 Credits
Level: Lower
This course provides the student with an understanding of animal nutrition. Students will learn feeding farm animals for growth, production, and profit, nutrient content and physiological value of feeds; nutrient requirements of farm livestock; physiology of digestion and developing and evaluating rations.

ANSC - 3103 Animal Disease Control, 3.00 Credits
Prerequisite(s): ANSC 1204 with D or better
Level: Lower
In this course, fundamental information on the nature of disease and its control and prevention will be studied. Students will learn the causes, symptoms, prevention and treatment of common diseases as well as to the life cycles, damage, diagnosis, control and treatment of various internal and external parasites.

ANSC - 3103 Livestock Mgmt & Production, 3.00 Credits
Level: Lower
The course introduces the student to the management and production of assorted species of livestock. Breeds of sheep, beef, and swine will be studied as well as the skills in selecting and judging these species. Feeding and management of each of these species, as well as housing and equipment requirements for animals in specific types of operations will be examined. Students will be introduced to diseases and parasites that may be encountered when managing a species-specific livestock operation. Students will also gain insight into different types of marketing used in livestock production.

ANSC - 3203 Dairy Cattle Production I, 3.00 Credits
Prerequisite(s): ANSC 1204 with D or better or VETS 3204 with D or better
Level: Lower
Applied Learning-Field Study Dairy Cattle Production I is an introduction to specific subject matter which influences cattle production units today. Subject matter includes: on-farm disease control and biosecurity, calf and heifer management, milk letdown and physiology of lactation, udder health, basic herdsmanship skills and introduction to Dairy Comp 305 record keeping software.

ANSC - 3204 Dairy Cattle Production II, 4.00 Credits
Prerequisite(s): ANSC 1204 with D or better or VETS 3204 with D or better
Level: Lower
Applied Learning-Field Study Dairy Cattle Production II focuses on dairy farm management analysis to troubleshoot and prioritize production and profitability opportunities. The course includes: developing on-farm observation skills, production records analysis using Dairy Comp 305, monitoring cow and rumen health, nutrition and feeding management and employee management.

ANSC - 3223 Dairy Calf Management, 3.00 Credits
Prerequisite(s): ANSC 2114 with D or better or ANSC 1204 with D or better
Level: Lower
Applied Learning-Field Study This course will provide the student with a basic understanding of the nutritional, environmental and health challenges a calf must go through from birth to weaning stage. Lab sessions will focus on mastering basic calf care skills. Field trips will be incorporated into the laboratories to expose students to different management approaches including custom calf raisers, and large and small herd replacement enterprises. Students will spend two hours per week practicing calf care procedures.

ANSC - 3243 Dairy Management Analysis, 3.00 Credits
Level: Lower
Applied Learning-Practicum Dairy Management Analysis is an overview of the factors that influence dairy cattle production units today. Topics include dairy records analysis, fresh cow management, heifer and calf management, housing and ventilation, economics, profitability factors and employee management. Participation in the Northeast Dairy Challenge interscholastic competition or an assigned farm assessment with presentation is required.

ANTH - ANTHROPOLOGY

ANTH - 1013 Cultural Anthropology, 3.00 Credits
Level: Lower
Gen Ed - Other World Civilizat, Gen Ed - Social Sciences, Gen Ed-World Hist/GLOBAL Aware, Liberal Arts and Science
This course promotes understanding of the world's cultures by providing an introduction to cultural anthropology and the study of contemporary cultures worldwide, with an emphasis on non-Western cultures. This course will introduce the student to anthropological methods, theories and concepts. It is a broad survey of a variety of belief systems, social and family structures, and different ways anthropologists understand individuals and cultures. Case studies are selected for specific ethnographic focus, through which to explore different approaches to life. The experiences of cross-cultural encounters are examined. After completion of this class the student should be able to define basic anthropological concepts, understand theories of cultural anthropology and critically reflect on personal assumptions you may have about human beings and cultural.

ANTH - 5113 Cross-Cultural Encounters, 3.00 Credits
Level: Upper
Gen Ed - Other World Civilizat, Gen Ed-World Hist/GLOBAL Aware, Liberal Arts and Science, Upper Level
This course develops a framework for cross-cultural literacy - understanding different cultural contexts and the dynamics of cross-cultural communication. Attention is paid to the diverse norms, values, and experiences encountered in multi-cultural environments. Primary social, economic, and political institutions or several specific cultures will be examined. The course is writing-intensive and a project is required.

ANTH - 5223 Archaeology - Cities of Fire, 3.00 Credits
Level: Upper
Gen Ed - Social Sciences, Liberal Arts and Science, Upper Level
The discovery of the buried city of Pompeii in the 18th century gave birth to the modern science of archaeology, and at the same time added greatly to our understanding of Roman civilization. "Cities of Fire" is offered to students enrolled in the study abroad program in Sorrento, Italy, and takes advantage of the unique cultural heritage of Campania (the region surrounding the Gulf of Naples). The course is a survey of the techniques of archaeology, the vulcanism of the region, and the history and culture of the Roman civilization in Campania. Field lectures at sites including Pompeii, Herculaneum, Baia, Cuma, Puteoli, Mt. Vesuvius and Napoli enrich classroom presentations, and provide a first-hand experience of the ancient cultures of Greece and Rome. Students investigate specific aspects of Roman architecture, city planning, and culture, and present their findings in research reports during field visits.

ANTH - 5333 Medical Anthropology, 3.00 Credits
Level: Upper
Gen Ed - Other World Civilizat, Gen Ed-World Hist/GLOBAL Aware, Liberal Arts and Science, Upper Level
This course will introduce students to the diversity in health seeking practices and beliefs across the globe. Students will learn how to analyze medical practice, including biomedicine, as a cultural institution. We will explore how culture shapes our perceptions of what it means to be sick or healthy. This course will provide a context for understanding the way in which culture plays an integral role in understanding, maintaining and restoring health. We will also examine how social structures and cultural misunderstandings can lead to inequalities in health outcomes and healthcare experiences.

APSY - APPLIED PSYCHOLOGY

APSY - 1013 Intro to Applied Psych, 3.00 Credits
Level: Upper
This course introduces students to a variety of applications of psychological theories, approaches, concepts, strategies, and skills. Students are provided with a general overview of Applied Psychology and how these differ for other subcategories of psychology. Each of the following areas are explored: Clinical Psychology, Health Psychology, Forensic Psychology, Educational Psychology, Occupational Psychology, and Sports Psychology. Case studies, videos, and other, materials will be used to present each topic and students will gain an understanding of the training involved and specialization of each area mentioned.

ARCH - ARCHITECTURE AND DESIGN

ARCH - 1184 Design Fundamentals 1, 4.00 Credits
Level: Lower
Course Fee $53.00
This course is an introduction to fundamental design, architectural design drawing, written and verbal communication skills and applied drawing techniques. Students are introduced in lecture to design and drawing principles, and techniques and conventions used to develop and communicate architectural ideas. Studio assignments emphasize the relationship between drawing and three-dimensional form and space, and include exercises in basic design and model-making. Topics include ordering systems, spatial relationships, the design process and architectural theory. Students explore and practice, observational sketching, depicting light, texture and depth, analytical drawing, orthographic projection systems, and professional standards for layout, lettering, use of line weights, and dimensioning of architectural drawings.

ARCH - 2014 Computer Visualization, 4.00 Credits
Level: Lower
Applied Learning-Practicum
This is an introductory course that examines the practical and theoretical issues of architectural modeling software (BIM) as a tool for all aspects of the architectural design and development process. Students learn to create and execute projects populated with elements of "process and technique" that will form a foundation tool for sequence courses.
ARCH - 2394 Design Fundamentals 2, 4.00 Credits
Prerequisite(s): ARCH 1184 with C or better or CIAT 1184 with C or better
Level: Lower
Course Fee $53.00
This course offers students the opportunity to pursue a civic engagement project through the Southern Tier Architectural Resource (STAR) Center. Each semester the project(s) for this course will change depending on the projects that the STAR Center receives from the surrounding communities. Students will be given a "real-world" project within the Southern Tier Region to complete with an advising instructor and a client who will be a member of the community in which the project is being completed. The student will produce a final project and present it to the client at the end of the semester.

ARCH - 3003 Environmental Controls 1, 3.00 Credits
Prerequisite(s): ARCH 2014 with D or better
Level: Lower
This course introduces the students to the fundamental principles of mechanical, electrical and plumbing (MEP) systems for small buildings. Students will explore passive and active design strategies and their effects on active MEP building systems. The course will emphasize holistic analyses of sites, buildings and small building systems with respect to geographic region, climate change, sustainability and energy efficiency. The student will develop an understanding of the integration of MEP technologies and systems into the design process, and the relationship of design to environmental performance. The course will involve developing critical thinking and problem solving skills, and the development of effective oral and written communication skills.

ARCH - 3014 Construction Technology 1, 4.00 Credits
Prerequisite(s): ARCH 2014 with D or better
Level: Lower
This course introduces students to the materials, methods and systems commonly used in residential construction. Students will study the inherent qualities of materials and develop an understanding of the properties and integration within a residential structure. The properties of construction and the resulting assemblies will be graphically explored using Building Information Modeling (BIM). Emphasis will be placed on the graphic standards used in the architectural industry and developing a basic understanding of construction documents. As the projects progress, each student will apply their understanding of residential construction technology, materials and the software environment by producing a series of architectural drawings. As the semester progresses, these drawings, which start as schematic architectural drawings addressing issues of design and organization, will develop into contract documents for construction.

ARCH - 3104 Design Studio 1, 4.00 Credits
Prerequisite(s): ARCH 2394 with C or better
Level: Lower
Course Fee $106.00
This course explores the programming, schematic design and design development phases of the architect's design services. This course presents students with a systematic approach to architectural design methods. Methods of graphic thinking are introduced as a means of exploring and evaluating issues related to the design process. Architectural form is investigated relative to human needs and environmental context. Student verbal and graphic communication skills are refined in project presentations.

ARCH - 4013 Municipal Codes & Regulations, 3.00 Credits
Prerequisite(s): ARCH 3014 with D or better or CIAT 3014 with D or better
Level: Lower
This course covers the municipal code review process and definition of model building and zoning codes. The course emphasizes use and occupancy, special use and occupancy, building heights and areas, types of construction, fire-resistive construction, interior finishes, fire-protection systems, means of egress, accessibility, interior environment, energy efficiency, exterior walls, roof assemblies, structural provisions, building materials and systems and existing structures as described in the Building Code of New York State.

ARCH - 4014 Construction Technology 2, 4.00 Credits
Prerequisite(s): ARCH 3014 with D or better
Level: Lower
This course builds on the construction topics begun in Construction Technology 1. The course is focused on construction techniques for commercial buildings. Topics covered include frame, reinforced concrete, pre-cast concrete and building envelope systems. Emphasis is placed on contemporary details and methods of construction. Student evaluations are based on Building Information Modeling (BIM) computer generated projects and periodic tests.

ARCH - 4304 Design Studio 2, 4.00 Credits
Prerequisite(s): ARCH 3104 with C or better or CIAT 3104 with C or better
Level: Lower
Course Fee $106.00
The course concentrates on problem-solving methods for a variety of architectural project types and sizes. Students working individually and in teams explore and document their work through sketches, study models and preliminary working drawings. The students are encouraged to develop skills in the areas of investigating, analyzing and designing architectural problems. This is the second studio course and will help students in preparing for more advanced and challenging studio course work in the curriculum.

ARCH - 4900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
A student may contract for one to four credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

ARCH - 5306 Design Studio 3, 6.00 Credits
Prerequisite(s): ARCH 4304 with C or better and ARCH 4014 with D or better
Level: Upper
Course Fee $106.00, Upper Level
This studio is designed to advance the student's ability to apply and integrate architectural principles and methods to design of buildings and spaces. The exploration and study of architectural design and technology makes connections between theory and practice through the design of buildings and environments that explore the relationship between architecture, building systems, and human experience. Students will be expected to progress through the schematic design and design development phases of short-term and extended design projects.

ARCH - 5901 STAR Center Civic Engagement, 1.00 Credit
Prerequisite(s): ARCH 2394 with C or better
Level: Upper
Applied Learning-Civic Engage, Upper Level
This course will be offered to students who want to pursue a civic engagement project through the Southern Tier Architectural Resource (STAR) Center. Each semester the project(s) for this course will change depending on the projects that the STAR Center receives from the surrounding communities. Students will be given a "real-world" project within the Southern Tier Region to complete with an advising instructor and a client, who will be a member of the community in which the project is being completed. The student will produce a final project and present it to the client at the end of the semester.

ARCH - 6306 Design Studio 4, 6.00 Credits
Prerequisite(s): ARCH 5306 with C or better or CIAT 5306 with C or better
Level: Upper
Applied Learning-Field Study, Course Fee $106.00. Upper Level
This course is intended to develop a sensitivity to historical buildings. Specifically, this course concentrates on developing student critical thinking and problem solving skills associated with historic building projects, guided by treatments set forth by the federal and state governments. Over the course of the semester, students synthesize building research analysis, and documentation in the scope of potential new building program requirements. As warranted, students may formulate schematic design proposals for future use. Projects will involve researching the historical evolution of the building, documentation of the existing, the analysis of building materials and structural conditions, understanding of the building's relationship to its wider physical, social and cultural environment and making appropriate design decisions with respect to future use.

ARCH - 6406 Studio Sorrento, 6.00 Credits
Prerequisite(s): ARCH 5306 with C or better
Level: Upper
Applied Learning-Intl/Dorm Trvl, Upper Level
Studio Sorrento is intended solely for students enrolled in the Third-Year Study Abroad Program in Sorrento, Italy. The course will be structured around the experiences, field trips and other learning opportunities during the semester of study abroad. Particular attention will focus on elements of traditional town design, sustainable building strategies, historic building analysis, and adaptive/reuse of historic structures. Student work for the semester will include: the development of a journal of site visits and analyses, photographic and metric documentation, reflective writing, and small design projects within the Sorrento environment.

ARCH - 6433 Urban Sketching & Journaling, 3.00 Credits
Level: Upper
Applied Learning-Intl/Dorm Trvl, Upper Level
Urban Sketching and Journaling is offered to students enrolled at SUNY at Stony Brook as part of the study abroad program in Sorrento, Italy. The course is designed to augment the architecture students' experience of their semester abroad by developing drawing skills and observational acuity. Emphasis is placed on the advanced use of drawing as an invaluable tool for seeing, learning, thinking, and communicating. Lectures are centered on the use of graphite, pen & ink, and watercolor, for observational sketching and note-taking. Lab exercises will capitalize on the unique urban environments of Sorrento and southern Italy. Students are required to keep a running journal that documents their thoughts and experiences throughout the semester.

ARCH - 7003 Environmental Controls 2, 3.00 Credits
Prerequisite(s): ( ARCH 2123 with D or better or CIAT 2123 with D or better or ARCH 3003 with D or better ) and ( ARCH 3304 with D or better or CIAT 3304 with D or better or ARCH 4014 with D or better )
Level: Upper
Applied Learning-Intl/Dorm Trvl, Upper Level
This course reinforces advanced technical and design strategies to maximize sustainability in large building design, and their relationship to other building service systems. Emphasis will be placed on applications of photovoltaic, thermal and wind systems in a sustainable environmental context. Qualitative and quantitative measures of building environments with a focus on efficient use of energy through integrated design practices will be employed. Other topics of discussion will include commercial building design practices related to MEP, construction and installation practices, spatial and thermal analysis, and sustainability. Case studies and projects will form the basis of instruction.
ARCH - 7306 Design Studio 5, 6.00 Credits
Prerequisite(s): ARCH 6306 with C or better or ARCH 6406 with C or better
Level: Upper
Course Fee $159.00, Upper Level
This studio focuses on the design of buildings and places in an urban setting that require an intense concentration of support systems. The course exploration and study of architectural design, technology, and planning principles is designed to bridge the gap between architectural theory and practice through the design of structures and places for human use and use for exploration. Students will be expected to proceed through the schematic design and design development phases of short-term and extended design projects. Conventional media and three-dimensional computer modeling will be used to define, analyze, and present solutions to complex architectural problems. Assignments in in-class exercises related to design, theory, technology, and criticism will also be used to reinforce topics discussed in class. Civic Engagement Intensive (CEI) sections exist.

ARCH - 8003 Professional Practice, 3.00 Credits
Prerequisite(s): ARCH 4614 with D or better
Level: Upper
Upper Level
The context within which buildings and spaces are created is rapidly evolving as is the way in which architecture and design is practiced. This advanced course is designed to provide the future practitioner with a comprehensive study of the business and practice of architecture and design. Emphasis will be placed on practical skills and usable information that will enhance the student's ability to function within the design professions and/or related disciplines.

ARCH - 8306 Design Studio 6, 6.00 Credits
Prerequisite(s): ARCH 7306 with C or better or CIAT 7306 with C or better
Level: Upper
Applied Learning Creative Work, Course Fee $159.00, Upper Level
This course requires students to conceptualize and develop a comprehensive design solution for a semester-long project that integrates sound architectural design with thorough consideration of site conditions, environmental stewardship, structural systems, building envelope assemblies, building mechanical systems, and regulatory code compliance, including accessibility for the disabled. Emphasis is placed on the ability to make effective design decisions while generating and considering multiple options in a schedule-driven setting. The course will be culminated by a series of milestone presentations throughout the semester. The students will individually present their final, comprehensive design solution to a panel of faculty and visiting professionals, and defend the decision-making processes that gave rise to their solution.

ARCH - 8716 Design Studio 7-Thesis Deftn, 6.00 Credits
Prerequisite(s): ARCH 8306 with C or better
Level: Upper
Applied Learning Creative Work, Course Fee $159.00, Upper Level
This is the first studio course of a two-studio course sequence offered in the final year of the B.Arch. program. The coursework prepares students for the culmination of their undergraduate academic professional preparation in architecture by providing a guided framework that will encourage the student to independently discern, discretely define and plan, research, manage, and successfully complete a comprehensive thesis project. Significant emphasis on research, planning, and iterative investigation of a topical architectural issue frames the project in which students will work closely with a thesis committee composed of a chief faculty mentor, a secondary faculty mentor, and a volunteer member of the profession. Throughout the duration of the semester each student will complete a research plan and a significant research and precedent study that will result in a rigorous and controlled schematic design. The initial output from this course will comprise the first portion of a 2-part publication and design project that will serve as the basis for further exploration, research, and development in the ARCH 8776 course that follows in sequence. The course is structured into a communal lecture section that will encompass weekly seminar discussions, and weekly tutorials on scientific method, design process, and the iterative process. Attendant to the lecture section is a lab section that is led by the primary thesis advisor for each individual student. Periodic, interim, and final critiques are scheduled as a function of the lecture section.

ARCH - 8723 Modern Architectural Theory, 3.00 Credits
Prerequisite(s): FNAT 5303 with C or better and ( ARCH 8306 with C or better or CIAT 8306 with C or better )
Level: Upper
Upper Level
This seminar introduces the student to theories and criticisms of contemporary architecture from the beginnings of the modern period to contemporary issues. This seminar course is designed to be highly interactive and will consist of facilitated discussion, weekly writing assignments, in-class exercises and presentations. Students will have the responsibility of initiating weekly discussion of the assigned readings. In-class discussion includes, discussion and analysis of the central arguments and conclusions of the theoretical constructs presented in the piece made relevant to contemporary and future practice of architecture. Students will prepare a series of long research papers that analyze and synthesize the arguments presented in the selected readings for the course. A biannual presentation will accompany the term paper to engage classmates and invited guests in critical commentary.

ARCH - 8753 Advanced Structural Concepts, 3.00 Credits
Prerequisite(s): CIVL 5213 with C or better
Level: Upper
Upper Level
This course addresses advanced architectural structures, exterior building envelopes and production technologies. It explores structural elements and expands to include more complex forms, materials and systems. Materials covered are: glass, steel and advanced composites. Material performance and detailing of the exterior envelope are emphasized with digital projects utilizing node based parametric programming and pattern based surface development.

ARCH - 8776 Design Studio 8-Thesis Develop, 6.00 Credits
Prerequisite(s): ARCH 8716 with C or better
Level: Upper
Applied Learning Creative Work, Course Fee $159.00, Upper Level
This course is the capstone of the two-semester sequence of architectural design studios. Building upon the thesis research completed during the previous semester in Design Studio 7 – Studio Definition, students will finalize a design program for their chosen thesis project. They will carry out a comprehensive design development study, present their design solution to a panel of faculty and visiting professionals, and defend the decision making process that gave rise to their design. The course is expected to stress competence and care in their technological solutions and in the creation of a livable, efficient, and contextually appropriate structure.

ARCH - 8793 Professional Development, 3.00 Credits
Prerequisite(s): ARCH 8003 with C or better or CIAT 8003 with C or better
Level: Upper
Upper Level
This comprehensive course will enhance the student's exposure to the architect's professional role based on case studies of real-world experiences. It expands upon previously introduced architectural business practices such as marketing, responding to client requests for services, assembling project teams, working with the appropriate consultants, and delivering a project, all within financial constraints of both project and business management. The changing role of the architect in nontraditional practice types and project delivery methods will also be explored. Throughout the course, professional written, verbal and graphic communication skills will be emphasized in relation to their importance in the business setting.

ASDC - ALFRED STU SUCCESS CENTER

ASDC - 1012 College and Life Skills*, 2.00 Credits
Level: Remedial
Remedial
This course will assist students in making the transition to college and in completing collegiate work successfully. In this course the student will learn strategies for: making use of campus resources; self-awareness and exploration; academic success; effective communication on a college campus; and management of time, health, and financial resources. Students will read and respond to articles, participate in class discussions, summarize topics verbally or in writing, and complete a short research project.

ASDC - 1092 Methods of Inquiry, 2.00 Credits
Level: Lower
This college level course introduces students to current and proven research on learning and intelligence. Students will set personal and academic goals and apply methods to reach them through mindsets, critical thinking, and self-management strategies. Students will also be presented with basic information literacy skills, study techniques, as well as effective strategies for critical thinking, problem solving, listening, note taking, test taking, and communication. This course will build on the summer bridge program, incorporate information management aspects, integrate blackboard and include preliminary development of a portfolio.

ASDC - 1201 Structured Learning-Soc Sci*, 1.00 Credit
Level: Remedial
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time. Taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and compliment a student's registered course (e.g. history, psychology, criminal justice). This course will be graded Pass/Fail.

ASDC - 1301 Structured Learning-Eng Tech*, 1.00 Credit
Level: Remedial
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time, taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and compliment a student's registered course (e.g. civil, mechanical, architecture). This course will be graded Pass/Fail.

ASDC - 1401 Structured Learning-Science*, 1.00 Credit
Level: Remedial
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time, taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and compliment a student's registered course (e.g. physics, chemistry, anatomy and physiology). This course will be graded Pass/Fail.

ASDC - 1601 Structured Learning-Computer*, 1.00 Credit
Level: Remedial
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time, taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and compliment a student's registered course (e.g. microcomputer applications, computer programming). This course will be graded Pass/Fail.

ASDC - 1801 Structured Learning-English*, 1.00 Credit
Level: Remedial
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time, taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and compliment a student's registered course (e.g. composition, literature). This course will be graded Pass/Fail.
ASDC - 1901 Structured Learning -Math*, 1.00 Credit
Level: Lower
Pass/Fail, Remedial
This course is supplemental instruction and recitation for students who need more structured study and development time, taught by faculty, professional tutor, and/or student success staff. The instructor develops additional review problems to match homework and topics of need while study skills, specific to discipline, are integrated. This course will coincide with and complete a student's registered course (e.g., college algebra, calculus, statistics). This course will be graded Pass/Fail.

ASDC - 2011 Career Exploration & Planning, 1.00 Credit
Level: Lower
Pass/Fail
This course will assist students with exploring and selecting a college major and/or career goal. The students will learn a decision making model designed to make appropriate, well-informed career/life choices. The students will engage in a variety of assessments using software programs and self-directed career searches. Students will complete out of class assignments designed to integrate self-awareness with career options and will develop their own parallel major plan and conduct and write research paper on majors and career areas. This is a pass/fail course.

ASDC - 2021 Academic & Career Explor II, 1.00 Credit
Level: Lower
Pass/Fail
This course will assist students in exploring and selecting a college major and/or career area. The students will engage in a variety of assessments using software programs and self-directed career searches. Students will complete out of class assignments designed to integrate self-awareness with knowledge of careers and the working world. Students will develop their own networking skills through an informational interview and development of an elevator pitch that highlights their strengths. The students will learn a decision-making model designed to make appropriate, well-informed career/life choices, as well as identify strategies for developing beneficial skills and/or experiences related to their major and/or career area.

ASDC - 2193 Intro to Academic Literacy, 3.00 Credits
Level: Lower
This course focuses on the continued improvement of literacy skills - reading comprehension skills, reading efficiency and flexibility, critical thinking, development of a college-level vocabulary, and the grammar, writing, and study skills needed for success with college course work. Students may be placed in this course on the basis of placement test scores or may take it as an elective to expand their basic literacy skill levels.

ASDC - 2900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
A student may contract for one to four credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study. This will be a credit bearing college-level set of material such as developing critical thinking skills, building information management and technology skills, or building reading strategies.

AUTO - AUTOMOTIVE

AUTO - 1109 Brakes, Steering & Susp Sys, 9.00 Credits
Level: Lower
Applied Learning-Practicum
This course is designed to train students in the service and diagnosis of: automotive brake systems, suspension systems, vehicle alignment, tire changing, tire balancing, and vibration diagnosis. This course includes the construction and testing of electronic circuits, alternators, and starters. The student will also use Ohm's Law to calculate voltage drop, current and resistance in electrical circuits. Air bag, power window motor and power door lock actuator testing and diagnosis will be investigated.

AUTO - 1224 Welding, 4.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $67.00
This course covers all facets of welding as they apply to the servicing of cars and light trucks. Methods covered are: SMAW, GTAW, and GMAW. The safe use of the cutting torch and plasma cutter and “booth time” is supplemented by the use of various processes in the actual repair of vehicle and equipment. The students are required to do outside research for a written and oral report.

AUTO - 1239 Trk Insp, Maint, AC, Clng/Htg, 9.00 Credits
Level: Lower
Applied Learning-Practicum
This course includes lab application of vehicle preventive maintenance and mandated annual safety inspection. Repair techniques to insure driver comfort and engine efficiency through the control of heat are studied as they apply to the truck cooling, heating and air conditioning systems. Analyzing how refrigerated cargo is maintained is a part of this course.

AUTO - 1245 Trk Bsc Electms & Cmptnt Ovrhl, 5.00 Credits
Level: Lower
Applied Learning-Practicum
This course includes the construction and testing of electronic circuits, alternators, and starters. The student will also use Ohm’s Law to calculate voltage drop, current and resistance in electrical circuits. Air bag, power window motor and power door lock actuator testing and diagnosis will be investigated.

AUTO - 1306 Rust Repair, 6.00 Credits
Level: Lower
Applied Learning-Practicum
Encompasses the causes, repair, and prevention of rust formation and develops an awareness in the student that it is his/her ethical duty to make rust repairs properly and economically.

AUTO - 1313 Wrecker Operation & Estimating, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course provides instruction and practical experience in wrecker operation including hook-ups, winching, dolly use, wheel lifts, and safety. It includes instruction and practical experience in auto body damage estimate writing and analysis.

AUTO - 1326 Body Welding, 6.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $87.00
This course covers welding methods used for securing body sheet metal including the thinner, high-strength, low alloy steels. Some of the methods covered in depth are: arc, oxy-acetylene, MIG, and TIG welding. Emphasis is placed on proficiency in repairing steels found in panels and vehicle frames, the use of heat as a straightening medium is investigated, and choosing welding equipment for a body shop, sheet metal fabrication and fuel tank repairs are included.

AUTO - 1343 Refinishing Basics, 3.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $106.00
Develops in the student the basic skills of the refinishing industry and provides the technical knowledge of different types of finishes as well as the sequence of foundation coats.

AUTO - 1344 Recondition & Mechanic Composts, 4.00 Credits
Level: Lower
Applied Learning-Practicum
Designed to acquaint trainees with the proper process of reconditioning a vehicle before customer delivery. Students will learn how to remove and install seat upholstery as well as interior trim panels and hardware.

AUTO - 2169 Truck Electrical, Fuel & Emiss, 9.00 Credits
Level: Lower
Applied Learning-Practicum
This course begins with instruction on basic electrical theory and progresses through the operation and diagnosis of many of the advanced electrical and electronic systems used on modern vehicles. Topics covered include: basic electrical theory, circuit design, common electrical components, fuel, ignition, emission control and electronic engine controls systems.

AUTO - 2309 Brakes, Susp & Structul Anlys, 9.00 Credits
Level: Lower
Applied Learning-Practicum
This unit of instruction is designed to train high school graduates and adult learners in the service and diagnosis of automotive brake and suspension systems as they relate to collision repair. Vehicle alignment, tire balancing, and vibration diagnosis are included. Students will be trained to operate a variety of brake, suspension, and alignment equipment while performing actual repairs, adjustments, and diagnosis. In addition, identification and analysis of structural damage, as well as frame and body measuring techniques are covered. This training will supplement the students’ autobody education in preparation for entry-level employment.

AUTO - 2365 Chassis Electrical, 5.00 Credits
Level: Lower
Applied Learning-Practicum
This unit of instruction is designed to enable trainees to become proficient in chassis electrical testing, repair, and component replacement.

AUTO - 2503 Prev Maint for Hvy Tk & Diesel, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course is designed to teach scheduled preventive maintenance procedures as they apply to trucks and heavy equipment. Vehicle system checks include air brakes, tires, critical fluids and lubrication points. Training is focused on ensuring safety and reliability between scheduled Preventive Maintenance checks.
on the mid-range and heavy duty diesels of the following makes: Cummins, Caterpillar, Detroit Diesel, Mack, John Deere, and Navistar. Covered is the use of special tools and equipment necessary to troubleshoot, maintain, and overhaul these engines and their related components.

**AUTO - 3809 Inspc, Gen Alignment & AC, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- Includes lab application of body panel alignment and mandated annual safety inspection, repair techniques to ensure customer satisfaction with component fit and operation, keeping customer safety in mind when components are replaced, and techniques to ensure customer comfort and engine efficiency through control of heat as they apply to auto cooling, heating and air conditioning systems.

**AUTO - 3819 Auto Body Skls/Computrzed Est, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum, Course Fee $106.00**
- Includes the different states of repair: metal analysis, metal straightening, filling and metal finishing, glass replacement, alignment problems, fender and door replacement, any and all small, quick, one or two day jobs. Also includes how to make manual and computerized estimates.

**AUTO - 4363 Heavy Duty Elec/Hydr Special, 3.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This three credit hour course consists of the service and troubleshooting of electrical systems as they pertain to heavy equipment, truck and diesel. This will include series parallel circuits including 12 and 24 volt systems. Included in this course is the service and troubleshooting of hydraulic systems as found in heavy equipment, truck and diesel. This will include pumps, Motors, valves, motors, actuators, accumulators and other related components in today's hydraulic systems.

**AUTO - 4439 Shop Management & Enhanced Sys, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This course will provide insight into other aspects of the automotive trade. Covered in shop management is repair order writing, duties of a shop adviser, customer relations, customer communications, questioning and follow-up, estimating repair costs, checking for recalls, searching for technical service bulletins, researching new product information, motorist's bill of rights, lemon laws and understanding the nature of the automotive business and reviewing Hybrid vehicles information. The lab portion allows the student to perform as a service manager in one of our many automotive shops. Work scheduling, quality control, maintenance, and record keeping are stressed as part of this program.

**AUTO - 4449 Drive Train Service, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- Study and actual repair of standard, automatic, and automatic transmissions and transaxles with emphasis on overdrives and electronically controlled units. Full coverage of clutches, axles, driveshafts, C-V joints, and 4 x 4 transfer cases, as well as open, limited-slip, and front drive differentials. Extensive hands-on work in a busy "line shop" situation. This is a seven and one-half (7 1/2) week course.

**AUTO - 4603 Heavy Duty Electrical Systems, 3.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This course covers the service and troubleshooting of electrical equipment pertaining to heavy equipment, truck, and diesel. This will include 12-48 volt electrical systems, multiplexing, GPS guidance, and traction motors.

**AUTO - 4613 Heavy Duty Hydraulic Systems, 3.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This course consists of the service and troubleshooting of hydraulic systems pertaining to heavy equipment, truck and diesel. This will include operation of open center and closed center systems, pumps, valves, actuators, accumulators, and the relation of electrical multiplexing and today's hydraulic systems. This course will also include preventative maintenance of hydraulic systems.

**AUTO - 4623 Heavy Duty HVAC, 3.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This course consists of the service and troubleshooting of HVAC (Heating Ventilation & Air Conditioning) as they pertain to heavy equipment, truck and refrigeration trailers for commercial usage. This will include MACS (Mobile Air Conditioning Society) certification review and testing for a national recognized Section 609 certification and basic HVAC systems used in refrigeration trailers.

**AUTO - 4629 Major Refinishing, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This course is designed to further the student's knowledge and practical experience in the use of painting and refinishing equipment, blending paints, metallic finishes, and hard to match colors, correcting paint failures, custom refinishing and how to solve their problems.

**AUTO - 4639 Major Collision Repair, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- Provides instruction in the repair procedures of vehicles considered by appraisers to be totals, or near totals. Study and repair of frame and body damage, suspension repairs. This includes computerized measuring systems, plastic welding, use of structural adhesives, and complete vehicle refinishing.

**AUTO - 4669 Diesel Fuel System Service, 9.00 Credits**
- **Level:** Lower
- **Applied Learning-Practicum**
- This nine credit hour course is intended for heavy equipment, truck and diesel mechanic majors. Coverage will include the fundamentals of diesel fuel systems, both mechanical and computer controlled will be covered. Engine tune-up procedures, and diesel fuel system equipment necessary to troubleshoot, maintain, and overhaul these engines and their related components.
consumed in less than recommended or excessive amounts. These nutritional facts will help answer some of the questions brought forward concerning the relationship between food and heart disease, weight control, preservatives, cancer, athletic performance, vegetarianism, pregnancy and lactation, just to name a few. Beyond these facts will be the understanding of the non-nutrient characteristics of food as related to culture, family and society. Most importantly, this course will present the tools necessary to properly evaluate the purchase and preparation of nutritious foods via personal assessment.

BIOL - 1404 Anatomy & Physiology I, 4.00 Credits

Prerequisite(s): BIOL 1104 with D or better and BIOL 2204 with D or better and CHEM 2984 with D or better

Level: Lower

Applied Learning-Creative Work

This course is intended for students typically in their fourth semester of the two-year Biological Sciences curriculum. The course is designed to prepare the student for transfer to a four-year institution and/or enter the workforce. Students are introduced to the theoretical and practical aspects of preparing and delivering a full-feature (40-45 minute length) presentation on a given topic within the realm of a biological discipline.

BIOL - 2204 General Biology II, 4.00 Credits

Prerequisite(s): BIOL 1104 with D or better

Level: Lower

Applied Learning-Other, Course Fee $15.00, Gen Ed - Natural Sciences, Liberal Arts and Science

A continuation of BIOL 1104 (General Biology I), with emphasis on animal and plant systems, evolution and ecology. Laboratory topics include the study of fascinating mammalian organ systems: digestion, respiration, circulation, homeostasis, reproduction, chemical and nervous control, and musculoskeletal structure and function. Lecture topics include systematic, evolution, ecosystems, and bioenergetics, including human impacts on the environment.

BIOL - 2214 Human Anat & Physiology II, 4.00 Credits

Prerequisite(s): BIOL 1114 with C or better or BIOL 1404 with C or better

Level: Lower

Gen Ed - Natural Sciences, Liberal Arts and Science

This course is a group laboratory exercises to aid in the study of human systems and their physiology. The laboratory sessions are designed to provide students with a basic understanding of the structure and functions of cells, tissues, and organ systems. The goals of the course are to promote an appreciation for the remarkable complexity of our bodies, to develop a proficiency in the use of laboratory equipment and the proper handling of materials, and to foster the development of self-sufficiency in the conduct of laboratory experiments and observations. This course is to be taken either concurrent with, or following completion of, BIOL 2303.

BIOL - 2303 Human Biology Laboratory, 1.00 Credit

Prerequisite(s): BIOL 2303 with D or better *

Level: Lower

Applied Learning-Other, Course Fee $24.00, Liberal Arts and Science

This course is an introduction to the human body systems and their physiology. Human body functions at the cellular, tissue, organ system, and organismal levels are included in the course. Topics include the scientific method, basic chemistry, cell structure and biochemistry, tissues, nervous integration and sensory receptors, the endocrine system, the cardiovascular system and blood, the lymphatic system and immunity, the respiratory system, the digestive system, the urinary system, and the reproductive systems and sexually transmitted infections. Students cannot receive credit for BIOL 2323 if BIOL 1404 or BIOL 1114 is concurrently or has been previously taken.

BIOL - 2504 Anatomy & Physiology II, 4.00 Credits

Prerequisite(s): BIOL 1404 with D or better

Level: Lower

Applied Learning-Other, Course Fee $17.00, Gen Ed - Natural Sciences, Liberal Arts and Science

This course is a continuation of Anatomy and Physiology I (BIOL 1404) and is a study of the gross and microscopic anatomy of various human systems, emphasizing how structure facilitates function. The areas addressed are the endocrine, cardiovascular, lymphatic, immune, respiratory, digestive, urinary, and reproductive systems.

BIOL - 2633 Histotechniques, 3.00 Credits

Prerequisite(s): BIOL 1104 with D or better or BIOL 1404 with D or better or BIOL 1114 with D or better or ANSC 1214 with D or better or VETS 2014 with D or better

Level: Lower

Course Fee $129.00

An applied and theoretical technology course which provides instruction and hands-on experiences in the preparation of tissues for microscopic examination by paraffin, and frozen section and smear techniques. Normal and diseased animal and plant tissues will be used to provide students an opportunity to use a variety of processing tissues. Tissue identification and classification will be discussed as it relates to preparation procedures. Care, maintenance, and use of instrumentation in tissue preparation will be stressed. One-hour lecture and two 2-hour laboratories per week with significant additional supervised time spent in the lab by students.
BIOL - 2801 Environmental Sciences Lab, 1.00 Credit
Prerequisite(s): BIOL 2803 with D or better
Level: Lower
Applied Learning-Field Study, Course Fee $96.00, Liberal Arts and Science
This course is a series of field-oriented laboratory experiences involving analyses of various local ecosystems. Topics to be stressed include identification of organisms, use of environmental monitoring equipment, and collection and interpretation of field data.

BIOL - 2803 Environmental Science, 3.00 Credits
Level: Lower
Gen Ed - Natural Sciences, Liberal Arts and Science
This course is an introduction to the science of ecology and the interrelationship between humans and their environment. The physical environment of the Earth's climate, geographic and geologic systems, and the cycling of minerals and water are described. The biology of populations, species, ecosystems and biomes section deals with organisms and their interactions with one another and their environment is discussed. The world's human populations, and their role in the ecosystems is investigated including the history of human populations, current demographic trends, and projected future population parameters. The impacts of human populations on the environment are covered as well.

BIOL - 2833 Environmental Science, 3.00 Credits
Level: Lower
Applied Learning-Other, Gen Ed - Natural Sciences, Liberal Arts and Science
This course provides an introduction to the science of ecology and the interrelationship between humans and their environment. The physical environment of the Earth's climate, geographic and geologic systems, and the cycling of minerals and water are described. The biology of populations, species, ecosystems and biomes section deals with organisms and their interactions with one another and their environment. The world's human populations and their role in the ecosystem is investigated including the history of human populations, current demographic trends and projected future population parameters. The impacts of human populations on the environment are covered as well. The course also includes a series of field-oriented laboratory experiences involving analyses of various local ecosystems. Topics stressed in the laboratory portion of the class include the identification of organisms, the use of environmental monitoring equipment and the collection and interpretation of field data.

BIOL - 3403 Essentials - Pathopharmacology, 3.00 Credits
Prerequisite(s): ( BIOL 1114 with C or better or BIOL 1404 with C or better ) and MEDR 1113 with C or better and ( BIOL 2214 with C or better * or BIOL 2504 with C or better *) 
Level: Lower
Liberal Arts and Science
This is a lecture-based online course which introduces students to the basics of pharmacology, pathophysiology, and the pharmacologic agents that are utilized in the treatment of diseases. By the end of the course, students will have been exposed to pathophysiology of the different organ systems (including etiology and symptoms), key concepts of pharmacology, regulatory agencies and legislation. A review of pharmacologic agents utilized to treat specific diseases.

BIOL - 4254 General Microbiology, 4.00 Credits
Level: Lower
Applied Learning-Other, Course Fee $29.00, Gen Ed - Natural Sciences, Liberal Arts and Science
This course is designed to provide an introductory survey to the various microorganisms, prokaryotes, viruses, bacteria, and their role in disease. Emphasis is placed on the use of techniques for the identification and isolation of microorganisms, and the role of these organisms in the environment.

BIOL - 4403 Pathophysiology, 3.00 Credits
Prerequisite(s): BIOL 2504 with C or better * or BIOL 2214 with C or better 
Level: Lower
Gen Ed - Natural Sciences, Liberal Arts and Science
This is a lecture-based online course that includes the study of disruptions of normal physiology, processes that bring about these disruptions, and various ways in which the disruptions manifest themselves as symptoms, signs, physical findings, and laboratory findings. The course explores the pathophysiology of genetic diseases, hypersensitivity and autoimmune diseases, infectious diseases, neoplasia, diseases due to physical and chemical agents, disturbances of fluid and electrolyte balance, and endocrine dysfunction.

BIOL - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower
Liberal Arts and Science
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

BIOL - 5003 Genomics, 3.00 Credits
Prerequisite(s): BIOL 6534 with D or better
Level: Upper
Applied Learning-Practicum, Liberal Arts and Science, Upper Level
This is a project-based learning course that will introduce the students to the emerging science of genomics and its implications for human biology, medicine, social policy and individual life path choices in the 21st century. Our genome is the blueprint that encodes all the information we need to develop from a single cell into a hugely complicated functional organism. This course will instruct students how to use bioinformatics tools to analyze genes and their expression. The course will explore techniques used to study genomes, what information is available, and how this information is used to understand how organisms differ or match; how different organisms evolved; how the genome is constructed and how it operates. In addition the course will examine genome structure and function in terms of our future health and wellbeing. The laboratory portion of the course will enable students to use bioinformatics tools to annotate genes from the bacterium Klycococcus coeliclus and to participate in a DNA Barcoding project to catalog living organisms such as http://www.studentindianabarcoding.org/.

BIOL - 5013 Biotechniques, 3.00 Credits
Prerequisite(s): ( CHEM 2894 with D or better or CHEM 2124 with D or better ) and BIOL 2204 with D or better 
Level: Upper
Applied Learning-Practicum, Course Fee $152.00, Liberal Arts and Science, Upper Level
This course focuses on the development of advanced practical skills, competencies, and knowledge in laboratory techniques commonly used across the biological sciences in medicine and industry. It is based on a full "hands on" approach where students undertake a variety of practical exercises designed in collaboration with the area of DNA science, cellular biology, protein analysis and tissue preparation. This course requires the student to use appropriate professional laboratory protocols that will lead to advanced study and employment.

BIOL - 5104 Kinesiology, 4.00 Credits
Prerequisite(s): BIOL 1404 with D or better and BIOL 2504 with D or better 
Level: Upper
Applied Learning-Practicum, Liberal Arts and Science, Upper Level
This course introduces and integrates musculoskeletal anatomy, biomechanics of human motion, and kinesiology. Primary emphasis is placed on functions of the body's defense mechanisms including the functions of the immune systems, laboratory diagnosis, genetics, behavior, and knowledge in laboratory techniques commonly used across the biological sciences in medicine and industry. It is based on a full "hands on" approach where students undertake a variety of practical exercises designed in collaboration with the area of DNA science, cellular biology, protein analysis and tissue preparation. This course requires the student to use appropriate professional laboratory protocols that will lead to advanced study and employment.

BIOL - 5223 Ecology, 3.00 Credits
Prerequisite(s): ( BIOL 1104 with D or better and BIOL 2204 with D or better ) or ( BIOL 1304 with D or better and BIOL 2204 with D or better ) 
Level: Upper
Liberal Arts and Science, Upper Level
The course will examine the biotic and abiotic factors that influence or limit distributions of organisms. Emphasis will be placed on population and community biology, including evolution, genetics, behavior, and community structure. The course will also be exploring the role of different ecosystems. Topics include bacterial culture and staining, metabolism and biochemical reactions, physiological characteristics, patient specimen collection and processing as done in microbiology laboratory and pathogen identification and antibiotic sensitivity determination.

BIOL - 5254 Principles of Microbiology, 4.00 Credits
Prerequisite(s): ( BIOL 2204 with C or better or BIOL 2504 with C or better or VETS 2013 with C or better or VETS 2014 with C or better or VETS 1203 with C or better or VETS 1214 with D or better ) or ( BIOL 1104 with C or better or BIOL 1404 with C or better ) 
Level: Upper
Applied Learning-Other, Course Fee $26.00, Liberal Arts and Science, Upper Level
A survey of microorganisms, their structures, physiology, and identification, with the emphasis on the classification, structure, replication, and evolution. The models of viral pathogenesis, viral diagnosis, prevention, and treatment of viral infection will also be examined.

BIOL - 5503 Virology, 3.00 Credits
Prerequisite(s): ( BIOL 1104 with D or better and BIOL 5254 with D or better ) or BIOL 4254 with D or better 
Level: Upper
Applied Learning-Practicum, Liberal Arts and Science, Upper Level
This course is designed to explore current concepts in the field of virology, with the emphasis on classification, structure, replication, and evolution. The models of viral pathogenesis, viral diagnosis, prevention, and treatment of viral infection will also be examined.

BIOL - 6003 Molecular and Cell Biology, 3.00 Credits
Prerequisite(s): BIOL 6534 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This course will provide a firm foundation on the principles of modern molecular and cellular biology. The first half of the course will focus on the molecular structure and function of DNA, RNA and proteins and the tenets of the central dogma of molecular biology. The second half of the course will focus on the fundamental processes that enable cells to grow, move, and communicate as well as introduce the processes underlying tissue formation and cell death. During recitation the students will read and analyze primary journal articles, create a short oral presentation on a topic and submit a short "News and Views" article written for a general audience.

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This course is an in-depth exploration of the cause and effect relationship between diet and common disease processes. This course will examine nutritional epidemiology, nutritional intervention and the research that substantiates both. The relationship of nutrition to common maladies, such as: obesity, diabetes mellitus and cancer, will be compared. Additionally, specific disease processes will be evaluated from a nutritional perspective, including: neurodegenerative, cardiovascular, gastrointestinal and bone disease. The course will conclude by determining the nutritional and dietary factors necessary for proper healing and recovery.

BIOL - 6403 Advanced Pathophysiology, 3.00 Credits
Prerequisite(s): BIOL 2504 with D or better or BIOL 2214 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This internet-based course examines abnormal human physiology in a clinical context, with an emphasis to develop specific intellectual skills related to nursing and other allied health professions. Pathophysiology is considered from a systemic perspective, with emphasis given to cellular abnormalities, disruptions of homeostasis, infectious disease, inflammation, and disorders of the blood, immune, cardiovascular, respiratory, digestive, endocrine, neurological, musculoskeletal, integumentary, renal, genitourinary, and reproductive systems. The course concludes with case study presentations to allow students to derive and discuss correlations among clinical healthcare or other related disciplinary settings.

BIOL - 6534 Genetics, 4.00 Credits
Prerequisite(s): BIOL 2504 with C or better or BIOL 1304 with C or better or BIOL 1404 with C or better or VETS 1214 with C or better
Level: Upper
Applied Learning-Other, Course Fee $104.00, Liberal Arts and Science, Upper Level
A study of heredity and the gene from the perspective of the individual, the cell, and the population. The human species will be emphasized along with recent advances in biotechnology. Laboratory work includes Drosophilia breeding, polymerase chain reaction and DNA electrophoresis.

BIOL - 7723 Research Methods in Health Sci, 3.00 Credits
Prerequisite(s): BIOL 2204 with C or better and CHEM 4524 with C or better
Level: Upper
Liberal Arts and Science, Upper Level
This course familiarizes the student with laboratory protocols, safety, and experimental design. It covers searching for, reading, writing, and presenting scientific literature. Students also learn skills for exploring and obtaining careers in the health professions.

BLCT - BUILDING CONSTRUCTION
BLCT - 1002 Intro to Construction Safety, 2.00 Credits
Level: Lower
This course explores the safety hazards associated with the construction trades. Part of this course will follow the training requirements set forth by the Occupational Safety & Health Administration (OSHA) Construction Safety Outreach Program, including OSHA’s Focus Four Hazards, personal protective equipment, and health hazards in construction. During this course students may have the opportunity to obtain an OSHA 10 card for the construction industry. Students will develop an understanding of construction safety beyond basic OSHA 10 instruction.

BLCT - 1132 Estimating I, 2.00 Credits
Level: Lower
This course develops mathematical concepts and application skills necessary for the carpenter's estimating in the masonry and wood framing trades. Students will learn to calculate material sizes, rough opening sizes and procedures for framing floor, wall and ceiling systems and power tool safety.

BLCT - 1242 Framing II, 2.00 Credits
Prerequisite(s): BLCT 1232 with D or better
Level: Lower
This course is a continuation of concepts taught in BLCT 1232. The course will include backing, blocking, and nailing, and metal stud framing. Roof framing concepts will be introduced. Students will study roof types and terminology with a concentration on common rafter layout and truss installation. Truss roof design, along with common fastening techniques and building codes relevant to the industry will be covered.

BLCT - 1302 Blueprint Reading & Grades I, 2.00 Credits
Level: Lower
This course is an introduction to different types of construction plans and how they represent finished grades of buildings. This course will present the parts of blueprints in detail including symbols, the title block, and grid lines. Students will be introduced to site plans and the concept of preparing graded surfaces using heavy equipment. Identification of construction stakes and interpretation of marks on each type of stake will be covered. The process for grading slopes will also be discussed.

BLCT - 1312 Introduction to Earth Moving, 2.00 Credits
Level: Lower
This course provides a broad introduction to the processes of planning and executing earth moving activities on various types of construction projects. The uses of heavy equipment such as bulldozers, scrapers, excavators, and loaders will be covered.

BLCT - 1332 Preventive Maintenance Checks, 2.00 Credits
Level: Lower
This course introduces new operators to equipment systems and their preventive maintenance procedures. Emphasis is placed on developing daily maintenance routines based on manufacturer's guidelines. The course content explains the reason for daily checks in relation to equipment uptime and longevity.

BLCT - 1332 Operations Part I, 2.00 Credits
Level: Lower
This course covers the use and maintenance of the most commonly used machines on a construction site: The course emphasizes safe operation as well as basic operating techniques for each machine. This will include safe setup of machines as well as excavating foundations, septic systems, driveways, etc.

BLCT - 2202 Insulation and Drywall, 2.00 Credits
Level: Lower
This course is an introduction to thermal and acoustical insulation, condensation and required ventilation in residential building. This course also includes drywall products and installation of drywall and concealing fasteners and joints (finishing) drywall. Students learn various tools of fasteners and related tools to the industry.

BLCT - 2206 Building Construction Lab II, 6.00 Credits
Prerequisite(s): BLCT 1206 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $93.00
This hands-on applied learning lab is a continuation of skills learned in BLCT 1206. It will include the application of practices used in residential and light commercial building construction and wood fabrication. Students will learn to safely set up and operate stationary power tools, as well as construction equipment commonly used on the jobsite. Students will develop the ability to interpret construction drawings and assemble projects based on shop drawings and models. There will be continued advancement in the application of residential and light commercial building practices. This course will have an emphasis on interior and exterior wall systems. Subject matter will include masonry, residential wall systems, and shop fabrication. Much of the lab will be conducted on genuine construction job sites. Throughout the semester, students will be required to demonstrate learned competency through a series of proficiency assessments.

BLCT - 2212 Exterior Building Envelope, 2.00 Credits
Level: Lower
This course provides the student with basic knowledge of windows, doors, and weather resistant barriers in residential construction. Subject matter will include applicable terminology, comparisons, and installation methods. Attention will be given to proper flashing techniques, code requirements, and associated condensation issues inside conventional wall systems. A survey of developing technologies in wall systems will also be conducted.

BLCT - 2232 Siding and Cornices, 2.00 Credits
Level: Lower
This course provides the student with basic knowledge of siding and cornice systems in residential construction. Subject matter will include applicable terminology, comparisons of various siding and cornices, and installation methods. Emerging technologies in exterior cladding systems will also be covered.

BLCT - 2242 Wood Products & Fabrication, 2.00 Credits
Level: Lower
This course examines the processing of lumber, (including the working parts of a tree, hardwoods vs. softwoods, different methods of sawing and drying to produce useful building products, etc.), the manufacture of wood panel products (structural and nonstructural), and engineered wood products. Students will learn how these products are used in building trades and the installation requirements unique to these engineered wood products. Students will also be trained in the proper setup and safe use of stationary power tools.
COURSE DESCRIPTIONS

BLCT - 2252 Intro to Print Reading & Estim, 2.00 Credits
Prerequisite(s): BLCT 2222 with D or better
Level: Lower
This course covers basic construction communication through residential print reading. Students will learn how to perform material takeoffs and apply costs based on construction drawings. The course will also cover common scales, symbols, line types, and abbreviations used in construction drawings. Basic construction drafting principles will be introduced. The course will familiarize students with the purpose of building codes and zoning laws and how they are demonstrated in a set of working drawings for a house.

BLCT - 2262 Masonry, 2.00 Credits
Prerequisite(s): BLCT 1212 with D or better
Level: Lower
This course reviews, reinforces, and builds on trade aspects and skills introduced in BLCT 1212. The class will cover the evolution of the masonry trades, its tools and materials. Bricklaying and stone veneers, the basics of plasterwork, and LEED and Green concepts will be introduced in this course as they pertain to masonry. The concepts and practices that make masonry a safe building material will also be covered.

BLCT - 2302 Work Zone Safety, 2.00 Credits
Prerequisite(s): BLCT 1002
Level: Lower
This course presents topics for safety on the construction site. A broad range of work zones involving heavy equipment will be covered. Emphasis is given to residential, commercial and highway construction. This course covers occupational safety and health standards and The Manual for Uniform Traffic Control Devices.

BLCT - 2306 Heavy Equipment Lab II, 6.00 Credits
Prerequisite(s): BLCT 1306 with D or better
Level: Lower
Applied Learning-Practicum
This course continues the use of grade setting equipment and heavy equipment. Emphasis is placed on work site safety and development of job skills. This hands-on applied learning lab will include various heavy equipment operations, performing site layout, grade settings, and the use of labor skills utilized in the construction industry. Throughout the semester, students will be required to demonstrate learned competency through a series of proficiency assessments.

BLCT - 2312 Blueprint Reading & Grades II, 2.00 Credits
Prerequisite(s): BLCT 1302 with D or better
Level: Lower
This course presents proper practices for setting grades off benchmarks and describes methods of setting grades using various types of levels. The student will be taught how to read and interpret construction plans to determine grading requirements. Students will review basic grading operations, site prep, New York State Code rule 753, contours, establishing grades, reading and understanding site plans.

BLCT - 2322 Equipment Preventative Maintnc, 2.00 Credits
Level: Lower
This course covers preventative maintenance responsibilities including specifying basic equipment subsystems and major mechanical systems; knowing how and when to service equipment; and how and when to complete routine inspections of equipment.

BLCT - 2332 Operations - Part II, 2.00 Credits
Prerequisite(s): BLCT 1332 with D or better
Level: Lower
This course continues the study of tractors, dump trucks, and front-end loaders. Safe operation practices as well as preventive maintenance requirements will be covered for each piece of equipment. Common uses of each piece of equipment and their attachments will also be discussed.

BLCT - 2342 Soils, 2.00 Credits
Level: Lower
This course describes basic soil classification methods, details factors affecting classification, and presents soil density and compaction requirements for highway and building construction.

BLCT - 2352 Compaction & Stabilization, 2.00 Credits
Level: Lower
This course presents the use, safe operation, and specialized maintenance of compaction equipment to include pneumatic tire compactor, steel-wheel compactor, vibratory compactor and sheepsfoot compactor. The use of compaction and stabilization equipment for leveling and compacting soils, compacting cement and asphalt will be explained and demonstrated. A discussion of soil stabilization methods and erosion control methods will be included.

BLCT - 3302 Blueprint Reading & Grades III, 2.00 Credits
Prerequisite(s): BLCT 2312 with D or better
Level: Lower
This course covers the equipment and supplies required to perform structural work. Discussions include the following topics: bridge types and materials, bridge substructures, bridge superstructures, structural concrete and structural steel. Reading and interpreting site drawings. The course will also cover common scales, symbols, line types, and abbreviations used in construction drawings. Basic construction drafting principles will be introduced. The course will familiarize students with the purpose of building codes and zoning laws and how they are demonstrated in a set of working drawings for a house.

BLCT - 3306 Heavy Equipment Lab III, 6.00 Credits
Prerequisite(s): BLCT 2306 with D or better
Level: Lower
Applied Learning-Practicum
This course builds on the content of HEQ lab part II. Additional highway and bridge construction techniques, as well as advanced pieces of heavy equipment will be introduced. New equipment includes a floating crane, a drill, a concrete batcher, and additional grading equipment. Students will practice with record keeping, estimation and project management.

BLCT - 3312 Introduction to Grading, 2.00 Credits
Level: Lower
This course contains information using various grading instruments and tools. A laser level, engineer's level, and GPS are used to establish grades for surface and sub-surface construction sites. Students will place and correctly mark appropriate grades stakes used at industry standard work sites.

BLCT - 3322 Advanced Operations, 2.00 Credits
Prerequisite(s): BLCT 2302 with D or better
Level: Lower
This course presents the use, safety operation, and maintenance of excavators, trucks, and trailers. The course content will explain and demonstrate the use of excavators in ditching, grading, and slope-finishing operations, describing various operating techniques, and describes the types of trucks used in highway/heavy construction; these include rigid-frame trucks, such as dump trucks, transit-mix trucks, and tractor-trailer trucks. The trailers discussed include bulk hauling and flatbed trailers. Truck controls and components, preventive maintenance and operation, and required licensing regulations are also covered. This course will continue to reinforce the operation of backhoes, bulldozers, and front-end loaders.

BLCT - 3332 Highway Surfaces, 2.00 Credits
Level: Lower
This course includes the processing, preparation and application of asphalt and concrete to a highway surface. Also covered is the operation of asphalt pavers and all equipment required to perform paving and concrete applications.

BLCT - 3342 Construction Proj Supervision, 2.00 Credits
Level: Lower
This course will discuss the principles of project planning, scheduling, estimating, and management. The student will practice different roles and skills required for supervising personnel. Students will be required to understand and utilize computer-based applications during the course.

BLCT - 3352 Trackd Finishing & Grading, 2.00 Credits
Level: Lower
This course includes the use of tracked equipment utilized in the process of finishing and grading of a construction site. Types of equipment available, proper selection and operating techniques will be discussed.

BLCT - 3413 Blueprint Reading-Bldg Construct, 3.00 Credits
Corequisite(s):
Level: Lower
This course covers instruction in blueprint reading, concentrating on plumbing, building blueprints, and instruction in the use of the architect's scale for taking measurements. The course covers all components of a wood frame structure including foundations. Students will be taught the proper installation of piping and fixtures so as not to jeopardize the building's structural integrity.

BLCT - 3423 Pipe Fitting - Math Estimating, 3.00 Credits
Corequisite(s):
Level: Lower
This course covers basic math and materials estimating the plumbing trades. Pipe fitting math is practiced and applied to ensure proper plumbing drainage, as well as water and gas line pipe length installations. Material lists and job estimating is also taught as it pertains to various plumbing systems and fixtures. The students are given instruction on materials mark up for profit, proper customer billing, and required income and sales tax as it pertains to a self-run plumbing business.

BLCT - 3433 Cop Pipe & Tub, Water Sys Des, 3.00 Credits
Corequisite(s):
Level: Lower
This course covers the study and installation of various types of copper pipe and tubing and proper methods of joining. Also includes instruction on fitting use and proper code applications. The methods of testing potable water lines are also covered.

BLCT - 3443 Drainage Systems & Piping, 3.00 Credits
Corequisite(s):
Level: Lower
Applied Learning-Practicum
This course covers the instruction in the design, joining, installation, and proper application of various types of drainage piping used in drainage and venting systems. Also covered will be instruction and study of public and private sewage systems, their make-up, various aspects of troubleshooting and maintenance.

BLCT - 3453 Plumb Trade History & Safety, 3.00 Credits
Level: Lower
This course covers the study of safety practices and OSHA training related to the plumbing trades. All students obtain a 10 hour OSHA training card upon successful completion of the course. The history of plumbing and how plumbing systems and codes originated is covered. This course also covers the instruction in the proper care, use, and application of various hand and power tools used in the plumbing trade.

BLCT - 3463 Watr Heats-Plumb Fix Inst/Rpr, 3.00 Credits
Corequisite(s):
Level: Lower
This course covers the instruction and study of selection and installation of water heaters for industry standards. Instruction is also given on gas and electric water heater troubleshooting and repairs. This course also covers the instruction of plumbing fixture specifications and installation. Fixure troubleshooting and repair is also covered in this course.

BLCT - 3473 Heating Fuels-Comb Theo&Troubl, 3.00 Credits
Prerequisite(s): BLCT 3453 with D or better
Level: Lower
This course also covers the instruction in the proper care, use, and application of various plumbing systems and fixtures. The students are given instruction on materials mark up for profit, proper customer billing, and required income and sales tax as it pertains to a self-run plumbing business.

BLCT - 3483 Electrical Fundamentals, 3.00 Credits
Prerequisite(s): BLCT 3453 with D or better
Level: Lower
The objective of this course is to develop knowledge of electricity and the units used to describe and measure it. The course will also show how different types of electrical circuits function and what different electrical components do in those circuits. Special emphasis is placed on temperature controls and switching. Elemental wiring diagrams are introduced.

BLCT - 4183 Sheet Metal Trade Safety, 3.00 Credits
Preerequisite(s): BLCT 3453 with D or better
Level: Lower
This course covers instruction in the proper use and application of various hand and power tools used in the sheet metal trade. Sheet metal trade and tool safety is also covered in this unit. Students will be introduced to different sheet metal types and their proper applications as well as mechanical drawing. Students will develop and lay out patterns for sheet metal to be cut and formed.

BLCT - 4203 Air Cond Components & Install, 3.00 Credits
Level: Lower
Students will learn about air conditioning components and accessories. Students will learn how to install air conditioning including pressure testing, evacuation, and charging.

BLCT - 4213 Air Conditioning Fundamentals, 3.00 Credits
Level: Lower
This course teaches the fundamentals of air conditioning and how the components of the system work together to perform the cooling process. This includes an examination of types of systems and detailed layout of the types and performance of evaporators and compressors.

BLCT - 4223 Air Cond Perl & Trou & Ht Pump, 3.00 Credits
Level: Lower
This course teaches electrical and mechanical troubleshooting capabilities that are usable in real-life applications. Students will also study heat pumps and a variety of applications in which they are feasible.

BLCT - 4233 Heat Loss & Heat Gain, 3.00 Credits
Prerequisite(s): BLCT 3523 with D or better
Level: Lower
Students will determine the heat loss and heat gain in a residential or small commercial building, which would allow a technician to determine what size equipment and to select and size heating and cooling equipment and diffusers.

BLCT - 4243 Refrigeration Handling Cert, 3.00 Credits
Level: Lower
This course prepares students to take the EPA Refrigerant Handling Certification test.

BLCT - 4253 Residential Duct System Design, 3.00 Credits
Prerequisite(s): BLCT 4233 with D or better * Level: Lower
Students will learn the fundamentals of duct system design as it applies to residential forced air heating and cooling systems. This includes an in-depth look at blower performance and equipment which affects airflow in ductwork.

BLCT - 4302 Basic CAD-Residential Drawing, 2.00 Credits
Prerequisite(s): BLCT 3622 with D or better
Level: Lower
This is a computer-based course of instruction that provides the student with training on basic computer aided drafting (CAD) techniques. This course utilizes AutoCAD, incorporating the application of projects and the AutoCAD commands that allow the student to learn at their own pace. There will be an emphasis on developing preliminary CAD residential blueprints.

BLCT - 4303 Interior Surfaces, 3.00 Credits
Prerequisite(s): BLCT 3323 with D or better
Level: Lower
This course covers the installation of finished ceiling, floor, and wall materials as well as the principles of stair building. The student will install floor and wall materials as well as calculate, cut and assemble stair parts in the laboratory.

BLCT - 4306 Building Construction Lab IV, 6.00 Credits
Prerequisite(s): BLCT 3606 with D or better
Applied Learning-Practicum
This hands-on applied learning lab is a continuation of skills learned in Building Construction Lab III. Subject matter expands on an understanding of construction systems within the carpenter’s discipline and links other aspects of the construction industry to better prepare students for the job market. Students will produce a finish-quality cabinet, develop skills in the installation of interior finishes, and learn about mechanical systems to include electrical and plumbing. Students will also explore career paths in the construction industry which may include commercial construction, green building, small business ownership, and more. Much of the lab will be conducted on genuine construction job sites. Throughout the semester, students will be required to demonstrate learned competency through a series of proficiency assessments.

BLCT - 4332 Green Building & Bldg Science, 2.00 Credits
Level: Lower
This course is a study in the concepts of green building and building sciences, which includes alternative building techniques designed to allow building practices that result in energy efficient, healthier and economically sustainable buildings. Students will learn about alternative sources of heating and cooling, electricity, water efficiency and alternative building materials. Students will employ critical thinking skills in the study of building science and learn the concepts behind moisture and thermal control and building envelope systems. Course content also includes study of energy efficiency rating systems such as LEED (Leadership in Energy and Environment Design) and its impact on the current construction industry.

BLCT - 4342 Mechanical Systems, 2.00 Credits
Level: Lower
This course is an overview of plumbing, HVAC, and electrical installation to develop job site coordination and cooperation among various trades working at a construction site. Students will develop an understanding necessary to perform fundamental tasks with regard to electrical and plumbing.

BLCT - 4352 Interior Finishes, 2.00 Credits
Level: Lower
This course is the study of interior finishes used in the building trades. Students will learn terminology and techniques and employ critical thinking skills in the study of wall and ceiling finishes, ceramic tile, wood flooring and resilient tile. Study also includes finish cabinet installation as well as countertop installation, including plastic laminate, solid surface and granite tops. Safe handling of materials, tools and equipment will be included in this course of study.

BLCT - 4362 Cabinetry, 2.00 Credits
Preerequisite(s): BLCT 3453 with D or better
Level: Lower
This course introduces students to cabinet construction. Course content includes cabinet designs, components needed for fabrication, kitchen layouts, and cabinet installation. This course also explores a variety of countertops and how they are manufactured and installed.

BLCT - 4372 Timber Framing, 2.00 Credits
Level: Lower
This course will focus on the progression of timber framing traditions and practices from the Far East, Europe, and America. We will begin with an in-depth look at the centuries-old techniques employed in timber framing, and then follow the progression through braced-frame and balloon frame buildings. Layout procedures covered and employed include scribe rule, centerline, and square rule. Specific engineering principles and appropriate joint design will be thoroughly covered.

BLCT - 4402 Wheeled Finishing & Grading, 2.00 Credits
Level: Lower
In this course students will learn how motor grader controls work and function at industry standards as well as the various types of controls for motor graders. Students will learn about wheeled dozers and their effects as well as various controls and types. Students will learn about wheeled excavators and how they are used in grading.

BLCT - 4406 Heavy Equipment Lab IV, 6.00 Credits
Preerequisite(s): BLCT 3306 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $136.00
This applied learning lab builds off skills acquired in HEO Lab pt. III. Students will gain understanding of underground excavation while maintaining proper grade from a pipe layer. Students will also use dual sloping lasers to industry standards. Students will setup and utilize GPS systems while safely operating a motor grader. Job management and completion of day-to-day operations on a construction site while following all safety standards in an organized manner will also be included.

BLCT - 4412 Finish Processes, 2.00 Credits
Level: Lower
In this course, students will learn about the work site finish processes for sub-surface and surface finishing methods and techniques. Also covered in this course: sub-surface/ surface piping and drainage systems, materials used, equipment used and interpretation of production requirements/specifications.

BLCT - 4422 Proj. Management & Support, 2.00 Credits
Level: Lower
This course will build on the concepts from Construction Project Supervision. Students will use Gantt charts, spreadsheets and project management tools to track project costs and completion dates. Computer-based technology will be utilized during the course. Leadership techniques will also be discussed.

BLCT - 4432 Advanced Safety, 2.00 Credits
Level: Lower
This course teaches advanced safety techniques and requirements for heavy equipment operators. Emphasis is placed on organizing and conducting safety meetings. OHSA hazardous material requirements and safe operation of equipment will be discussed. Safety reporting, inspections, and investigations will also be covered.

BLCT - 4442 Machine Control Technology, 2.00 Credits
Level: Lower
This course discusses advanced grading techniques utilizing both indicate and machine control technology. The use of the dual slope laser in conjunction with machine-mounted receivers will be reinforced. The course also describes the available technology and discusses its use in the field.

BLCT - 4482 Construction Entrepreneur, 2.00 Credits
Level: Lower
This course will explore entrepreneurial opportunities available in the construction industry. The course will include an overview of the basic requirements of ownership of a small business. Particulars for financing, law, regulation, permitting, insurance, and employee payroll will be discussed. In addition, students will study the relationships between general contractors, vendors, and subcontractors.

BLCT - 4492 Commercial Construction, 2.00 Credits
Level: Lower
This course is a study of the methods used in commercial construction. Course study includes commercial print reading, foundations, structural practices, exterior and interior finishes, and roofing systems. Students will study different employment and career opportunities associated with the commercial construction industry. Students will engage critical thinking skills in the study of safety issues and how to correct them in relation to commercial construction.

BLCT - 4502 ACI Concrete Testing, 2.00 Credits
Prerequisite(s): BLCT 3706 with D or better
Level: Lower
This course presents the student with the proper knowledge and techniques to perform American Concrete Institute (ACI) quality control field tests on freshly mixed concrete and masonry grout. Upon completion, the student may elect to take the ACI field technician exam  provided by a qualified ACI examiner.

BLCT - 4506 Masonry Construction Lab IV, 6.00 Credits
Prerequisite(s): BLCT 3706 with D or better
Level: Lower
Applied Learning-Practicum
This course builds upon the skills learned in BLCT 3706 - Masonry Construction Lab III. Emphasis will be placed on advanced principles and further development of skills used in masonry construction operations to safely perform layout, measurement, cutting, and installation processes. This hands-on applied learning lab will include masonry and forming work on real-world projects and authentic constructions sites. Throughout the semester, students will be required to demonstrate learned competency through a series of proficiency assessments.

COURSE DESCRIPTIONS

231
BUAD - 4053 Business Law II, 3.00 Credits
Level: Lower
This course is an examination of the law of sales, commercial paper, agency-employment relationships, business organizations and government regulation of same. Article 2 of the UCC is used in the sales area with special attention paid to contract formation, title and risk of loss, performance and product liability. In examining commercial paper, Article 3 of the UCC is referenced with emphasis on function and form, holders in due course and liability and discharge. Attention is also given to employer/employee relationships, and distinguishing between sole proprietorships, partnerships, limited liability companies and corporations. Finally, government regulation of business is examined, especially in the areas of anti-trust and restraint of trade.

BUAD - 4133 Investments, 3.00 Credits
Level: Lower
This course is designed to be an introductory course in investments. Topics covered are sources of information, establishing investment goals, investment returns and risks, time value of money, investing in common stocks, bonds, and mutual funds, tax aspects of investing, analysis of financial statements, portfolio management techniques, and introduction to futures and options.

BUAD - 4193 Insurance and Risk Management, 3.00 Credits
Level: Lower
This course will describe the techniques a financial planner/risk manager/consumer will use to analyze risk and assess alternate strategies for managing risk. The course begins by examining the pervasive nature of risk and its impact on both the individual and society. It also demonstrates the ways in which insurance can be used to deal with the problems posed by such risk. The course is designed to be consumer oriented with the main emphasis on the role of insurance in the personal risk management framework. The course can be useful in preparation for a career in the fields of life insurance, health and disability insurance, as well as property and casualty insurance.

BUAD - 4203 Intro Personal Financial Plan, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course is an introduction to personal finance covering those areas that are necessary for an individual to make better financial decisions throughout their lifetime. Topics include: developing financial statements, plans, budgets, time value of money, money management, credit management, tax planning, insurance, investments, retirement planning, and estate planning. Computer, business calculator applications, and case studies will be used throughout the course. The creation of a comprehensive financial plan will be required.

BUAD - 4403 Business Computer Applications, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course will introduce the student to multiple aspects of business computer applications including the representation, storage, manipulation, and use of digital information. Topics include: hardware applications; information collection; research methods; and using digital information to enhance presentations in the workplace. This course prepares students to work with Microsoft Office in a career setting. Students will be introduced to key ethical issues they will face in the context of using information technology. Students will develop electronic documents, spreadsheets, and databases. Students will also develop and present an electronic presentation in order to document the students' competence applying business solutions.

BUAD - 5003 Management Communications, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better or BUAD 2033 with D or better
Level: Upper
Applied Learning-Practicum
This course is designed to provide the student with the range of communication issues a manager will face in the future. Enduring issues on how to write and speak effectively and successfully a communications strategy as well as how to make the best use of telecommunications technology will be explored. Through lecture and application, the student will study such areas as handling feedback, managing meetings, communicating change, communicating with diverse populations and external audiences. Special emphasis will focus on how to use communications to achieve an organizational mission, how to adapt their communications to the specific needs of their audiences, and how to prepare for intercultural communication challenges.

BUAD - 5013 Principles of Leadership, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Upper Level
This course is an examination of the theory, practice, and principles of leadership within the realm of management. Major topics include the evolution of leadership theory, an examination of the major leadership theories operating in modern organizations, and the impact of each on organizational effectiveness. The development, refinement, and application of effective leadership principles and skills are also examined. Students will be expected to analyze the spectrum of leadership theories and formulate opinions as to the most effective and efficient forms of leadership given a specific situation or organizational context.

BUAD - 5023 Human Resource Management, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Upper Level
This course provides students with an understanding of human resource management, and how they can improve their use of human resources through management tactics. It will discuss what human resource management contributes to the organization in terms of effectiveness and competitiveness. Discussion and research will take place on some of the challenges and workforce issues facing the student in this area. Some of the topics covered include equal opportunity and the legal environment, strategic human resource planning, recruiting and selection, staffing, training and development, compensation, performance appraisal, employee and labor relations, and workplace safety.
COURSE DESCRIPTIONS

BUAD - 5033 Retirement Planning, 3.00 Credits
Prerequisite(s): BUAD 4203 with D or better
Level: Upper
This course provides an overview of the retirement planning process. It will describe the ongoing, systematic procedures a financial planner will utilize to assist a client in establishing meaningful retirement objectives and creating appropriate strategies. Topics will include employer-sponsored retirement plans, Social Security, Medicare, post retirement income, health and quality of life issues, as well as investment, estate, and tax planning strategies.

BUAD - 5043 Business Ethics, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
This course explores the complex nature of ethical problems in business for decision involving ethical issues. Topics include ethical concepts, personal integrity, individual and collective conscience, company loyalty, and responsible behavior as they impact the decision process in the functional areas of business. It integrates perspectives from a variety of disciplines, including not limited to, philosophy, law, management, economics, marketing, and public policy. Coursework is designed to illustrate the ethical process applicable in a business setting while considering policies concerning employees, customers, and the public while building trust, commitment, and effort within the business organization.

BUAD - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Upper Level
A student may contract for one to six credits hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairman. The instructor and student will confer regularly regarding the process of the study.

BUAD - 6003 Managerial Finance, 3.00 Credits
Prerequisite(s): ( ACCT 1124 with D or better and ACCT 2224 with D or better ) or ACCT 5043 with D or better
Level: Upper
Upper Level
This course is a comprehensive examination of the theoretical and practical approaches to financial management. Analyzing, planning, controlling investment and short and long term financial goals are examined. Topics include: the financial environment, risk and rates of return, capital budgeting techniques, the cost of capital and capital structure, analysis of financial statements, financial planning and control, and ethics in finance.

BUAD - 6113 Strategic & Creative Prob Solv, 3.00 Credits
Prerequisite(s): TMGT 7153 with D or better or BUAD 3153 with D or better
Level: Upper
Upper Level
The focus of this course is the analysis of issues that managers typically address in technology-based environments and application of creative problem solving techniques. Emphasis is on fostering creative thinking as a way to approach and solve problems, and analysis of personal thinking styles. Problem, evaluation, and decision analysis techniques will be used. Preparation and presentation of written and oral reports is required. The course offers an opportunity for students to practice communication of ideas and accomplishments through informal discussion, formal presentation, team decision making and team learning using collaborative efforts to achieve a common goal. The applied problems explored in this course are based upon real and current industry problems.

BUAD - 6213 Business in the European Union, 3.00 Credits
Level: Upper
Upper Level
Applied Learning Intl/Dom Tnl
The course describes how economic, political and social factors interrelate, and influence business in the European Union. Students will research sustainable business practices from different European Union member state's perspective. Guest lecturers and field trips are planned for students enrolled in the study abroad program.

BUAD - 6303 Bus & Corp Soc Mgmt, 3.00 Credits
Prerequisite(s): ( CISY 1163 with D or better or CISY 1003 with D or better ) or ( BUAD 3153 with D or better or TMGT 7153 with D or better )
Level: Upper
Upper Level
Upon completion of this course, the student will understand the key concepts of social media and their application in today's business environment. This course is specifically designed to address business needs related to the design, development, and implementation of social media projects in areas such as customer relationship management (CRM), marketing and public relations, and internal organizational communication. In addition to the presentation of key concepts via lectures, this course will use case studies to illustrate business applications of social media, and hands-on projects in which students will create their personal social "brand" online. Students will also work on a larger team project that involves the development of a social media project for a not for profit organization that is selected and approved in coordination with the faculty.

BUAD - 6403 Progmgt for Busi Prosfilms, 3.00 Credits
Prerequisite(s): ( CISY 1103 with D or better or CISY 1003 with D or better ) or ( BUAD 4403 with D or better ) and ( BUAD 3153 with D or better or TMGT 7153 with D or better )
Level: Upper
Upper Level
Upon completion of this course, the student will understand the key concepts of social media and their application in today's business environment. This course is specifically designed to address business needs related to the design, development, and implementation of social media projects in areas such as customer relationship management (CRM), marketing and public relations, and internal organizational communication. In addition to the presentation of key concepts via lectures, this course will use case studies to illustrate business applications of social media, and hands-on projects in which students will create their personal social "brand" online. Students will also work on a larger team project that involves the development of a social media project for a not for profit organization that is selected and approved in coordination with the faculty.

BUAD - 7004 Small Business Planning & Mgmt, 4.00 Credits
Prerequisite(s): MKTG 2073 with D or better or BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
This course offers the student a step-by-step approach to starting and managing a small business. The course covers the fundamental principles of marketing, law, management, and office administration as applied to beginning a new venture. Each student will prepare a comprehensive individualized business plan to include a market profile, site analysis, competitive analysis, financials, goals and objectives, pricing and marketing strategies, and executive summary. A major focus of this course is to explore each step necessary in structuring and launching a new venture, and discussing ways of recruiting the necessary resources to accomplish this venture.

BUAD - 7023 Legal Environment of Business, 3.00 Credits
Level: Upper
Upper Level
This course will expose students to the legal environment within which businesses operate. It focuses on business relationships with government agencies, as well as with other businesses, consumers, and society in general. The course specifically addresses the impact of operational decisions on the firm and emphasizes cross-functional decision making. The course essentially deals with the process design, delivery systems, quality management, ERP, inventory control, scheduling and management of transformation processes to create and deliver value to customers by identifying opportunities and direction for change. This course will cover the terminology, problems, concepts and tools associated with managing operations. Special topics include: supply chain management, e-operations, service blueprinting, competency-based strategy, Six Sigma, lean systems, and mass customization.

BUAD - 7033 Operations Management, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Upper Level
Upon completion of this course, the student will understand modern (quantitative and qualitative) concepts in production management and their application to problems relevant to today's workplace, for both industrial and service organizations. This course specifically addresses the impact of operational decisions on the firm and emphasizes cross-functional decision making. The course essentially deals with the process design, delivery systems, quality management, ERP, inventory control, scheduling and management of transformation processes to create and deliver value to customers by identifying opportunities and direction for change. This course will cover the terminology, problems, concepts and tools associated with managing operations. Special topics include: supply chain management, e-operations, service blueprinting, competency-based strategy, Six Sigma, lean systems, and mass customization.

BUAD - 7043 Quantitative Decision Making, 3.00 Credits
Prerequisite(s): MATH 1123 with D or better or MATH 2124 with D or better or MATH 1014 with D or better or MATH 1034 with D or better or MATH 1034 with D or better
Level: Upper
Upper Level
This course is an introduction to quantitative problem solving methods used in business applications. Topics include General Linear Programming and Sensitivity Analysis; Transportation, Assignment, and Transshipment Problems; Network Flow Algorithms; Project Scheduling; PERT/CMP; Inventory Models; Waiting Line Models; and Markov Processes. Software applications will be utilized whenever possible to aid students in the problem solving process.

BUAD - 7273 Organizational Behavior, 3.00 Credits
Prerequisite(s): TMGT 7153 with C or better or BUAD 3153 with C or better
Level: Upper
Upper Level
This course is designed to create an understanding of the behavior of people in organizations to help people be more productive and satisfied in organizational settings. It exposes students to advanced behavioral science theories and applications in management. Topics include work motivation, work attitudes and job satisfaction, personal and values, socialization, leadership, teamwork, communication, politics, decision making, and management of change. The course will also focus on personal growth and development. Students will integrate their learning through active participation in experiential exercises, personal experiences, case analysis, and general behavior experiments and study.

BUAD - 8003 Management Info Systems - MIS, 3.00 Credits
Prerequisite(s): ( CISY 1003 with D or better or CISY 1103 with D or better or CISY 1023 with D or better ) and ( BUAD 3153 with D or better or TMGT 7153 with D or better )
Level: Upper
Upper Level
This course focuses on a management perspective of information systems activity from development through implementation. The goal of this course is to help business students learn how to use and manage information technologies to revitalize business processes, improve business decision making, and gain competitive advantage. This course places major emphasis on up-to-date coverage of the essential role of Internet technologies in providing a platform for business, commerce, and collaboration processes among all business stakeholders in the globalized enterprise era. The course places a major emphasis on the strategic role of information technology in providing business professionals with tools and resources for managing business operations, supporting business decision making, and gaining competitive advantages.

BUAD - 8013 International Business, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Upper Level
This course is an application of theoretical approaches to the globalization of business. Major concepts, tools, and processes will be explored through lecture, readings, team activities, and case study applications. Major topics include the examination of how businesses and managers focus and succeed in the global economy including an overview of the economic, political, social, and cultural systems involved. Emphasis is given to the scope and theories of international business, the framework for international transactions, relations with host countries and host cultures, global business strategies, and the contrasting international management and ethical issues managers may face.
CHM - 1114 General Chemistry I, 4.00 Credits
Level: Lower
Applied Learning-Other, Course Fee $60.00, Gen Ed - Natural Sciences, Liberal Arts and Science
This course is intended for science majors particularly focused in the health or agricultural areas who have had high school chemistry. It can be a terminal course in chemistry for those seeking an AAS in veterinary technology. Topical coverage includes: metric units and conversions, atomic theory, periodicity, electronic bonding models (Lewis, Pauling, Gillespie VSEPR), inorganic nomenclature, inorganic reactions (metathesis, acid-base, redox), stoichiometry and the mole concept, gas laws, phase transitions (phase diagrams, cooling curves, critical phenomena, heat capacities, intermolecular interactions), equilibrium (calculations involving K, Le Chatelier's principle) and elementary kinetics (Arrhenius model).

CHEM - 2984 Chemical Principles II, 4.00 Credits
Prerequisite(s): CHEM 1114 with D or better and ( MATH 2124 with D or better or MATH 2133 with D or better )
Level: Lower
Applied Learning-Other, Course Fee $10.00, Gen Ed - Natural Sciences, Liberal Arts and Science
This course is a continuation of Chemical Principles I and is intended for science majors. The course emphasizes the development of chemical concepts and problem-solving techniques that are essential in science. General topics include atomic structure of matter, chemical reactions, thermochemistry, electronic structure of the atom and chemical bonding.

CHEM - 3514 Organic Chemistry I, 4.00 Credits
Prerequisite(s): CHEM 2124 with D or better or CHEM 2984 with D or better
Level: Lower
Applied Learning-Other, Course Fee $33.00, Gen Ed - Natural Sciences, Liberal Arts and Science
This course is the first semester of a two-semester sequence in organic chemistry and is a thorough introduction to the language, mechanisms, materials and concepts fundamental to organic chemistry. Lecture topics include: VSEPR and atomic orbital models; basic valence hybrid and molecular orbitals; the language of stereochemistry; the basic 'activated complex' model of Eyring and Polanyi; free radical reactions, notably as they occur in alkenes; alkene preparation and synthesis; SN1 and SN2 substitution reaction pathways notably as they occur in alkyl halides and alcohols; E1 and E2 elimination pathways, notably as they occur for alcohols and alkyl halides; the stereochemistry and energetics of cycloalkanes, and an introduction to retrograde, multi-step synthesis. Lab skills taught include: principles and practice of simple, fractional and steam distillation; recrystallization, solvent extraction, melting point, refractive index determination, IR and GC instrumental characterizations of compounds. Students are also required to synthesize three different compounds, including a multi-step Grignard synthesis to 2-methyl-2-hexene starting from 2-propane and 1-bromobutane.

CHM - 5013 Applied Chemical Principles, 3.00 Credits
Prerequisite(s): CHEM 3514 with D or better
Level: Lower
Applied Learning-Other, Course Fee $62.00, Gen Ed - Natural Sciences, Liberal Arts and Science
This course is an in-depth examination of the chemistry and mathematical underpinnings connected to classical chemical calculations and the chemical principles that form the foundation of modern quantitative chemistry. Using only a balance, buret and various classical volumetric devices, students will develop skills and understanding of gravimetric, titrimetric, complexometric, argentometric and redox methodologies. The course covers a thorough coverage of the manifold concentration conversions as well as complete treatment of the details of equilibrium equations connected to precipitation, acid-base reactions, buffers, complexation, redox. Non-ideal corrections, notably Debye-Huckel theory, will also be covered.

CHEM - 5414 Analytical Principles, 4.00 Credits
Prerequisite(s): CHEM 2984 with C or better and MATH 2124 with D or better or MATH 1123 with D or better and MATH 2133 with D or better
Prerequisite(s): CHEM 2984 with C or better and MATH 2124 with D or better or MATH 1123 with D or better and MATH 2133 with D or better
Level: Upper
Applied Learning-Practicum, Course Fee $33.00, Liberal Arts and Science
This course is designed to provide engineering students with a foundation in the important concepts and principles of chemistry needed to communicate effectively with colleagues, develop manufacturing methods, and solve industrial problems related to chemistry. Emphasis will be placed on those areas considered most relevant in an engineering context, and practical applications in engineering and technology will be examined. Topics include: atomic theory, bonding, stoichiometry, acid-base chemistry, oxidation-reduction, gases, and chemical equilibrium.

CHEM - 6614 Instrumental Analysis, 4.00 Credits
Prerequisite(s): CHEM 5414 with C or better
Level: Upper
Applied Learning-Practicum, Course Fee $55.00, Upper Level
A strongly lab-focused course devoted to providing students a thorough exposure to the most common instrumental methods found in modern chemistry and material science labs including: UV-VIS spectroscopy, Atomic Absorption Spectroscopy (AAS), Infrared Spectroscopy (IR), Gas Chromatography (GC), Mass Spectroscopy (MS), High Performance Liquid Chromatography (HPLC), optical and electron microscopy, calorimetric methods including Differential Scanning Calorimetry (DSC) and X-ray Diffraction (XRD). Additionally, fundamentals of glass, glass blowing and basic electronics including passive component behavior as well as some exposure to the fundamentals of semiconductor devices (transistors, op amps) will be explored.
CISY - 1113 Computer Programming I, 3.00 Credits
Prerequisite(s): CISY 1113 with C or better and PHYS 1064 with C or better and MATH 6114 with C or better
Level: Upper
Applied Learning-Practicum, Course Fee $57.00, Upper Level
This course provides students who plan future studies in forensic science technology, chemical sciences or chemical engineering a firm grounding in the quantum mechanical description of molecules, as well as a critical set of insights into thermodinamic reasoning. The quantum mechanical focus will be on key model systems, notably the 1- and 2D particle-in-a-box, the rigid rotor, the harmonic oscillator and hydrogen atom. Selected approximation methods applicable to multi-electron atomic systems and applications of infrared and visible spectroscopy will be explored. Selected examples will be given exercises in using current quantum calculation software to estimate optimal structures, predict IR spectra and estimate activated complex geometries. It is expected that students taking this course will have already taken a course of ordinary differential equations, but some of the course will also include mathematical excursions developing necessary mathematical tools, notably eigenvalue problems, series solutions of differentials and various matrix algebraic methods. The thermodynamic focus will be on efficiently developing the 4 laws of thermodynamics into useful forms whereby chemical equilibria and phase change of chemical systems can be predicted and described. A strong emphasis will be laid on using the practical chemical results of thermodynamic reasoning (K and Q predictions, Clausius-Clapeyron, Gibbs-Helmholtz and Nernst equation, phase rules and Gibbs-Duhem equations) rather than deriving the abstracted expressions of the several thermodynamic laws.

CHEM - 7784 Biochemistry, 4.00 Credits
Prerequisite(s): CHEM 4524 with C or better and BIOL 2204 with C or better
Level: Upper
Applied Learning-Practicum, Course Fee $109.00, Upper Level
This course is a comprehensive course intended for science majors. Topics covered include the basic structure and reactions of biological compounds (carbohydrates, lipids, proteins, enzymes, and nucleic acids), the digestion and absorption of nutrients, bioenergetic principles, and catalytic and anabolic metabolism of major biochemistry in the human body. The laboratory exercises include classic techniques in isolation, purification and assay of proteins, enzymes (and kinetics), carbohydrates, lipids, and nucleic acids as well as polypeptide and polynucleotide sequencing and synthesis.

CISY - COMPUTER INFORM SYSTEMS

CISY - 1003 Intro to Microcomputer Appl, 3.00 Credits
Level: Lower
An introductory course in business computing, focusing on microcomputer technology utilizing operating system commands, word processing, spreadsheets, and database software used in business organizations.

CISY - 1023 Intro to Information Tech, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course is an introductory course in information technology and computer applications. The course focuses on computer concepts and technology emphasizing secure file and memory management within various operating systems. The course also covers operating system commands, spreadsheet/database, web tools and other applications used in business and scientific environments.

CISY - 1103 Info Technology Management, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course will introduce the student to multiple aspects of information technology management including: representing, storing, manipulating, and using digital information. Topics include: computer hardware and software fundamentals, essential applications, networking and the Internet, and computer user security and risks. Students will develop skills in collecting, analyzing, and using information from a variety of resources in order to complete class projects.

CISY - 1111 Computer Programming I, 3.00 Credits
Level: Lower
Applied Learning-Other
This course covers the fundamentals of computer problem solving and programming. Topics include: program development process, differences between the object-oriented, structured, and functional programming methodologies, phases of language translation (compiling, interpreting, linking, executing), and error conditions associated with each phase, primitive data types, memory representation, variables, expressions, assignment, fundamental programming constructs (sequence, selection, iteration), algorithms for solving simple problems, tracing execution, subprograms/functions/methods, parameter passing, security coding techniques (criteria for selection of a specific type and use, input data validation), and professional behavior in response to ethical issues inherent in computing.

CISY - 1123 Intro to Programming for IT, 3.00 Credits
Level: Lower
Applied Learning-Practicum
An introductory programming course for information technology or CisS majors. The development of solutions through a set of logical steps and basic control structures (including selection and iteration) will be introduced. Students will write, debug and execute programs using a high level visual programming language.

CISY - 2133 Computer Programming II, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better
Level: Upper
Applied Learning-Other
This course covers the fundamentals of algorithms and object oriented software development. Topics include: modern IDE for software development, primitive and development, primitive and reference data types, encapsulation, information hiding, selection, iteration, functions/methods, parameters, recursion, exception handling, generic linear data structures (arrays, records/ structs) and maps, files, file i/o, simple GUIs with event, network, user interface, lambda expressions, semantics of inheritance and use of polymorphism, relation with subtyping, search (sequential, binary), select (min, max), and sort (bubble, insertion, selection) algorithms, complexity, notation, documentation, and standard tools, program testing (unit testing) and debugging, reasoning about control flow in a program, and societal impacts related to computing and software.

CISY - 2141 Info Tech A+ Cert, Prep. Prep., 1.00 Credit
Level: Lower
Applied Learning-Practicum
This course will prepare students to pass the Information Technology certification exam A+ (CompTIA). Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

CISY - 2143 Microcomputer Systems I, 3.00 Credits
Prerequisite(s): CISY 1003 with D or better or CISY 1113 with D or better
Level: Lower
Applied Learning-Practicum
This course provides an exposure to computer operating systems and hardware. Topics include: troubleshooting, operating system commands, system utilities, memory managers, graphical user interface (GUI), software and computer security.

CISY - 2153 Database Appl and Programing I, 3.00 Credits
Prerequisite(s): CISY 1003 with D or better
Level: Lower
Applied Learning-Creative Work
A comprehensive exposure to the use of database software concepts, capabilities and applications beyond the introductory level focusing on developing expertise in using a contemporary spreadsheet software package and companion tools to develop business systems.

CISY - 3001 Info Tech Cert, Prep. Prep., Course, 1.00 Credit
Level: Lower
This course will prepare students to pass an Information Technology related certification exam related to a topic agreed upon by student and faculty member. Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

CISY - 3023 Advanced Microcompr Spreadsheets, 3.00 Credits
Prerequisite(s): CISY 1003 with D or better or CISY 1023 with D or better or CISY 1103 with D or better
Level: Lower
Applied Learning-Practicum
This course focuses on computer concepts and technology emphasizing secure file and memory management within various operating systems. The course also covers operating system commands, spreadsheet/database, web tools and other applications used in business and scientific environments.

CISY - 3193 Computer Architecture & Organi, 3.00 Credits
Prerequisite(s): CISY 1113 with D or better
Level: Lower
This course covers fundamentals of computer architecture and organization. Topics include: classical von Neumann machine, major functional units, primary memory, representation of numbers (integer and floating point) and nonnumerical data, CPU architecture, instruction encoding, fetch-decode-execute cycle, instruction formats, addressing modes, symbolic assembler, assembly language programming, handling of subprogram calls at assembly level, mapping between high and low language patterns and assembly/machine language, interrupts and I/O operations, virtual memory management, and data access from a magnetic disk.

CISY - 3223 Intro to Web Page Development, 3.00 Credits
Prerequisite(s): CISY 1023 with D or better
Level: Lower
An introductory course in web page development with HTML, CSS, and JavaScript. Also includes a hands-on exposure to the various software packages that automate the web page design process. These may include Dreamweaver, Sublime, Bootstrap, and others. This course is suitable for anyone who would like to create simple, but useful web pages. Topics include: the internet, tables, frames, forms, scripting language(s), and multi-media.

CISY - 3283 Internetworking I, 3.00 Credits
Prerequisite(s): CISY 2123 with D or better
Level: Lower
Applied Learning-Practicum
This is the first of two courses in a series to be offered covering the Cisco academy semesters 1 and 2. Students will develop skills and knowledge in Network Media installation and testing, router and switch installation and configuration, and concepts of Local Area Networks (LANs) and Wide Area Networks (WANS). Instruction will be completed through on-line resources, lecture, and hands-on skills development. Students will be prepared for Cisco Certified Network Associate certification exams upon completion of both courses.

CISY - 4003 Comp Prgrmming III/Data Strctu, 3.00 Credits
Prerequisite(s): CISY 2133 with D or better
Level: Lower
Applied Learning-Practicum
This course covers the fundamentals of data structures and software modeling. Topics include: modern IDE for software development and code version management systems, design and development of reusable software, software modeling (class diagram, use case, CRC card), introduction to analysis of algorithms (order notation), abstract properties, implementation and use of stacks, queues, linked lists, binary trees, binary search trees, and recursion and efficiency of recursive solutions. Additional focus will be given to range searching (sequential, binary), selecting (min, max, median) and sorting algorithms (quicksort, merge sort, heap sort) and their time and space efficiencies. Software quality assurance (pre and post conditions, program testing), team development of software applications, and professional responsibilities and liabilities associated with software development will be discussed.

CISY - 4031 Info Tech Net+ (CompTIA) Cert., 1.00 Credit
Level: Lower
This course will prepare students to pass the Information Technology certification exam Network+(CompTIA). Students will research testing preparatory tools and certification requirements. The student will find and use study materials to take pre-tests (if available) and evaluate test taking processes.

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CISY - 4033 Networking I, 3.00 Credits  
Level: Lower  
Applied Learning-Practicum  
This is an introductory course in networking with a survey and evaluation of network media, access methods, topologies, and terminology. Topics will include end user perspective, network cabling, hardware and software protocols, internetworking, network operating systems, and system administration. Included will be basic server installation, configuration, and management. A variety of workstations and server operating systems will be explored through extensive hands-on labs with an emphasis on network security.

CISY - 4053 Linux/Unix Admin and Scripting, 3.00 Credits  
Prerequisite(s): CISY 4033 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course takes an in-depth look at Linux and Unix-like system administration, including console and graphical interfaces. Major topics include file systems, text processing, installation, system configuration, software packages, network configuration, backup, and kernel management. A significant portion of the course will concentrate on script analysis and creation. Laboratory exercise will provide hands-on exercise in each of these topics.

CISY - 4063 Systems Analysis & Design, 3.00 Credits  
Prerequisite(s): CISY 1113 with D or better or CISY 1123 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course covers the fundamental concepts underlying all business information systems including security. Emphasis is on a structured process in the design of computer-based information systems. Current tools and techniques are applied to a case study project.

CISY - 4103 Visual Programming & Development, 3.00 Credits  
Prerequisite(s): CISY 1113 with D or better or CISY 1123 with D or better  
Level: Lower  
A visual programming environment will be used in a continuation of Computer Programming I. Emphasis will be placed on advanced algorithms, program design and development. Topics included will be sub-programs, arrays, files, and data abstraction. Debugging and proper program design and documentation will be stressed.

CISY - 4283 Internetworking II, 3.00 Credits  
Prerequisite(s): CISY 3283 with D or better  
Level: Lower  
Applied Learning-Practicum  
Students will develop skills and knowledge in network media installation and testing, router and switch installation, and concepts of Local Area Networks (LANs) and Wide Area Networks (WANS). Instruction will be completed through on-line resources, lecture, and hands-on skill development. Students will be prepared for Cisco Certified Network Associate certification exams upon completion of CISY 3283 and this course.

CISY - 4423 Intro to Mobile Robotics & Anim, 3.00 Credits  
Level: Lower  
Applied Learning-Practicum  
The course covers basic programming techniques of mobile and stationary robotic systems with respect to autonomous function and interaction with the environment. Topics include basic programming techniques, robot platforms, use of sensors, embedded control, pre-programmed problem solving, robot construction, and human-robot interaction. Students will complete programming and robot construction projects. Theoretical concepts presented in the lecture will be reinforced in the laboratory.

CISY - 4723 Essentials of Info Security, 3.00 Credits  
Prerequisite(s): CISY 4033 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course is a comprehensive survey of all aspects of computer security. This includes local host, network web, and database security as well as other objects that are prone to attack. Special focus will be given to the identification of security threats and countermeasures that can be taken to make these systems more secure. Students will develop a security plan for a small to mid-sized organization.

CISY - 5123 Scientific Programming, 3.00 Credits  
Prerequisite(s): or MATH 1033 with D or better or MATH 1043 with D or better or MATH 2043 with D or better or MATH 1043 with D or better or MATH 1043 with D or better or MATH 1084 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
In this course students will learn structured programming techniques to solve scientific and engineering problems using conventional programming languages. Topics include data types, flow control structures, functions, I/O pointers, program design and maintenance, top-down design and programming techniques.

CISY - 5133 Sec Policies, Recov & Risk Man, 3.00 Credits  
Prerequisite(s): CISY 4053 with D or better or CISY 4723 with D or better or CISY 5403 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
Students will be introduced to security policies, the tools and techniques used in security management, and risk management procedures. They will analyze risk and security threats in the organization as well as manage, test, and establish security policy. Topics such as information protection, code of practice for information security, risk management, security awareness and security evaluations will be explored. A final project in security assessment will be required.

CISY - 5203 Network Administration, 3.00 Credits  
Prerequisite(s): CISY 4033 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
Students will use a variety of network management tools to manage, monitor, support and troubleshoot network operations. Topics will include performance issues, user accounts, data security, disaster recovery, supporting applications, and documentation.

CISY - 5233 Human Computer Interaction, 3.00 Credits  
Prerequisite(s): CISY 4103 with D or better and CISY 3223 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
This course will cover the design, prototyping, and evaluation of user interface to computers. This will include the implementation of interactive computing systems for human use and the study of major phenomena surrounding them. In addition, the course will stress the importance of good interfaces and the relationship of user interface design to human-computer interaction within multi-disciplinary dynamics. Example systems, case studies, methodologies and models will be used to demonstrate the concepts and the importance of human computer interaction.

CISY - 5303 Web Programming I, 3.00 Credits  
Prerequisite(s): CISY 3283 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
A comprehensive survey of HTML and web publishing software to create robust, functional web pages. This course will examine HTML standards, browser capabilities, information architecture, bandwidth considerations, image format, maps, frames, forms, and server side scripting. Topics of current interest will be included, such as: JavaScript, VBScript, ActiveX, Active Server Pages, Dynamic HTML, and Cascading Style Sheets.

CISY - 5403 Database Concepts, 3.00 Credits  
Prerequisite(s): CISY 2153 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
This course is a study of the terminology, design, implementation and software associated with database systems. Topics include the need for database management systems, file organization, sequential and direct access methods and physical implementation. Other topics covered are relational database design, entity and semantic models, hierarchical and network models, SQL, database applications using the internet, and sharing enterprise data. Students will design, implement, test, and debug database management systems according to industry standards.

CISY - 5613 UNIX/Linux Server Admin, 3.00 Credits  
Prerequisite(s): CISY 4033 with D or better or ELET 2012 with D or better  
Level: Upper  
Upper Level  
This is a comprehensive survey of all aspects of computer security. This will include local host, network, web, database security as well as other objects that are prone to attack. The student will focus on the identification of security threats and countermeasures that can be taken to make these systems more secure. Students will develop a security plan for a small to mid-size company.

CISY - 5813 Cloud Computing Architecture I, 3.00 Credits  
Prerequisite(s): CISY 2153 with D or better and CISY 3223 with D or better  
Level: Upper  
Upper Level  
This is an introductory course in the emerging field of cloud computing technologies. This course is the first course in a two course sequence which provides the student with a foundation and survey of the many new emerging cloud computing tools being used to create the Internet. Topics will include Scalability, load balancing, collaboration, Security, and Disaster Recovery in the cloud. This course will be used in industry leading cloud services and cloud datacenter technologies. A variety of cloud service provider's products and platforms will be explored through appropriate hands-on labs.

CISY - 5900 Directed Study, 1.00 TO 6.00 Credits  
Level: Upper  
Upper Level  
A capstone course which provides an integrative experience in applying the knowledge and skills of earlier course work, with particular emphasis on computer science management, information systems, and communications skills in an integrated/internship setting; requires student to present and defend, orally and in writing, solutions to experienced real-world problems encountered.

CISY - 6103 Web Server Administration, 3.00 Credits  
Prerequisite(s): CISY 4053 with D or better and CISY 3223 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
This is a comprehensive survey of all aspects of web server administration. Students will gain hands-on experience by actually installing and administering their own web servers. Topics include: server installation and configuration, site planning, supporting dynamic content, security, and maintenance.

CISY - 6123 Adv Pro wth Vid Game Des & Dev, 3.00 Credits  
Prerequisite(s): CISY 4033 with D or better or CISY 6503 with D or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
This course is an advanced study of programming using current tools to create video games. Topics covered include higher level programming techniques, writing programs to use the windows user interface, and creating and using graphic objects. The gaming topics of data structures and algorithms, artificial intelligence, physics modeling, and mathematics will also be covered. A final project will be required incorporating AI and physics.
CISY - 6503 Object-Oriented Programming, 3.00 Credits
Prerequisite(s): CISY 2133 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
Object oriented analysis (OOD) and object oriented design (OOD) concepts will be covered using an object oriented programming (OOP) language such as Java. Topics include: objects, messages, classes, encapsulation, inheritance, polymorphism, code reuse, and method-driven and model-driven object-oriented approaches, methodologies and tools. Students will formulate object solutions to practical problems in the business and scientific areas.

CISY - 6703 Network Design Concepts, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
In this course students will design and implement network systems, utilizing various topologies, media, and protocols. Students will control network hardware such as switches, and routers. Design concepts will be implemented through a variety of laboratory exercises. Students will be required to analyze and present a network design plan.

CISY - 7003 Project Management, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better and (CISY 5133 with D or better or CISY 5303 with D or better or CISY 5203 with D or better or CISY 5403 with D or better)
Level: Upper
Applied Learning-Practicum, Upper Level
A comprehensive approach to project management tools and applications in an interdisciplinary and global environment. Emphasizing concepts, techniques, and principles associated with project management, this course is vital to students entering the IT management field. The course will focus on the changes in the computing environment including hardware, software, and networking. Students will be able to plan, schedule, budget, estimate, control, and monitor projects. In addition, they will become familiar with resource allocation, resource loading, GPM, CMM, GANTT, and PERT. The use of project management software will be a major component of the course.

CISY - 7013 Network & Host Security, 3.00 Credits
Prerequisite(s): CISY 4033 with D or better and CISY 4053 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course will provide a practical, hands-on approach to the security of both hosts and networks. Students will be provided with the opportunity to perform penetration testing and then apply results to updating and patching hosts to mitigate discovered vulnerabilities. It includes access control and authentication systems as well as planning and implementation for wireless network security. A variety of client and network operating systems will be used. This course assumes a prerequisite knowledge of network operating systems and introductory security concepts. A major network security project is a requirement of the course and will be presented in written and oral formats.

CISY - 7023 Comp Forensics & Legal Issues, 3.00 Credits
Prerequisite(s): CISY 5203 with D or better or CISY 5613 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course will provide a practical, hands-on approach to the process of scientifically retrieving, examining and analyzing data from computer storage media so that data can be used as evidence in court. This course assumes a prerequisite knowledge of network operating systems and security concepts. A final project will be required.

CISY - 7033 Security Tools, 3.00 Credits
Prerequisite(s): CISY 5203 with D or better or CISY 4043 with D or better or CISY 4053 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course provides a practical, hands-on approach to a myriad of security tools employed in wired and wireless networks. These security tools will include Industry Standard Firewalls, Virtual Private Networks (VPN), wired network vulnerability scanners, wireless security probes, wireless intrusion detectors, wireless scanners and wireless encryption cracking utilities. Advanced firewall concepts and technologies will be covered in depth and include design considerations for enterprise networks, large company networks and medium business networks. The course will include VPN concepts, technologies, and configurations for site to site VPNs as well as configurations for client remote access VPNs. The course will cover various vulnerability scanners for networks with heterogeneous operating systems and advanced firewall configurations. Students, in a laboratory environment, will attack and defend networks and submit a project paper detailing lessons learned and how to best defend both wired and wireless networks. The course assumes a prerequisite knowledge of network operating systems and security concepts.

CISY - 7203 Web Programming II, 3.00 Credits
Prerequisite(s): CISY 5303 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
A survey of programming languages and techniques for Web development. Topics include CGI’s (Common Gateway Interface), client side programming with JavaScript, dynamic content using Java and ActiveX, server side programming using Active Server Pages and VBScript, creating dynamic database driven content, and developing web based client/server database applications.

CISY - 8303 Mtw Inntng & Interoperability, 3.00 Credits
Prerequisite(s): CISY 6700 with D or better and CISY 4723 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
In this course, students will integrate network system components to construct a working enterprise network. Topics addressed include integration of different network topologies, interoperability between network operating systems, integration of client-server applications, web based information systems, other support systems and support of end-user needs.

CISY - 8403 Web Applications, 3.00 Credits
Prerequisite(s): CISY 7203 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this capstone course, students will create web based multi-media applications for companies and/or organizations. These applications will demonstrate client and server side design, programming and maintenance. Additional topics include: systems development life cycle, web-site hosting and administration, e-commerce, and integrated software applications.

CISY - 8503 Appl Database Management, 3.00 Credits
Prerequisite(s): CISY 5403 with D or better and CISY 6503 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this capstone course, students will create and maintain Database Applications in a commercial and/or academic setting. This course provides an integrative experience in applying the knowledge and skills of earlier course work, focusing on multi-user database systems. A major portion of this course will be design, implementation, and documentation of an enterprise data system. Additional topics may include: systems development life cycle, web applications, and application reliability and security.

CISY - 8603 Seminar Critical Issues in IT, 3.00 Credits
Prerequisite(s): CISY 4103 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
This is a research-oriented and performance-oriented course. The course addresses critical (both theoretical and pragmatic) issues in information technology (IT). Issues of concern may include, but are not limited to, IT systems security, ethics of using IT systems, human-IT systems interface, and data analysis requirements at different organizational levels. Students are expected to conduct research, present their findings, accept feedback on their presentations, and document their knowledge of their topics. Students will also complete a project working with a cross-disciplinary team and prepare strategies/materials for an effective job search. Every student is expected to attend all class presentations and guest speaker sessions.

CISY - 8703 Information Security Capstone, 3.00 Credits
Prerequisite(s): CISY 5133 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course, students will integrate, configure and analyze network system components, security tools and procedures necessary to create enterprise class network security perimeters. Topics addressed include a combination of open source and proprietary security applications covering the fundamental components of an effective network security perimeter. These components include: firewalls, Intrusion Detection Systems (IDSs), Intrusion Prevention Systems (IPSs) virtual Private Networks (VPN), authentication systems, port scanning, vulnerability scanning, penetration testing, disaster recovery systems and security management systems. An in-depth analysis of the security risks associated with the TCP/IP protocol and associated sub-protocols will also be included as part of a final project.

CISY - 8706 Info Technology Internship, 6.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty. Written and oral reports and a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Students will be required to complete a series of 4 brief investigative or evaluative papers while completing the internship in areas such as career development, organizational structures, organized labor, business management, security, policies, and/or industry and market trends. Two papers will be completed in each of the 6 hour internships. These courses are offered as a two-part alternative to CISY 8712, 8706 and 8716 are to be taken in sequence as two 6 credit hour classes. These 12 hours will be equivalent of CISY 8712. Students may not enroll in CISY 8712 and CISY 8706 / 8716.

CISY - 8712 Info Technology Internship, 12.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of information technology in an organization. Each intern will be supervised by a member of the faculty. Written and oral reports and a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship. Students will be required to complete a series of 4 brief investigative or evaluative papers while completing the internship in areas such as career development, organizational structures, organized labor, business management, security, policies, and/or industry and market trends. Two papers will be completed in each of the 6 hour internships. These courses are offered as a two-part alternative to CISY 8712, 8706 and 8716 are to be taken in sequence as two 6 credit hour classes. These 12 hours will be equivalent to CISY 8712. Students may not enroll in CISY 8712 and CISY 8706 / 8716.

CIVL - 1011 Civil AutoCAD, 1.00 Credit
Level: Lower
This course will give the student the basic skills necessary to complete dimensioned drawings in AutoCAD. Topics include: setting up a drawing, basic lines and coordinates, geometric shapes, layering, editing commands, dimensioning, creating text, hatching and plotting to scale.

CIVIL - CIVIL ENGINEERING TECH
CIVL - 1013 Portland Cement Concrete, 3.00 Credits
Level: Lower
Applied Learning-Field Study, Course Fee $15.00
This course introduces aggregates and concrete as construction materials. Standard techniques of measurement and computation are presented and then applied to testing materials. The student is prepared to reach the level of Concrete Field Testing Technician Grade 1, with emphasis on the American Concrete Institute studies of Portland Cement Concrete, and on quality control in the field. Concrete masonry block is reviewed as a product of cement.

CIVL - 1021 Civil Eng Tech 1st Yr Exp, 1.00 Credit
Level: Lower
This course helps prepare students for academic success and career exploration. Introduction to the diversity of opportunities in the civil engineering technology field, including design, geomatics and construction will be explored through industry guest lectures. Campus tools for success are discussed as well as planning for graduation.

CIVL - 1024 Civil Materials, 4.00 Credits
Prerequisite(s): ( MATH 1054 with D or better * or MATH 1063 with D or better * or MATH 1084 with D or better * )
Level: Lower
An introduction to materials engineering that covers the characteristics of materials used in the engineering fields. the students will also complete laboratory methods for the evaluation of materials. Materials covered include: steel, aluminum, concrete, masonry, asphalt, wood and composites. Sustainability of each material is reviewed.

CIVL - 1182 Civil Tech Graphics, 2.00 Credits
Level: Lower
Applied Learning-Practicum
This is an introductory course in construction/civil/surveying graphics. The student will be introduced to scales, dimensioning, surveying maps, house plans, print reading, and construction terminology. Contour maps, wall sections, foundation plans, floor plans, and house elevations are drawn and plotted using industry standard software.

CIVL - 1204 Surveying I, 4.00 Credits
Prerequisite(s): MATH 1033 with D or better * or MATH 1034 with D or better * or MATH 1054 with D or better * or MATH 1063 with D or better * or MATH 1084 with D or better * or MATH 2043 with D or better * or MATH 2094 with D or better *
Level: Lower
Applied Learning-Field Study
This course is a study of the fundamentals of surveying technology. Emphasis is on the use and care of various types of surveying equipment, note keeping, basic surveying calculations and adjustment of data. This course is designed to introduce measurement techniques through applications in an outdoor laboratory environment.

CIVL - 2154 Quality Control of Const Matl, 4.00 Credits
Level: Lower
Applied Learning-Field Study
This course will equip students with skills typical of a quality control technician in soils and asphaltic concrete. Students will learn about the properties of soil, including laboratory testing of soil that will lead to the classification of soils. Students will also design and test asphaltic concrete mixes using industry procedures and standards.

CIVL - 2204 Surveying II, 4.00 Credits
Prerequisite(s): CIVL 1204 with D or better
Level: Lower
Applied Learning-Field Study
This course is the study of traditional surveying techniques. Topics include the basis of bearings/azimuths, working as a member of a technical team, and safe operation of surveying equipment. Emphasis is placed on increasingly complex surveying calculations and includes geometry (COGO), intersections, horizontal curves, and vertical curves.

CIVL - 3053 Construction Methods & Practic, 3.00 Credits
Level: Lower
This course is a study of materials and methods employed in construction. Topics include building foundation, envelope, and finishes. Throughout the course, attention will be given to sustainability of construction materials and methods.

CIVL - 3204 Legal Asp & Prac of Land Surv, 4.00 Credits
Prerequisite(s): CIVL 2204 with D or better
Level: Lower
In this course students will develop an understanding of the professional land surveyor's role in society, the professional land surveyor's legal responsibility to the public, systems used to describe real property, types of transfer of real property, techniques of record research, and locating sequential and simultaneous real property conveyances.

CIVL - 3214 Geodesy, 4.00 Credits
Prerequisite(s): MATH 1054 with D or better or MATH 2043 with D or better or MATH 1063 with D or better
Level: Lower
Course emphasizes the techniques of precise horizontal and vertical control surveying used by government or private surveyors and engineering consultants. Use of directional theodolites, precise levels and total station measurement equipment are stressed. Projects are used to present underlying theory of field work, standards, specifications, and adjustment of horizontal and vertical data.

CIVL - 3313 Civil Hydraulics, 3.00 Credits
Level: Lower
This course is a course of the principle physical properties of fluids with emphasis in civil engineering technology applications. Topics include closed conduit systems, open channel flow, and pumps. A weekly laboratory provides hands on examples of topics taught in the classroom.

CIVL - 3314 Civil Hydraulics, 4.00 Credits
Prerequisite(s): MATH 1054 with D or better
Level: Lower
A study of the principle physical properties of fluids with emphasis on civil engineering technology applications. Topics include closed conduit systems, open channel flow, and pumps. A weekly laboratory will provide hands on examples of topics taught in the classroom.

CIVL - 3553 Comm Bldg Const Methods & Prac, 3.00 Credits
Prerequisite(s): ( CIVL 1011 with D or better and BLCT 1182 with D or better ) or BLCT 3606 with D or better or BLCT 3706 with D or better or BLCT 3306 with D or better or ELTR 3306 with D or better
Level: Lower
This course is a study of materials and methods of construction employed in commercial building construction. This course will be used to extend the student's graphics skills using BIM/3-D software as well as their knowledge of the building construction process. Topics include: foundation, steel frame and reinforced concrete construction. Throughout the course, attention will be given to sustainability of construction materials and methods.

CIVL - 4012 Civil 3D Graphics, 2.00 Credits
Prerequisite(s): CIVL 1011 with D or better
Level: Lower
An introduction to Civil 3D graphics where the student will use AutoCAD Civil 3D for its various uses in the civil field including topographic, highway and utility uses. Students will learn techniques enabling you to organize project data, work with points, create and analyze surfaces, model road corridors, create parcel layouts, perform grading and volume calculation tasks, and layout pipe networks.

CIVL - 4013 Strengths of Material, 3.00 Credits
Prerequisite(s): MECH 3334 with D or better
Level: Lower
The main objective of this course is to introduce the concepts of stress and strain and their induction due to axial, torsional, bending, shear, or thermal sources on structural member. It also covers shear and moment diagrams, deformations, and combined stresses.

CIVL - 4043 Construction Management, 3.00 Credits
Level: Lower
This course is a study of the business organizations, contracts, personnel and ethics used in construction projects. Topics include the stakeholders, contracts, cost accounting, construction documentation, planning and scheduling, bonding, insurance, labor relations and ethics as specifically experienced in the construction industry.

CIVL - 4103 Structures I, 3.00 Credits
Prerequisite(s): ( MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or MATH 2043 with D or better ) and ( PHYS 1024 with D or better or PHYS 1044 with D or better )
Level: Lower
This course provides the students with a quantitative understanding of the effect of loads on structural elements in a building. Principles of structural mechanics are covered from forces and stresses to properties of structure, and finally to shear and bending moments on beams. The designs of basic timber and steel beams and columns are also presented.

CIVL - 4133 Soil Mechanics, 3.00 Credits
Prerequisite(s): ( MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better ) and MECH 3334 with D or better *
Corequisite(s): ( MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better ) and MECH 3334 with D or better *
Level: Lower
This course introduces soil mechanics, foundation and earth structure to engineering technology students. It includes soil classification, soil properties, soil stresses, earth pressures, bearing capacity, slope stability. It also discusses principles of foundation analysis and design, and retaining walls. Laboratory experiments to test behavior of soils are included.

CIVL - 4143 Contracts, Specs, & Estimating, 3.00 Credits
Prerequisite(s): CIVL 3553 with D or better or ARCH 4014 with D or better
Level: Lower
Applied Learning-Practicum
This course is an introduction to the U.S. Public Lands Survey System, the laws of simultaneous conveyances, and subdivision of lands. Governmental regulations and environmental considerations will be addressed. Industry standard software will be utilized in the laboratory.

CIVL - 4214 Surveying Practicum, 4.00 Credits
Prerequisite(s): CIVL 3214 with D or better and CIVL 2094 with D or better
Level: Lower
Applied Learning-Practicum
This course consists of a series of field and office problems in surveying. Topics include research, field reconnaissance, data collection, deed interpretation, and mapping. Students are responsible for the execution of a comprehensive surveying project.

CIVL - 4243 Surveying Computer Appl, 3.00 Credits
Prerequisite(s): CIVL 1204 with D or better and CIVL 2094 with D or better and CIVL 3214 with D or better
Level: Lower
This course is an introduction to the concepts of field to office automation, the use of coordinate geometry (COGO) software programs and computer aided drafting (CAD) software programs. Emphasis will be placed on the use of the computer in the solution of problems and projects that stress data analysis, data adjustment, mapping calculations and the application of computer graphics.

CIVL - 4273 Photogrammetry & Image Interpr, 3.00 Credits
Level: Lower
This course will introduce the advantages of photogrammetry, LiDAR and Remote Sensing as a mapping and planning tool. The types of photography and data scaling, flight planning techniques and specifications, displacement calculations and stereoscopic measurement are covered.
CIVL - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

CIVL - 5114 Land Surveying, 4.00 Credits
Prerequisite(s): CIVL 3204 with D or better
Level: Upper
Upper Level
A study of licensure requirements, professional liability and ethics. The legal concepts of the rules of evidence are presented and applied to written and unwritten transfers of land ownership. Riparian rights, reversionary rights, problems of appointment, procedures, both field and office, for locating written title boundaries and the writing of deed descriptions are discussed in both a theoretical and applied sense.

CIVL - 5213 Reinforced Concrete, 3.00 Credits
Prerequisite(s): CIVL 4104 with D or better or CIVL 4103 with D or better
Level: Upper
Upper Level
This course introduces students to basic design principles of reinforced concrete structural members such as beams, and slabs. Topics will include bending of single and doubly reinforced beams, T-beams, and slabs, as well as an introduction to the fundamentals of mechanism of bending. The design of tensile and compressive reinforcing bars in the members will be included as well. Students will learn methods and materials used in concrete work with attention given to the materials and methods of formwork construction. In addition, students will learn building code requirements for structural concrete of the American Concrete Institute (ACI).

CIVL - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Upper Level
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

CIVL - 6103 Structural Analysis, 3.00 Credits
Prerequisite(s): ( MATH 1063 with D or better * or MATH 2074 with D or better * ) and MECH 3334 with D or better or CIVL 4122 with D or better Corequisite(s): ( MATH 1063 with D or better * or MATH 2074 with D or better * ) and MECH 3334 with D or better
Level: Upper
Upper Level
The course analyzes statically determinate and indeterminate structures. Additional topics of influence lines, moving loads, member forces and stresses, deflections, flexibility and stiffness analyses are explored using computer applications.

CIVL - 6104 Anlys & Adjments of Surv Mmmts, 4.00 Credits
Prerequisite(s): MATH 2074 with D or better or MATH 2094 with D or better
Level: Upper
Upper Level
This course is an introduction to the adjustment of survey data, incorporating the use of the computer and matrix algebra. Error propagation, least-squares adjustment methods and the analysis of survey measurements will be covered.

CIVL - 6113 Environmental Tech Concepts, 3.00 Credits
Prerequisite(s): MATH 1033 with D or better or MATH 1034 with D or better or MATH 2043 with D or better or MATH 1063 with D or better
Level: Upper
Upper Level
This course focuses on environmental technology systems. Topics covered will include basic environmental concepts, water quality, water pollution, drinking water, storm water management, wastewater treatment, municipal solid waste, hazardous waste, air pollution, noise pollution, erosion control and environmental assessments. During the course, the student will analyze a site plan to determine the "best practice" solutions to storm water management challenges using industry standards. At the end of the course the student will be able to make decisions with regards to various environmental issues that will come both in the workplace and in the student's personal life. Leadership in Energy and Environmental Design, (LEED) criteria and sustainable building issues will also be addressed.

CIVL - 6123 Mechanical Systems, 3.00 Credits
Prerequisite(s): CIVL 3553 with D or better or CIVL 3554 with D or better
Level: Upper
Upper Level
An introduction to building equipment for single and multi-story projects including domestic water, sewer, heating and ventilating systems, and electrical systems. Students will design these systems for a residence or small office building. Students will review blueprints and analyze systems for a large commercial building.

CIVL - 6143 Transport & Highway Design, 3.00 Credits
Prerequisite(s): ( CIVL 1024 with D or better and CIVL 1204 with D or better and CIVL 2013 with D or better )
Level: Upper
This course focuses on the principles of highway design. Students should understand the basic concepts and engineering principles of transportation engineering and pavement design. Topics covered include: road and vehicle performance, geometric design of highways, pavement design, traffic flow and control, highway capacity and traffic forecasting.

CIVL - 6154 Supervisory Estimating, 4.00 Credits
Prerequisite(s): CIVL 3553 with D or better or CIVL 3553 with D or better
Level: Upper
Upper Level
This course provides in depth study of construction estimating as used in winning bids and the change order process during construction. The course teaches the student to use a quantity estimating software package and to incorporate advanced estimating techniques into a final project cost estimate. During the course, the students will complete estimates in several disciplines of construction.

CIVL - 6212 Construction Safety, 2.00 Credits
Prerequisite(s): CIVL 5553 with D or better or ARCH 4014 with D or better or CIVL 3053 with D or better
Level: Upper
Upper Level
This course is a comprehensive study of the requirements of an effective safety program that focuses on worker safety, improved productivity and accident risk management. The course will also provide students with an understanding of the Occupational Safety Health Administration (OSHA) standards and their application to the construction industry.

CIVL - 6214 Advanced Estimating, 4.00 Credits
Prerequisite(s): CIVL 4143 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is an extension of topics learned in the basic estimating course. The course teaches students to use a database estimating software package to incorporate advanced estimating techniques into a final project cost estimate. During the course, the students will create estimates on several types of construction including commercial building and heavy civil projects. The student will also learn the concepts of database estimating including how to create and edit a database.

CIVL - 7001 Sr Seminar & Project Design I, 1.00 Credit
Level: Upper
Applied Learning-Creative Work, Upper Level
This course is the first of a two-semester sequence required for all ETAC/ABET accredited Civil Engineering Technology Bachelor seniors. Students design and implement a technical project for completion in CIVL 8003. Project proposal and oral reports are presented for initial approval by department faculty. The weekly seminar encompasses professional licensure examination preparation, aspects of post graduation professional employment, review of initial project proposal and consultation on project progress.

CIVL - 7103 Land Development & Design, 3.00 Credits
Prerequisite(s): CIVL 1204 with D or better and ( MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or MATH 2043 with D or better or MATH 2074 with D or better or MATH 2094 with D or better )
Level: Upper
Upper Level
This course is intended to give the Civil Engineering Technology student an understanding of the issues related to site development and drainage issues for land development. Students will study and create land development plans including drainage calculation, street and road design, water distribution, and sewer design. Issues related to sustainable development will be integrated into the topics to provide the student with an appreciation of concerns related to energy, as well as material and land conservation.

CIVL - 7114 Geographic Information Systems, 4.00 Credits
Prerequisite(s): CIVL 3214 with D or better
Level: Upper
Upper Level
A broad-based introduction to GIS; especially the application of spatial analysis and modeling. Applications will cover hardware and software considerations, map overlays, automation in thematic and topographic mapping, raster/vector devices, data acquisition, and related database storage and algorithms. Advanced topics will include error modeling, data uncertainty, and new directions and impacts of GIS.

CIVL - 7200 Ground & Storm Water Hydrology, 3.00 Credits
Prerequisite(s): CIVL 3314 with D or better
Level: Upper
Upper Level
This course deals with the occurrence, circulation, storage, and distribution of surface and groundwater on earth. Topics include water supply, floods, droughts and their management. Urban drainage, storm water issues, floodplain management and water quality impacts will be studied. Appropriate software will be introduced.

CIVL - 7213 Construction Systems, 3.00 Credits
Prerequisite(s): CIVL 4143 with D or better
Level: Upper
Upper Level
This course examines how people and machines interact to build efficient systems that improve productivity in the construction industry. This course will document existing and uses of construction equipment. This course culminates with a project to design equipment spreads for an earthwork project.

CIVL - 7223 Construction Project Planning, 3.00 Credits
Prerequisite(s): CIVL 3554 with D or better or CIVL 3553 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
Students will develop a construction project management logic diagram for large multi-phase projects. The students will use software for scheduling, monitoring, and "crashing" projects to evaluate alternatives to reduce time to completion and to ensure cost effectiveness and safety considerations.

CIVL - 7303 Water & Waste Water Design, 3.00 Credits
Prerequisite(s): CIVL 3314 with D or better and CHEM 5013 with D or better
Level: Upper
Upper Level
The objective of the course is to introduce the students to water and wastewater treatment. The various methods and processes used in the treatment of potable water before human use and treatment of wastewater before disposing into natural water bodies will be discussed. Design of water and wastewater treatment plant will be covered.

CIVL - 7503 Construction Supervision, 3.00 Credits
Prerequisite(s): CIVL 3553 with D or better
Level: Upper
Upper Level
Exploration of construction contract types and language. Introduction to managing resources such as time, labor, equipment, materials and budget. Additionally students will be introduced to the business of construction through construction job site cost accounting. Effective oral and written construction supervision communication will be addressed.
CIVL - 7523 Construction Scheduling, 3.00 Credits
Prerequisite(s): CIVL 7503 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
In this course, students will study job site construction scheduling. Software will be employed to produce Critical Path Method analysis. Topics include bar charts, basic scheduling networks, critical path method, resource allocation and leveling, scheduling update and project control, schedule compression techniques, and an introduction to Last Planner System. Students will be required to complete a scheduling project using appropriate industry documents and processes.

CIVL - 8033 Senior Seminar & Project Design 2, 3.00 Credits
Prerequisite(s): CIVL 7001 with D or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course, students implement a capstone technical project proposed and designed in CIVL 7001. Each student must do research, prepare a plan/map, conduct a formal oral presentation and submit a comprehensive written report.

CIVL - 8023 Construction Jobsite Admin., 3.00 Credits
Prerequisite(s): CIVL 4043 with D or better or CIVL 7503 with D or better
Level: Upper
Upper Level
This course is an in-depth study of the documents and processes for construction project administration, including submittals, subcontracting, expediting, pay procedures, closeout and reporting.

CIVL - 8103 Senior Capstone Design Project, 3.00 Credits
Prerequisite(s): CIVL 6143 with D or better and CIVL 7001 with D or better
Level: Upper
In this course students implement a capstone technical project. Each student must do research, prepare construction documents, conduct formal oral presentation and submit a comprehensive written report.

CIVL - 8104 Global Positioning Systems, 4.00 Credits
Prerequisite(s): CIVL 3214 with D or better
Level: Upper
Upper Level
This course is designed to provide an introduction to the following topics: The U.S. Global Positioning System; other satellite-based navigation systems; GPS terminology; sources of error; GPS accuracy in forested conditions; post-process differential correction; WAAS, DGPS; and mission planning.

CIVL - 8123 Construction Project Admin, 3.00 Credits
Prerequisite(s): CIVL 4043 with D or better or CIVL 7503 with D or better
Level: Upper
Upper Level
This course is an in depth study of the documents and processes for construction project administration, including submittals, subcontracting, expediting, pay procedures, closeout and reporting. This course culminates in a simulated construction project where students assume various stakeholder roles.

CIVL - 8512 Construction Mgmt Internship, 12.00 Credits
Prerequisite(s): CIVL 7503 with D or better
Level: Upper
Applied Learning-Internship, Upper Level
This course is a work experience designed to assist the student in making the transition from classroom to the construction industry. Students will complete an approved supervised work experience under the direct supervision of an owner, manager or supervisor in a construction related industry. Each student will have a planned work program of educational objectives approved by the student, site supervisor, and Internship Coordinator. Written and oral reports, along with a journal of work activities and experience, will be required.

CJUS - CRIMINAL JUSTICE

CJUS - 1003 Intro to Criminal Justice, 3.00 Credits
Level: Lower
This course examines the three segments of the criminal justice system in the U.S. - law enforcement, the courts and corrections. Included is study of their evolution, philosophy, structure, responsibilities, agencies, and ethical obligations. Also examined are the role of the U.S. Constitution and of state and federal laws, the role of the criminal justice system in a democratic society and current issues facing those who work in the criminal justice field.

CJUS - 2003 Introduction to Law, 3.00 Credits
Level: Lower
This course introduces students to civil and criminal law. It examines the historical development of laws in the United States, distinguishing between civil and criminal laws. It also examines the essential elements of substantive law, procedural law and civil processes, and how they interact, as well as the evolution of legal realism and legal interpretation. The roles of those involved with civil and criminal law to include types of courts, plaintiffs, defendants, police, prosecutors, judges and other court-related personnel are discussed. Special emphasis is placed on the basic principles to manage complex situations during the administration of justice.

CJUS - 2103 Comm. & Prob Oriented Policing, 3.00 Credits
Level: Lower
This course examines the concepts of Community Oriented Policing (COP) and Problem Oriented Policing (POP) and crime prevention measures. Students examine principles and practices of COP and POP, comparing these philosophies with systemic issues currently facing communities and identify models for remedying the problem. This course requires a blend of leadership models for transformational change in police and community relationships culminating in a written practical exercise or special project.

CJUS - 3003 Cybercrime, 3.00 Credits
Level: Lower
As emerging technologies continue to redefine the very nature of crime, the legal apparatus in the United States and around world must adapt accordingly. This course is designed to provide an overview of topics related to cybercrime. The theories and legal issues, with emphasis on technology will be used to address cybercrime issues and to apply critical thinking skills to modern criminal justice practices, procedures, and policies related to cybercrime. Topics include legalistic, enforcement, behavioral, social, and technological issues that are related to the crime problems.

CJUS - 4003 Corrections Process in the U.S, 3.00 Credits
Prerequisite(s): CJUS 1003 with D or better
Level: Lower
This course provides an introduction to the corrections process and examines state, local and federal correctional programs in the United States. Included is the study of the evolution, philosophy, structure, responsibilities and types of correctional agencies as well as the roles and ethical obligations of those working in the corrections system. The impact of American Correctional Association Standards (ACA) on correctional agencies is examined. Attention also is paid to public policy as it relates to issues affecting the corrections process including probation and parole rehabilitation and offender versus victim rights.

CJUS - 4103 Policing in a Free Society, 3.00 Credits
Prerequisite(s): CJUS 1003 with C or better
Level: Lower
Applied Learning-Creative Work
This course is an introduction to the responsibilities of police and police agencies at the local, state and federal levels. Police operations are examined relative to their effectiveness in crime control, delivery of services and maintenance of order with particular emphasis on patrol operations and preserving the freedom of citizens. Principles of management as they relate to organizational structures and activities of public and private police and corrections agencies in America are introduced. Also examined are the development of policy, personnel administration, inspection procedures, performance evaluations, and planning and research in police agencies. The students will complete a final capstone project synthesizing supervisory and leadership aspects of the course.

CJUS - 5003 Constitutional Issues in Crime, 3.00 Credits
Prerequisite(s): CJUS 1003 with D or better
Level: Upper
Upper Level
A comprehensive examination of the U.S. Constitution and the impacts of resulting case law on public policy relative to criminal and social systems, governmental authority and civil liberties. In this course students will research and analyze social and political policy resulting from these impacts in areas such as pornography, abortion, women's rights, voting rights, sentencing equality, immigration, terrorism, juvenile death penalty, and the Patriot Act to name a few. This is a discussion-based course requiring students to participate in in-depth peer discussions. Students are required to analyze the impacts of case law on state and local law enforcement as it pertains to a specific topic culminating in a research project.

CJUS - 5103 Courts in Contemporary Society, 3.00 Credits
Prerequisite(s): CJUS 1003 with D or better
Level: Upper
Upper Level
The Courts in Contemporary Society is a comprehensive analysis of the courts: structure, process, and issues. This course provides a historical perspective of courts in America from past to present requiring students to critically analyze social policy affecting the courts transformation to contemporary functions including diversion, alternative dispute resolution, recidivism, and specialty courts. This examines the law and its origins, compares the federal and state court systems, and examines juvenile justice process in America.

CJUS - 5113 Contemp Public Safety Leadersh, 3.00 Credits
Prerequisite(s): BUAD 3153 with D or better or CJUS 4103 with D or better
Level: Upper
Upper Level
This course provides the evolution of leadership theorists and theories including behavioral, situational and contingency schools of thought. Students evaluate the various leadership styles and attributes of effective and ineffective leaders. Students must analyze the relationship between effective leadership and teamwork, organizational culture, diversity, ethics, interpersonal communications, organizational performance, futures planning, technology, conflict resolution, and problem solving. This course culminates in a written report and presents a leadership model for transformational change in written practical exercise.

CJUS - 5303 Glob Persp in Crim Justice, 3.00 Credits
Prerequisite(s): CJUS 1003 with C or better or DOCI 1163 with C or better
Level: Upper
Upper Level
This course will compare and contrast the American criminal justice system with various systems from around the world, which provides a global perspective. Topics include legal systems of the world, policing and correctional systems in other countries, ethical issues of other countries: criminal justice agencies, international courts, Interpol, and transnational crimes. Students will be divided into groups to conduct research on multiple international criminal justice systems.

CJUS - 5313 Soc Justice & US Justice Syst, 3.00 Credits
Prerequisite(s): CJUS 1003 with C or better
Level: Upper
Upper Level
This course explains the concept of social justice within the United States criminal justice system. Students develop an understanding of equity, diversity, and inclusion issues that plague communities in our society and the negative effects that lead to disparate treatment within the criminal justice system. The concepts of social justice and equity related to employment, education, housing, and economic opportunities are examined. The impact of these concepts within the criminal justice system are evaluated.
COURS DESCRIPTIONS

COMP - 1503 Freshman Composition, 3.00 Credits
Level: Lower

Freshmen Composition is intended to enable students to express themselves in essays. They will generate ideas, develop thesis statements, plan paragraphs, organize compositions, and select rhetorical strategies. Essays and a reference paper are required. Readings stimulate language use, critical thinking, and writing techniques.

COMP - 2703 Into to Tech Comm & Emer. Med, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science

This course presents an introduction to the major in Technical Communication and Emergent Media and the related disciplines and professions. Students will explore the rhetorical situations of technical communication through various genres including reports, workplace and employment documents, and visual communication. Emphasis will be placed on the media forms and intercultural contexts of technical communication.

COMP - 2900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
Liberal Arts and Science

The student may contract for one to four credit hours of independent study through an arrangement with the instructor. The student must submit a plan acceptable for the instructor and the department chairperson. To be substituted for the listed humanities requirements, a directed study course must be so designated by the department chair. Writing is continued in assignments related to readings, class discussions, and lectures.

COMP - 2903 English in a Global Context, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better and LITR 2343 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3233 with D or better or LITR 4333 with D or better or LITR 6003 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science

This course is an introduction to the history, evolution, and global context of the English language. The course will present a primer on the major methods and scope of linguistic and language change. Students will explore the history of English through texts of major linguistic periods. Major emphasis will be placed on a consideration of “Englishes,” or English as a world language. This course will situate the evolution of English in context of Englishes of many cultures, focusing specifically on the development of technologies for the inscription, storage, and transmission of written and spoken language.

COMP - 2503 Advanced Composition, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with C or better or LITR 2033 with C or better or LITR 2343 with C or better or LITR 2703 with C or better or LITR 2813 with C or better or LITR 2903 with C or better or LITR 2913 with C or better or LITR 3233 with C or better or LITR 4333 with C or better or LITR 7003 with C or better or LITR 7013 with C or better or LITR 7023 with D or better
Level: Lower

This course focuses on developing the student's ability to write at an advanced level about topics of broad cultural importance. Students will demonstrate assurance and skill in producing written communications on par with published prose. This class will go beyond the mechanics of proper English composition and explore concepts such as originality, honesty of both fact and presentation of emotion, economy of expression, and naturalness of style. This course can be taught from many perspectives. It will strive to instill Alexander Pope's thought that "true ease in writing comes from art, not chance". Writing is emphasized in response to readings from accomplished essayists such as Flaubert, Montaigne, Johnson, Orwell, Emerson, Thoreau, Mencken, Eileen, and Dillard, among others.

COMP - 3603 Writing for Emergent Media, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3233 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better
Level: Lower
Liberal Arts and Science

This course is an introduction to writing for emergent media. Students will be taught basic principles of good writing as they apply to various media forms, practices, and online audiences. An emphasis will be placed on textual and visual development for use in different contexts: digital narrative, Web page content, blogging, coding, screenwriting, online journalism, and hypertext styles. Students will design, edit and publish online content using current methods and tools across different platforms. Ethics in writing for emergent media will be a focus in the course.

COMP - 5703 Technical Writing II, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and ( LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3233 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better and ( LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3233 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science

This course presents a primer on the major methods and scope of linguistic and language change. Students will explore the history of English through texts of major linguistic periods. Major emphasis will be placed on a consideration of "Englishes," or English as a world language. This course will situate the evolution of English in context of Englishes of many cultures, focusing specifically on the development of technologies for the inscription, storage, and transmission of written and spoken language.

CJUS - 6003 Law & Criminal Evidence, 3.00 Credits
Level: Upper
Upper Level
The course examines the origin, development, philosophy, and legal bases of evidence, including a brief survey of the system of constitutional and procedural rules and standards affecting evidence collection and preservation. Specific topics include evidence collection and preservation, the trial process, expert and lay opinion, scientific evidence, and confessions and admissions. The course requires a research paper.

CJUS - 6203 Ethics in Criminal Justice Adm, 3.00 Credits
Prerequisite(s): SOCI 1183 with C or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course examines ethical issues in the criminal justice (CJ) field, including an analysis of diversity and situational events of persons employed in the criminal justice field. Students will evaluate leadership theory and the emerging issues and challenges confronting leaders in public safety/criminal justice. Students will also synthesize ethical philosophies and responsibilities of CJ practitioners at the local, state, and federal levels. Research will be conducted on contemporary CJ topics such as immigration, terrorism, and police conduct in commercial/industrial security agency. This is a remedial/practicum course with a written practical framework for successful and ethical leadership in a CJ setting.

CJUS - 7004 Criminal Investigation & Mgmt, 4.00 Credits
Prerequisite(s): CJUS 6003 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course examines ethical issues in the criminal justice (CJ) field, including an analysis of diversity and situational events of persons employed in the criminal justice field. Students will evaluate leadership theory and the emerging issues and challenges confronting leaders in public safety/criminal justice. Students will also synthesize ethical philosophies and responsibilities of CJ practitioners at the local, state, and federal levels. Research will be conducted on contemporary CJ topics such as immigration, terrorism, and police conduct in commercial/industrial security agency. This is a remedial/practicum course with a written practical framework for successful and ethical leadership in a CJ setting.

CJUS - 8003 Criminal Investigation Capston, 3.00 Credits
Prerequisite(s): CJUS 7004 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is a comprehensive examination of contemporary techniques, principles, problems, and theories and management of the criminal investigation process. This course provides interactive experience between classroom and crime scene evaluation. Emphasizing initial response to a scene through the questioning of witnesses and suspects; collection and preservation of evidence; preparation of case files; preparation of testimony and the management of this discipline. This course requires a lab course in conjunction with classroom presentation and is an applied course.

CJUS - 8012 Criminal Justice Internship, 12.00 Credits
Prerequisite(s): CJUS 1003 with C or better and CJUS 6203 with C or better
Level: Upper
Applied Learning-Internship, Upper Level
This course requires a minimum of 480 hours of work experience in an approved public safety agency, commonly defined as police, courts, corrections, or fire service, or in a commercial/industrial security agency. The agency or industry selected must be approved by the Department Chair and Internship Coordinator and be specifically related to the curriculum of the student. This course requires a comprehensive final report contrasting the selected agency with contemporary agencies and the maintenance of a daily diary. Students must meet the standards of their cooperating agency in order to participate.

CJUS - 8103 Criminal Justice Internship, 3.00 Credits
Prerequisite(s): CJUS 1003 with C or better and CJUS 6203 with C or better
Level: Upper
Applied Learning-Internship, Upper Level
This course requires a minimum of 120 hours of work experience in an approved public safety agency, commonly defined as police, courts, corrections or fire service, or in a commercial/industrial security agency. The agency or industry selected must be approved by the Internship Coordinator and be specifically related to the curriculum of the student. The course requires a comprehensive final report and daily diary.

CJUS - 8203 Pvt Security Admin in America, 3.00 Credits
Prerequisite(s): CJUS 6003 with C or better
Level: Upper
Upper Level
This course examines contemporary management theories and concepts applied to private security. The examination of private security theories and principles is used to analyze effective security management schemes, ranging from leadership and supervision to recruitment, selection of employees, job performance, training, supervision, discipline, and termination. This course contrasts public sector policing and private security in America with student forecasting of the future of the private security industry.
COMP - 7013 Design, & Edit. for Usability, 3.00 Credits
Prerequisite(s): COMP 2703 with D or better and SPCH 4003 with D or better and SPCH 5003 with D or better and LITR 2603 with D or better or LITR 2703 with D or better or LITR 2803 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 7003 with D or better.
Level: Upper
Gen Ed - Credits Only, Liberal Arts and Science, Upper Level
This course will introduce students to content management including an emphasis on editing digital content for multiple platforms and audiences. Students will learn about content life cycles, genres and tools central to content management, collaboration and accessibility, content analysis, and technical editing. Editing loci will be on comprehensive editing, commenting strategies and psychologies, collaboration and validation tools, copyediting, and editing for global and cultural contexts.

COMP - 7003 Writing for Emergent Media II, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 3233 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 6003 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better.
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science, Upper Level
This course is a study of the theories and methods of writing for emergent media. Students will develop advanced skills in effective writing, knowledge of media history, and awareness of theoretical approaches. Readings and assignments will feature composition in creative, critical, and professional contexts. Examples of successful writing for emergent media from popular culture will inform students' own compositions in text-based, audio, video, and interactive formats. Students will also explore how media networks form discourse communities and impact marginalized groups in a global society. Emphasis will be placed on using emergent media for social good in the context of a civic engagement project.

COURSE DESCRIPTIONS

CTRP - 1113 Med & Legal Term for Court Rep, 3.00 Credits
Level: Lower
This course will teach the student the basics of legal and medical terminology as required by the National Court Reporters Association's General Requirements and Minimum Standards (GRMS). Students will be able to use the terminology learned to build and enhance their personal dictionary and vocabulary. Students will machine produce to understand a realistic, real-time translation of the terminology learned. The goal of the course is to give the student knowledge of anatomy and medical terminologies, including root words, prefixes, suffixes, body systems, and functions of biological, medical, and psychological researching medical information, as well as knowledge of civil law, criminal law, the judicial system (e.g. discovery, trial, and appellate processes), and legal terms.

CTRP - 1112 Realtime Writing Theory Ia, 2.00 Credits
Level: Lower
Applied Learning-Practicum
Realtime Writing Theory I teaches students how to write the spoken word with punctuation by means of a conflict-free, real-time-ready shorthand theory and provide instantaneous translation. It includes the use of online computer-aided technology and teacher interaction; live practice dictation for speed and accuracy; read back and analysis of shorthand notes. NCRA requirements include the following: students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed tests and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a swearing statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for real-time translation.

CTRP - 1112 Realtime Writing Theory Ib, 2.00 Credits
Prerequisite(s): CTRP 1112 with C or better and CTRP 1112 with C or better.
Level: Lower
Applied Learning-Practicum
In a continuation of Realtime Writing Theory I, Realtime Writing Theory II teaches students how to write the spoken word with punctuation by means of a conflict-free, real-time-ready shorthand theory and provide instantaneous translation. It includes the use of online computer-aided technology and teacher interaction; live practice dictation for speed and accuracy; read back and analysis of shorthand notes. NCRA requirements include the following: students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed tests and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a swearing statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for real-time translation.

CTRP - 1134 Grammar for Court Reporters, 3.00 Credits
Level: Lower
In this course students will develop a high-level ability in spelling, vocabulary, sentence structure, word choice, capitalization and punctuation with direct application to business writing and speaking. Writing course encourages application of this knowledge through writing activities. Attention is given to diagnosing grammatical errors. Emphasis is placed upon mastery of grammatical structure needed for effective writing of sentences, paragraphs, and essays. When this course is the prerequisite for another course, the student must receive a grade of "C" or better in this course.
CTRP - 2262 Realtime Writing Theory IIIa, 2.00 Credits
Prerequisite(s): CTRP 1192 with C or better or CTRP 1192 with C or better or CTRP 1174 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of basic realtime writing theory. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory and provide instantaneous translation. Students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes must be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.

CTRP - 2272 Realtime Writing Theory IIib, 2.00 Credits
Prerequisite(s): CTRP 1192 with C or better or CTRP 1192 with C or better or CTRP 1174 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of basic realtime writing theory. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory and provide instantaneous translation. Students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes must be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.

CTRP - 2282 Realtime Writing Theory IVa, 2.00 Credits
Prerequisite(s): CTRP 2262 with C or better or CTRP 2272 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of basic realtime writing theory. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory and provide instantaneous translation. Students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes must be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.

CTRP - 2292 Realtime Writing Theory IVb, 2.00 Credits
Prerequisite(s): CTRP 2262 with C or better or CTRP 2272 with C or better or CTRP 2292 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of basic realtime writing theory. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory and provide instantaneous translation. Students are required to transcribe steno notes and speed takes under timed institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes must be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.

CTRP - 3111 Transcript Production, 1.00 Credit
Prerequisite(s): CTRP 2274 with D or better
Level: Lower
Students will learn how to properly format and prepare judicial transcripts, including cover page, appearance page, examination and exhibit indexes, question-and-answer, colloquy, parentheticals, jurats, and certification pages, as well as how to prepare ASCII disks and mini-transcripts.

CTRP - 3163 Speedbuild I for Report & Capt, 3.00 Credits
Prerequisite(s): CTRP 2274 with C or better or CTRP 2292 with C or better or CTRP 2282 with C or better
Level: Lower
Applied Learning-Practicum
This student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory. Students must be able to transcribe three-minute dictation at 120 wpm in legal areas: 80 wpm on literary material, 100 wpm on jury charge material, and 120 wpm on two-voice material. All speed takes must be transcribed with a minimum of 95 percent accuracy or higher. Testing material used for speed takes will be given at incremental speeds on unfamiliar material; the same material will not be used more than once every six months. Internet students must sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and tests shall be deleted immediately. Online students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.

CTRP - 3363 Tech for Reporting/Captioning, 3.00 Credits
Prerequisite(s): CTRP 2274 with C or better or CTRP 2282 with C or better or CTRP 2292 with C or better
Level: Lower
This course will complement the Computer Aided Transcription course (CTRP 3373) to the extent that information pertaining to the computers, hardware, software, maintenance, and upkeep will be enhanced. The material covered in this class for reporting students will relate to realtime transcription systems, realtime applications, realtime reporting in the captioning/CART environment, litigation, support, video recording, and information on related software packages used by judicial reporters. The material covered in this class for captioning students will relate to captioning technology, computer operating systems, online translation systems, basic setup and maintenance of broadcast captioner's equipment, broadcast news production preparation, prescripting, verbatim vs. word substitutes, finger spelling, history of captioning, and information relating to the deaf and hard-of-hearing community.

CTRP - 3373 Computer Aided Transcription, 3.00 Credits
Level: Lower
This course will teach the student how the computer works with the shorthand writing machine to produce an instantaneous transcript using realtime translation. The course includes computer concepts and terminology and basic file management, saving, editing, and printing. This course will take the student from the basics of a computer application software program to a more advanced level of understanding and appreciation. The goal of the course is to integrate computer concepts and English punctuation rules to produce an accurate and saleable work product. Students will review basic punctuation rules and apply them to transcript production.

CTRP - 4262 Speed Building Ila, 2.00 Credits
Prerequisite(s): CTRP 3163 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of Speed Building I for Reporters and Captioners. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory. Reporting students must be able to transcribe five minutes of unfamiliar dictation with at least 95 percent accuracy in each of the areas listed: literary at 100 wpm, jury charge at 120 wpm, and two-voice at 140 wpm. Dictation includes two-voice and multi-voice testimony (including medical and technical material), literary, jury charge, and current events. Testing material used for speed takes will be given at incremental speeds on unfamiliar material; the same material will not be used more than once every six months. Students are required to transcribe steno notes and speed takes under institutional supervision or if online students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and tests shall be deleted immediately. Online students must sign a sworn statement verifying that the recording material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation and readback and analysis of shorthand notes.

CTRP - 4272 Speed Building Iib, 2.00 Credits
Prerequisite(s): CTRP 3163 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of Speed Building I for Reporters and Captioners. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, realtime-ready shorthand theory. Reporting students must be able to transcribe five minutes of unfamiliar dictation with at least 95 percent accuracy in each of the areas listed: literary at 100 wpm, jury charge at 120 wpm, and two-voice at 140 wpm. Dictation includes two-voice and multi-voice testimony (including medical and technical material), literary, jury charge, and current events. Testing material used for speed takes will be given at incremental speeds on unfamiliar material; the same material will not be used more than once every six months. Students are required to transcribe steno notes and speed takes under institutional supervision or if online students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and tests shall be deleted immediately. Online students must sign a sworn statement verifying that the recording material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA. Successful completion of the course requires a grade of "C" or better. The course includes online computer-aided technology for realtime translation.
Level: Lower

This course is a continuation of Speed Building II for Reporters and Captioners. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, real-time-ready shorthand theory. Reporting students must be able to transcribe five minutes of unfamiliar dictation with at least 95 percent accuracy in each of the areas listed: literary at 130 wpm, jury charge at 150 wpm, and two-voice at 170 wpm. Dictation includes two-voice and multi-voice material; the same material will not be used more than once every ten months. Students are required to transcribe steno notes and speed takes under institutional supervision or if online students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA. Successful completion of the course requires a grade of "C" or better. Students must be able to pass three 5-minute dictations with 95% accuracy in each of the following areas: Q & A at 225 wpm, jury charge at 200 wpm, and literary at 180 wpm. Students are required to perform a line-by-line edit/analysis of steno notes and perform readback and analysis of shorthand notes. Students are required to transcribe steno notes and speed takes at least once every six months. Students are required to transcribe steno notes and speed takes under institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student's computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to the minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of "C" or better. Students must be able to pass three 5-minute dictations with 95% accuracy in each of the following areas: Q & A at 225 wpm, jury charge at 200 wpm, and literary at 180 wpm.
CTRP - 4393 Speed Building Vb, 2.00 Credits
Prerequisite(s): CTRP 4262 with C or better or CTRP 4327 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of Speed Building IV for Reporters and Captioners. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, real-time-ready shorthand theory. In this course dictation includes two-voice and multi-voice testimony (including medical and technical material), literary, and jury charge. Students are required to perform in a line-by-line edit/analysis of steno notes. Testing material used for speed takes will be given at incremental speeds on unfamiliar material. Students will be required to transcribe steno notes and speed takes under institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student’s computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of “C” or better. Students must be able to pass three 5-minute dictations with 95% accuracy in each of the following areas: Q & A at 225 wpm, jury charge at 200wpm, and literary at 180 wpm.

CTRP - 4392 Speed Building Vb, 3.00 Credits
Prerequisite(s): CTRP 4262 with C or better or CTRP 4327 with C or better
Level: Lower
Applied Learning-Practicum
This course is a continuation of Speed Building IV for Reporters and Captioners. The student will continue to learn to write, read, and transcribe the spoken word by means of a conflict-free, real-time-ready shorthand theory. In this course dictation includes two-voice and multi-voice testimony (including medical and technical material), literary, and jury charge. Students are required to perform in a line-by-line edit/analysis of steno notes. Testing material used for speed takes will be given at incremental speeds on unfamiliar material. Students will be required to transcribe steno notes and speed takes under institutional supervision or, if internet students, sign a sworn verification form stating that the work was completed without the aid of anyone present and without cheating. Speed takes shall be monitored and timed in the same way. Students are required to transcribe at least once a week. All speed takes and test recordings shall be deleted from the student’s computer immediately following tests. Internet students must sign a sworn statement verifying that the material has been deleted from their computers and no backup has been made. Students shall have access to minimum grading criteria as set forth by the NCRA requirements. Successful completion of the course requires a grade of “C” or better. Students must be able to pass three 5-minute dictations with 95% accuracy in each of the following areas: Q & A at 225 wpm, jury charge at 200wpm, and literary at 180 wpm.

CULN - 1413 Culinary Foundations, 3.00 Credits
Level: Lower
Applied Learning-Practicum
Through the use of demonstrations and lectures this course will focus on the basic methods and scientific principles of cooking, and will explore the fundamentals of industry specific cooking techniques used in contemporary gastronomy. In addition, students will be introduced to the history of the culinary industry, professional standards, and kitchen organization. The basics of product identification and introductory cooking techniques will also be explored. Palate development and development of flavor profiles accompanies the course.

CULN - 1153 Baking Foundations, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This introductory course will teach students the proper procedures, mixing methods, and equipment used in basic baked goods production. Culinary and baking history will be discussed.

CULN - 1173 Purchasing & Cost Control, 3.00 Credits
Level: Lower
This course incorporates basic math as related to the food service industry. Topics will include principles of food cost controls, daily yields and menu pricing, monthly report forms, food check preparation, recipe conversion and standardization procedures. This course will also cover cashier’s report procedures, the use of balance sheets to determine the state of a food service operation, and costing as related to budgeting, improvements of operation efficiency and comparisons of similar operations. In addition this course will cover the principles of purchasing, receiving and storage. Students will learn the ABC’s of inventory as well as how to utilize sales history and popularity percentages to create forecasting as it pertains to budgeting and production.

CULN - 1479 Kitchen Fundamentals, 9.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $60.00
The student will acquire experience in the preparation of and service of quantity foods with an emphasis on school, institutional, and commercial cafeterias; and an a la carte restaurant. The course covers basic equipment usage, knife skills, as well as storage and inventory procedures. Students will acquire experience in salad and stock preparation and will learn about the fabrication of chicken, pork, and beef cuts. Scientific, economic, and artistic aspects of food preparation will also be developed as the student involvement increases in each area of food production.

CULN - 1579 Baking Fundamentals, 9.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $60.00
This lab section introduces students to the fundamental aspects of baking. Students will learn about the preparation, use and safety considerations of baking equipment, and will get hands-on experience preparing fried bakery goods, yeast dough, quick breads, pies, cookies, cakes and icings. Students will rotate bi-weekly through experiences with general baking concepts, preparation, equipment use, safety, mixing, panning and finishing of the products.

CULN - 2043 Fundamentals of Nutrition, 3.00 Credits
Level: Lower
This course will cover the function and importance of nutrients and vitamins in the body, daily nutritional requirements, important food sources and the effects of nutrient deficiencies. Nutritional guidelines and standards, importance of nutrition in disease prevention, storing, and using nutritious ingredients in the daily production of food will be stressed. In addition, students will examine various topics related to the American diet such as fast diets, herbs and supplements, diet and exercise, allergens, special needs diets and food additives.
CULN - 2183 Menu Planning, 3.00 Credits  
Level: Lower  
This course will focus on the basic principles of menu planning with an emphasis on classical menu patterns, menu formats, and the relationship of the menu to the complete operation of a food service establishment. The pricing and profitability of menu items, menu design, as well food merchandising and styling will be covered.

CULN - 2263 Cooking Techniques & Preps, 3.00 Credits  
Prerequisite(s): CULN 1143 with D or better or FDSR 1373 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course is a continuation of Culinary Foundations (CULN 1143). This course aims to provide understanding of cooking theory and mastery of a set of manual skills. These are applied to a wide range of cooking styles and products.

CULN - 2273 Baking Techniques & Prep, 3.00 Credits  
Prerequisite(s): CULN 1153 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course will cover the proper procedures for mixing methods, and equipment used in intermediate baked goods production. Topics include laminated doughs, frozen desserts, intermediate yeast raised breads, baguettes and brioche, as well as intermediate baked goods, cakes, icings, and specialty desserts. The course will also introduce students to basic chocolate work, including tempering and piping.

CULN - 2479 Culinary Preparations, 9.00 Credits  
Prerequisite(s): CULN 1479 with D or better or FDSR 1478 with D or better  
Level: Lower  
Applied Learning-Practicum, Course Fee $60.00  
This lab is a study and practice of the principles, standards and procedures involved in quantity and quality food preparation. Students will rotate the duties involved in all areas of preparation, service, and sanitation within the a la carte restaurant and the cafeteria. The course emphasizes improvement of basic knife, fabrication, and bakery skills needed for the preparation of breakfast items, meat, fish and poultry, soups and vegetables.

CULN - 3162 Hospitality Accounting, 2.00 Credits  
Prerequisite(s): CULN 1373 with D or better or FDSR 2183 with D or better and FDSR 2153 with D or better  
Level: Lower  
This course focuses on introductory accounting principles and practices specific to the hospitality industry. Activities in this class are directed toward developing and refining a professional fluency in budget and forecast preparation. This class will also apply operational performance analysis based upon income statements and balance sheets. Students will study basic accounting principles, rules and standards, as well as managerial accounting as well food merchandising and styling. The course will introduce and raise awareness of the importance of business plans, tax implications, and cash controls.

CULN - 3173 Int'l Cook, Garde Manger & Baki, 3.00 Credits  
Prerequisite(s): CULN 2263 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course introduces baking products, techniques, advanced food preparation and regional cuisines. It is broken down into three separate modules; each one dealing with those three areas. The course will establish a strong foundation in basic baking, advance ability in higher level food preparations, and develop an understanding and appreciation for global cuisine.

CULN - 3251 Beverages, 1.00 Credit  
Level: Lower  
Applied Learning-Practicum  
Students will learn about the history, classification, methods of production, and the characteristics of wine, spirits and beers. Mixology, lounge service, systems of beverage controls, laws controlling beverage sales, nonalcoholic beverages, and profitability will also be covered in this course.

CULN - 3253 Beverage & Fermentation, 3.00 Credits  
Level: Lower  
Students will learn about the history and production of beer, wine and cheese through hands-on experience. They will develop an understanding of styles and characteristics of different types of beer, wine, and cheese. The course covers systems of beverage controls, laws controlling beverage sales, and nonalcoholic beverages.

CULN - 3293 Int'l Baking & Cooking Fundamen, 3.00 Credits  
Prerequisite(s): CULN 2273 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course will teach students the proper baking procedures and mixing methods used to produce advanced baked goods. The course will cover speciality items such as mousses, puddings, and cream desserts, as well as merengues, advanced gateaux and tortes. Students will learn about advanced bakery techniques using gingerbread, marzipan, and specialty sauces. Ethnic desserts and baked goods will be a focus of the course. Baking students will also become familiar with fundamental culinary skills.

CULN - 3353 Hospitality Supervision, 3.00 Credits  
Level: Lower  
The emphasis of this course is on kitchen management techniques, cost control, employee hiring and supervision. A major focus will be budgets, including labor and product cost controls and analysis. The importance of internal and external communications, conflict management, and creative problem solving will be stressed. The hiring, training, and rating of employees, as well as the role of unions in the hospitality industry, will be covered. Each student will be prepared for job procurement through resume writing, cover letter creation and insights on interviewing.

CULN - 3479 Advanced Culinary Preparation, 9.00 Credits  
Prerequisite(s): CULN 2479 with D or better or FDSR 2479 with D or better  
Level: Lower  
Applied Learning-Practicum, Course Fee $60.00  
Students will practice menu planning and the preparation of restaurant items in the working labs of the program. This lab provides hands-on experience in order to develop supervisory and management skills in the kitchens and dining room. In addition, the student is expected to develop a mastery of skills for a la carte and volume preparation of basic sauces, appetizers, vegetables, grains and pastas, salads, sandwiches, and a variety of entrees, with an emphasis on accepted culinary techniques and presentation.

CULN - 3489 Advanced Pastry Preparation, 9.00 Credits  
Prerequisite(s): CULN 2489 with D or better or FDSR 2489 with D or better  
Level: Lower  
Applied Learning-Practicum, Course Fee $60.00  
This lab section will develop advanced techniques and disciplines for fine dining and high volume baking operations. In weekly rotations in the lab, students will gain hands-on experience producing wedding cakes, specialized pastries and cookies, layer and ethnic cakes, tortes, seasonal baked goods, and specialty doughs. Management of a bakery operation will also be addressed.

CULN - 4033 Intro to Food Science & Techno, 3.00 Credits  
Level: Lower  
Applied Learning-Practicum  
This course is an introduction to food science - the biology, chemistry, and physics of food ingredients and food production. The role of formulation, heating, and cooling on foods, as well as the way taste, texture and appearance affect food production will be covered. The chemical interactions of key food ingredients are a major focus of the course. There will be an emphasis on the scientific method as it pertains to food science and technology, ingredient substitution, and the development and testing of food products. Students will gain experience creating new or improved food products through using formulation variables.

CULN - 4043 Advanced Pastry, 3.00 Credits  
Prerequisite(s): CULN 3253 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course will introduce the student to specialized techniques in baking and pastry. Skill development covering petits fours, candy making, decorative sugar, wedding cakes, various ethnic ingredients, desserts, and baked goods will be the focus. Bakery packaging and merchandising will also be covered.

CULN - 4163 Advanced Cuisine, 3.00 Credits  
Prerequisite(s): CULN 3173 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course deals with advanced cooking techniques and cuisine issues. Much of the activity is devoted toward developing a personal culinary philosophy by the students. Students will study cooking techniques in depth. They will develop a perspective on their use, and will study basic methods of product development in the foodservice industry. The course will introduce topics, begin discussion, and raise awareness of sustainable food production and will establish a firm connection between cooking and culture.

CULN - 4253 Hospitality Management, 3.00 Credits  
Prerequisite(s): CULN 3353 with D or better  
Level: Lower  
Applied Learning-Practicum  
This course builds on the supervisory elements covered in Hospitality Supervision. The fundamentals of personnel management relating to motivation, performance, employee rights and labor relations will be covered. In addition, the course will emphasize basic planning, organizing, staff development, and interfacing with government and the public. Students will be exposed to management and motivation theory, allowing them to begin developing personal philosophies in both areas.

CULN - 4479 Culinary Capstone, 9.00 Credits  
Prerequisite(s): CULN 3479 with D or better  
Level: Lower  
Applied Learning-Practicum, Course Fee $60.00  
Using the knowledge and experience gained through previous lecture and lab experiences, this capstone course provides students with hands-on managerial experience in the planning, organizing and direction of kitchen production. Students will rotate through experiences as chef, station cook and dining room manager. These experiences will help students develop a personal/professional cooking style through creativity, innovation and synthesis based on previous lab exposures. The lab will emphasize refined sauce making, braising, smoking, cooking proteins to order and sophisticated plate presentation.

CULN - 4489 Pastry Capstone, 9.00 Credits  
Prerequisite(s): CULN 3489 with D or better  
Level: Lower  
Applied Learning-Practicum  
In this capstone course students will incorporate earlier lab and lecture experiences, and will demonstrate managerial level skills in the planning, organizing, and direction of bake-shop production. Students will be encouraged to develop a personal/professional baking style through creativity, innovation, and synthesis. In weekly rotations in the lab, students will gain hands-on experience with a wide variety of pastry items including but not limited to plated desserts, cakes and tortes, chocolate sculpting, sugar artistry, and candy production. Inventory control, ordering, and pricing, as well as promotion and merchandising of bakery products will also be covered.

CULN - 4900 Directed Study, 1.00 TO 6.00 Credits  
Level: Lower  
A student may contact for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.
COURSE DESCRIPTIONS

DGMA - DIGITAL MEDIA & ANIMATION

DGMA - 1333 Survey of Animators & Visual Ef, 3.00 Credits
Level: Lower
This course will take students through a comprehensive history of animated films beginning with their conception in the early 1900's through the present. Students will learn how the medium reflects social issues, political views as well as human creativity. The various types of animation and how they were created in different countries and cultures will be the major focus. The screenings and discussions will span various genres and styles of animation including anime, experimental, commercial, computer, and independent film as well as gaming.

DGMA - 1401 Freshman Seminar, 1.00 Credit
Level: Lower
This introductory course prepares students with basic skills that will help them succeed in the Graphic & Media Design or Digital Media & Animation programs. These skills include but are not limited to: time management, research practices, effective critique strategies, and online portfolio management.

DGMA - 1403 Digital Foundations I, 3.00 Credits
Level: Lower
This is an introductory digital media course that focuses on the manipulation of both raster and vector-based imagery. Students will learn the basics of Photoshop as well as digital imaging and use the software to develop their skills in the visualization of motion and time. The course will have a strong emphasis on principles of lighting, layout and composition.

DGMA - 1413 Foundations: Form/Space, 3.00 Credits
Level: Lower
This is a visual rendering course in the Digital Media and Animation major. Broad experience is emphasized with diverse graphic tools and techniques to develop observation of and analyze visual information. This course is designed to deconstruct preconceived ideas of form/space relationships and replace them with objective understandings.

DGMA - 1423 Intro to Visual Communication, 3.00 Credits
Level: Lower
This is a course that focuses on creative, technical, and environmental collaborations involved in visual communication. Building on the elements and principles of design/communication the students work through increasingly difficult projects to their final cumulative piece. An investigation of color theory as it applies to traditional and computer generated images is also pursued.

DGMA - 2403 Introduction to 3D Animation, 3.00 Credits
Prerequisite(s): DGMA 1403 with C or better
Level: Lower
Applied Learning-Practicum
This course provides an introduction to 3D modeling, texturing, lighting, and animating. Students will use a variety of tools and techniques to create various hard and soft surface models that address specific design problems.

DGMA - 2503 Digital Foundations II, 3.00 Credits
Prerequisite(s): DGMA 1403 with C or better
Level: Lower
Applied Learning-Practicum
This course expands upon the fundamental concepts behind visual communications introduced in previous courses. Emphasis will be placed on the creative process and design thinking using multiple models of visual communication. Students will explore technical and conceptual ideas associated with digital media communications through the production of time based and interactive projects.

DGMA - 2603 Media Forge I, 3.00 Credits
Prerequisite(s): DGMA 1403 with C or better
Level: Lower
Applied Learning-Practicum
This course provides an introduction to media design studio practice. Students work within design teams on real-world media design problems, with emphasis on video production, motion graphics and project management.

DGMA - 3111 Japanese Media, 1.00 Credit
Level: Lower
This course is an overview of Japanese art, cinema, animation and digital media. Students will explore Japanese media in native and transcultural contexts through a series of lectures and research projects. Special emphasis is given on communication strategies for art and digital media collaboration across cultures, with the goal of participation in a short-term study abroad program.

DGMA - 3113 Studio Tokyo, 3.00 Credits
Prerequisite(s): DGMA 3111 with D or better and JAPN 1203 with D or better
Level: Lower
Applied Learning-Int'l/Dom Trvl
Students will explore Japanese art, cinema, animation and digital media through a study-abroad program based in Tokyo. Students will create animation and digital media projects in collaboration with local artists, and expand upon their research from Japanese Media (DGMA 3111) through screenings and site visits.

DGMA - 3203 Interactive Authoring, 3.00 Credits
Prerequisite(s): CIAT 2403 with C or better or DGMA 2403 with C or better
Level: Lower
This is a course that introduces the student to the art of creating cartoon-style animation applicable to industry needs in graphic design, interactive media, the internet, film, and television using Macromedia Flash. The course emphasizes student acquisition production with both cameraless and computer-based techniques.

DGMA - 3303 Digital Photography, 3.00 Credits
Level: Lower
In this course, students will be introduced to digital photography covering basic to advanced techniques necessary for the production of art work, as well as learning about the visual arts, how to look at and critique photography, photographic vocabulary, and be introduced to works by well known photographers. Students will also gain a better understanding of the use of external hardware such as lenses, flashes, lights, and other equipment and their impact on photography.

DGMA - 3403 Intermediate 3D Animation, 3.00 Credits
Prerequisite(s): DGMA 2403 with C or better
Level: Lower
This course delves deeper into 3D computer animation while reinforcing the modeling, texturing, and lighting techniques learned in DGMA 2403. Various animation techniques will be explored and applied through object and character animation, as well as rigging that addresses specific animation problems. There will be a strong focus on the study of human and animal anatomy and how they influence motion.

DGMA - 3503 Typography, 3.00 Credits
Level: Lower
This course introduces students to the fundamentals of typography. Students combine research and design principles to move projects from concept to execution. Emphasis is given to new technologies and modes of delivery.

DGMA - 3603 Production I, 3.00 Credits
Level: Lower
Applied Learning-Creative Work
This course will introduce the student to the use of current non-linear editing technology. Class projects will develop an understanding of the methods used for creating, sampling and storing digital video and audio and the constraints placed on these media assets when used for media based projects. Emphasis is placed upon the technology of digital video and audio, including: formats, data rates and compression algorithms.

DGMA - 3703 2D Game Design, 3.00 Credits
Prerequisite(s): DGMA 1403 with C or better and CISY 1113 with C or better
Level: Lower
This course will introduce concepts fundamental to game design in a hands-on studio setting. Through a series of experiments and projects, students will explore character design, level design, behaviors, game mechanics, risk/reward balancing and testing processes. Additional focus will be given to asset design and animation in 2D environments, including the principles of animation and game-engine animation tools.

DGMA - 4003 2D Animation, 3.00 Credits
Prerequisite(s): DGMA 1333 with C or better or FNAT 2433 with C or better
Level: Lower
Applied Learning-Creative Work
This course will introduce the student to the art of 2D animation production. Topics include character design, preproduction techniques, physical forces, the principles of animation, soundtrack synchronization, and performance for animation. Students will use industry-standard software to complete exercises and projects of their own design.

DGMA - 4103 Interactive Design, 3.00 Credits
Prerequisite(s): DGMA 1403 with C or better
Level: Lower
This is an exploration of visual communication through interactive media and interface design. Students will explore the fundamental concepts of interactivity and visual perception concerning computer interfaces, focusing on design for websites, online media, and digital games. Students will complete interactive titles of their own design with intuitive interfaces that incorporate concepts covered in class.

DGMA - 4203 Color Theory, 3.00 Credits
Level: Lower
This course explores the history and theories associated with the use of color in graphic design, and develop design practices that utilize concept driven color solutions for projects. Students will gain experience in the techniques and color management practices necessary for the production of effective screen-based and print-based design.

DGMA - 4303 3D Game Design, 3.00 Credits
Prerequisite(s): DGMA 2403 with C or better and DGMA 3703 with C or better
Level: Lower
Applied Learning-Creative Work
This course will expand students' understanding of game design and 3D interactive environments. Topics will include 3D character and level design, procedural generation in level design, development of game mechanics, complex behaviors, engine-based physics and development for virtual reality systems. Projects will be required to create a game utilizing a 3D game engine and principles covered in class.

DGMA - 4443 Advanced 3D Animation, 3.00 Credits
Prerequisite(s): DGMA 3403 with C or better
Level: Lower
Applied Learning-Practicum
This course focuses on rigging and animation for 3D. Students will continue their work with modeling, texturing, lighting, rigging, and animation from previous courses, and apply it towards creating an animated short.

DGMA - 4900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
A student may contract for one to four credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

DGMA - 5103 Production I, 3.00 Credits
Prerequisite(s): ( CIAT 4103 with C or better or DGMA 4103 with C or better ) or ( CIAT 4423 with C or better or DGMA 4423 with C or better )
Level: Upper
Applied Learning-Creative Work, Upper Level
This course will introduce the student to the use of current non-linear editing technology. Class projects will develop an understanding of the methods used for creating, sampling and storing digital video and audio and the constraints placed on these media assets when used for media based projects. Emphasis is placed upon the technology of digital video and audio, including: formats, data rates and compression algorithms.
DGMA - 5113 Studio Tokyo II, 3.00 Credits  
Prerequisite(s): DGMA 3113 with D or better and JAPN 1203 with D or better and ( DGMA 3113 with D or better or DGMA 6203 with D or better )  
Level: Upper  
Applied Learning-Int/Dom Trl, Upper Level  
In this course, students will explore Japanese art, animation and digital media through a study-abroad program based in Tokyo. Students will schedule and lead teams in the creation of animation and digital media projects. Students will also conduct and present individual research into topics introduced in Interactive Media (DGMA 3111). Special emphasis will be given to linguistic, cultural and industrial differences in media production in Japan.

DGMA - 5303 Sound Design, 3.00 Credits  
Prerequisite(s): DGMA 2503 with C or better  
Level: Upper  
Upper Level  
This course explores fundamental concepts of sound as a creative medium. Emphasis will be placed on concurrent development of theory and practice of sound and how it contextualizes visual experience. Students will learn about waveform synthesis, expanded Foley techniques, electronics, performance, acoustics and theories of listening. By the end of this course, students will create both stand alone and integrated sonic artworks for use in film, interactive and other digital media applications.

DGMA - 5333 Special Topics in Art & Design, 3.00 Credits  
Prerequisite(s): DGMA 1403 with C or better  
Level: Upper  
Upper Level  
This is an upper-level course, which focuses on a topic of special interest to the instructor and the course. Prerequisites: DGMA 3113 with D or better or DGMA or JAPN 1203 with D or better. This course will be offered in response to student interest. Special topics must be approved by the department. The topics will be agreed upon by the instructor and the students. This course is limited to 15 credits, which may be repeated, but will count as only one course toward the degree. No more than 24 credits of special topics may be included in the degree.

DGMA - 5403 Advanced Modeling, 3.00 Credits  
Prerequisite(s): DGMA 2403 with C or better  
Level: Upper  
Applied Learning-Creative Work, Upper Level  
This course develops a refinement of skills from the preceding semesters work with modeling and a focus on photo-realistic models. The student will build upon their knowledge of 3D and provide an in depth study of modeling coupled with lighting and texturing. The course shows students how to visualize a project and effectively build it in the 3D world using various surface types and communicate scenarios and moods through the use of textures and light to surface interactions.

DGMA - 5543 Asset Production, 3.00 Credits  
Prerequisite(s): DGMA 2403 with C or better  
Level: Upper  
Upper Level  
In this course, students will create video game assets for both 2D and 3D interfaces. Students will expand on their use of the principles of animation, character design, 3D modeling, texturing and rigging, and will be introduced to sound recording and production techniques. Emphasis will be given to cohesive design strategies across group production.

DGMA - 5603 Interactive Media, 3.00 Credits  
Prerequisite(s): DGMA 1403 with C or better  
Level: Upper  
Upper Level  
In this course, students will expand their skills in interactive design as they are introduced to new control systems and developing interactive technologies. Students will create applications that communicate with viewers through text, image and sound, utilizing skills developed in previous courses. Particular emphasis will be given to incorporating video and animation in interactive environments. Students will explore communication possibilities through interactive media in studio experiments and complete interactive titles of their design that incorporate concepts covered in class.

DGMA - 5900 Directed Study, 1.00 TO 4.00 Credits  
Prerequisite(s): DGMA 1403 with D or better  
Level: Upper  
Upper Level  
A student may contract for one to four credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

DGMA - 6103 Production II, 3.00 Credits  
Prerequisite(s): DGMA 3603 with C or better  
Level: Upper  
Applied Learning-Creative Work, Upper Level  
This is an advanced course that expands upon the fundamental concepts involved in time based visual communication. Emphasis will be placed on the creative process of making images that can convey ideas and information to others. Students will learn advanced cinematography, editing and collaborative workflow techniques while incorporating expanded theoretical concepts from the history of narrative and non-narrative media to their projects.

DGMA - 6203 Motion Graphics, 3.00 Credits  
Prerequisite(s): DGMA 5103 with C or better or DGMA 3603 with C or better  
Level: Upper  
Applied Learning-Practicum, Upper Level  
From experimental video and film title sequences to revolutionary TV commercials, broadcast design and motion graphics are used to inspire and influence. Through a series of exercises and projects, students will develop skills in motion design and compositing, utilizing techniques developed in previous courses.

DGMA - 6303 Spec. Topics in Media Design 1, 3.00 Credits  
Prerequisite(s): DGMA 4103 with C or better  
Level: Upper  
Upper Level  
This course focuses on current issues in media design and explores the latest techniques and processes. Students will be given the emerging technologies and the changing role of media design. Students will utilize research-based practices as a catalyst in the generation of project(s) aligned with a special topic. Topics may vary each time the course is offered.
DSGN - 8003 Senior Studio Project II, 3.00 Credits
Prerequisite(s): DSGN 6103 with C or better or DSGN 6403 with C or better or DSGM 6203 with C or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course, students will integrate aspects of their studies in a semester-long production. Students will use this semester to create a work from start to completion. Students will be responsible for all aspects of this project, including conceptualization, design, pre-production, post-production and final design.

DSGM - 8106 Senior Studio Project II, 6.00 Credits
Prerequisite(s): CIAT 7403 with C or better or DSGM 7403 with C or better
Level: Upper
Applied Learning-Creative Work, Upper Level
This is a cumulative two-part course where students will integrate aspects from their studies of the previous three years. Students will use this semester to create one of the following: a 3D animated film; a 2D animated film; and Experimental Animation film (Stop Motion, Mixture of 3D and 2D animation or a fully Interactive/Informative Media project). Students will produce all pre-production work including proposal, storyboards and animatics. Students will also generate all post-production work including editing, sound mixing and final delivery format (using current technology) prior to a film screening.

DSGM - 8203 Media Design Seminar, 3.00 Credits
Prerequisite(s): DSGM 6103 with C or better
Level: Upper
This seminar will prepare Graphic Media and Design seniors to transition into the professional world by focusing on critical self-evaluation. Students will examine their own body of work as well as the work of professionals in the field. Special focus will be given to a designer's responsibilities in social, cultural, and environmental contexts. This course will include field trips and lectures from visiting artists.

DSGM - 8303 Game Design Studio 2, 3.00 Credits
Prerequisite(s): DSGM 6533 with C or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course students will develop and lead a team in the production of an innovative computer game. Students will expand on their use of Agile software development methodology, focusing on management. Students will be responsible for organizing and overseeing all aspects of game design, including programming, visual development and user testing. Special emphasis will be placed on narrative design, original mechanic design and art direction.

DSGM - 8403 Sr Studio Proj - Media Design, 3.00 Credits
Prerequisite(s): DSGM 6103 with C or better
Level: Upper
Applied Learning-Creative Work, Upper Level
In this course, students will identify an existing design problem and complete the design process towards a successful solution.

DSGM - 8503 Special Topics Media Design II, 3.00 Credits
Prerequisite(s): DSGM 6103 with C or better
Level: Upper
Upper Level
This course focuses on current issues in media design and explores the latest techniques and processes. Students will evaluate emerging technologies and the changing role of media design. Students will utilize research-based practices as a catalyst in the generation of large scale project(s) aligned with a special topic. Topics may vary each time the course is offered.

DSGN - INTERIOR DESIGN

DSGN - 1433 Furniture & Finishes, 3.00 Credits
Prerequisite(s): ARCH 1184 with C or better or CIAT 1184 with C or better
Level: Lower
This survey course examines the selection, specification, composition, manufacture, and application of finishes and materials in interior design and presents an overview of furniture construction, types, planning and selection.

DSGN - 1443 Color, Lighting and Acoustics, 3.00 Credits
Level: Lower
This course is a fundamental course that investigates the properties and principles of basic color theory and its interrelationship with lighting. The focus is on the psychological and physiological effects of color and lighting as it applies to the form, texture, and finish of interior spaces. Course content provides a basic understanding of lighting calculations, types of lamps, appropriate use and application. General acoustic principles with an exploration of material application are introduced.

DSGN - 2204 Interior Design I, 4.00 Credits
Prerequisite(s): CIAT 2394 with C or better or ARCH 2394 with C or better
Level: Lower
Applied Learning-Civic Engage, Course Fee $106.00
This studio course emphasizes the design process for residential projects. Students will develop hand drawing, manual model making and digital techniques for presenting their projects. Basic programming skills will be introduced and applied to a small residential project. Projects will focus on civic engagement that is "Good Design for Social Good" for example, public housing and emergency housing. Students will investigate the application of appropriate materials, in accordance with accepted industry standards, as well as spatial and furniture layouts, appropriate to residential functions. Projects must comply with appropriate building codes and standards.

DSGN - 2223 History of Interior Design, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
This survey course offers a critical overview of the history of interior design, its connection to different periods and cultures, and its integral relationship with architecture, stylistic movements and the decorative arts. Course content introduces students to major historical design periods from prehistoric civilizations to contemporary design. Lectures highlight period design, furniture styles, decorative objects, color palettes and their relevance to present-day interior design.

DSGN - 2304 Interior Design II, 4.00 Credits
Prerequisite(s): DSGN 2204 with C or better
Level: Lower
Applied Learning-Creative Work, Course Fee $106.00
This studio course emphasizes evidence based design and design process for commercial projects. Anthropometrics, ergonomics, universal design, sustainable and green design, biophilia, wayfinding and commercial design trends will be studied. Students will refine programming skills to include functional, spatial and technical requirements for their projects. All projects will incorporate pertinent building codes, green design, and accessibility standards. Advanced material board techniques and professional presentation practices will be reinforced.

ECON - ECONOMICS

ECON - 1013 Principles of Macroeconomics, 3.00 Credits
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This is an introductory course, which views the behavior of the economy as a whole and the problems of economic organization. Students will explore the fluctuations of output and prices. Problems and measurement of economic growth, inflation, unemployment, and income will be discussed. Money, credit and financial institutions will be analyzed, as well as their impact on fiscal policies and international trade.

ECON - 2023 Principles of Microeconomics, 3.00 Credits
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This course provides an analysis of the basic market forces of supply and demand, and economic outcomes under different market structures such as competitive, imperfectly competitive, and monopolistic markets. The labor and capital markets are analyzed. In addition, the economics of the public sector emphasizes tax policy, externalities, monopoly power, and the provision of public goods. The course examines contemporary social issues such as income distribution, poverty, and the welfare state as well as global issues such as international trade and protectionism.

ECON - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

EDUC - EDUCATION

EDUC - 2163 Foundations of Education, 3.00 Credits
Level: Lower
Applied Learning-Creative Work
The course examines the social, historical, ethical and philosophical foundations of the U.S. educational system. Attention will also be paid to contemporary educational opportunities and challenges including the evolving teaching role, school equity and funding, educational standards and assessment, classroom diversity and multicultural education, social justice, and reform initiatives. Students will complete a portfolio as the culmination of their work in the program.

ELET - ELECTRICAL ENG TECH

ELET - 1001 Seminar, 1.00 Credit
Level: Lower
This course is an examination of strategies for success, including organizational and study skills, and electrically related career opportunities for engineering technology students. The class entails textbook and research readings followed by written assignments. Topics include the variety of engineering technology and engineering careers, diversity in society and the technical workplace, sustainability, and ethics. Students make personal assessments of goals, strengths and weaknesses as related to college and technical career success. Employment application techniques addressed in assignments include resume writing, and letters of application. Research assignments use library and internet resources.

ELET - 1103 Circuit Theory I, 3.00 Credits
Prerequisite(s): MATH 1033 with D or better or MATH 1034 with D or better or MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or MATH 2043 with D or better
Level: Lower
In circuit theory, a student will analyze electrical circuits according to the fundamental definitions and laws as they apply to direct current circuits. The physical parameters defined include charge, voltage, current, resistance, capacitance and inductance. The laws applied include Ohm’s Law, Joule’s Law, Kirchoff’s Voltage Law, and Kirchoff’s Current Law. The analysis relies on algebra and exponentials.

ELET - 1111 Digital Logic Laboratory, 1.00 Credit
Corequisite(s): Level: Lower
Applied Learning-Other
This laboratory implements the theoretical principles of ELET 1133, Digital Logic. Students learn to build working circuits based upon design goals. Applications include examples of combinational and sequential logic such as adders, multiplexers, counters and 7-segment displays. Logic solutions utilizing, and interrelated interstage as well as transistor-transistor logic integrated circuits, and simulation software. Written laboratory reports are required.
ELET - 3103 Digital Logic, 3.00 Credits
Level: Lower
Digital Logic introduces a student to two-state logic. Logic analysis will use the binary number system and Boolean algebra. Both combinational (AND-OR) logic and sequential (flip-flop) logic are studied. Typical logic designs include 7-segment displays, adders, multiplexers, and counters. Logic designs are implemented using simulation, programmable logic devices and transistor-transistor logic.

ELET - 3115 Electronics Laboratory II, 1.00 Credit
Prerequisite(s): ELET 2103 with D or better
Corequisite(s): ELET 2103 with D or better
Level: Lower
Applied Learning-Other
This course is an experimental study of operational amplifiers and linear integrated circuits as applied to comparators, amplifiers, waveform generations, signal conditioning, and regulated power supplies. Emphasis is placed on design, proper measuring techniques and documentation of results. Device characteristics and limitations will be studied. The use of manufacturer's data sheets is required. Computers are used to design, analyze and test circuits along with manual measuring techniques.

ELET - 4154 Microelectronics, 4.00 Credits
Prerequisite(s): ELET 1103 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $98.00
This course provides the student with a realistic experience in semiconductor manufacturing processes. Oxidation, diffusion, photolithography (spin/bake/expose/develop), etch, and vapor deposition equipment allow students the opportunity to design, build, and test simple solid-state devices in a cleanroom environment. Properties and characteristics of semiconductor materials will be examined. Introduction to fabrication processes, design rules, and semiconductor device models will be applied to the design and fabrication of resistors, capacitors, diodes, and transistors.

ELET - 4224 Alternative Energy Generation, 4.00 Credits
Level: Lower
Applied Learning-Practicum
The purpose of this course is to provide students with a realistic look at the potential and the limitations of electrical generation through energy conversion. The energy sources include solar, wind and water. The course will include semiconductor properties of photovoltaic cells and the electronic circuits necessary for energy conversion. Using trigonometry, students will be able to calculate the position of the sun at any time or place and calculate the energy available at different panel orientations. Students will have the beginning tools to design off-grid and grid photovoltaic energy systems. MATLAB and LabVIEW software will be used to analyze and measure the solar resource. Some background knowledge of trigonometry and basic electrical circuits is expected.

ELET - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

ELET - 5113 Electronic Communications, 3.00 Credits
Prerequisite(s): ELET 2103 with D or better
Level: Upper
Applied Learning-Other, Upper Level
This course is the study of analog and digital communication concepts and systems. Students begin by learning the terminology and measurements used in the communication industry. The course includes analysis of AM, and FM transmission and reception, Single-Sideband communications, Digital Wired and Wireless Communications, Network Communications, and Multiplexing and De-multiplexing techniques. Emphasis is on the system approach with block diagrams, with the presentation of theoretical fundamentals and study of the concepts within each diagram. The associated laboratory and projects augment the lecture theory. Students investigate further by completing an individual project.

ELET - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Applied Learning-Practicum
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

ELET - 6004 Advanced Power Systems, 4.00 Credits
Prerequisite(s): (ELET 2124 with D or better or ELET 2123 with D or better ) and ELET 2103 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is the study of electrical power transmission and conversion. A project involves the design of a dc-ac converter from theory through a completed printed circuit board. Circuit topologies studied include linear, buck, boost and buck-boost converters. On the utility scale, ac circuit theory is applied to grid power flow and transmission line models. Synchronous generators and transmission lines are modeled in theory and examined in the laboratory. Power electronics are analyzed for their role in conversion and transmission.

ELET - 6143 Electrical Machine and Control, 3.00 Credits
Prerequisite(s): ELET 1103 with D or better or ELET 1104 with D or better or MCTF 2423 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
Students will study electromagnetic machines through circuit models, mathematical analysis, and experimental measurements. Mechanical, electrical, and electromagnetic fundamentals are reviewed as applied to motors and generators. Machine topologies studied include three-phase synchronous, generators and motors, three-phase induction motors, single-phase motors, and dc motors and generators. To control these machines, students will implement relay ladder logic and programmable logic circuits. Variable frequency drives and SCR drives are analyzed and tested. Sustainable engineering is promoted in this course through the selection of the most efficient and appropriate machine and control system for the application.
Students are required to perform all tasks in a neat craftsman-like manner. Emphasis is placed on the calculations along with all N.E.C. and utility company requirements for the installation of Reading and interpreting floor plan drawings as they relate to all trades is taught. Power distribution of electrical energy are discussed, as well as the adequacy of circuit design. Students will apply techniques learned in theory required to make proper terminations and correct, and accurate laboratory test procedures using appropriate test equipment such as Volt-Ohm-Milliampere Meters (VOM). Schematic drawings are required for each circuit and outside of lab, report and analysis writing is necessary.

ELTR - 2166 Residential Wiring Lab II B, 6.00 Credits
Prerequisite(s): ELTR 1156 with D or better * and ELTR 1166 with D or better * and ELTR 1176 with D or better *
Corequisite(s): ELTR 1156 with D or better * and ELTR 1166 with D or better * and ELTR 1176 with D or better *
Level: Lower
Applied Learning-Practicum, Course Fee $27.00
The lab emphasizes the application of the complete wiring system used for residential applications. Students will be required to complete several types of services, such as riser, main conduit and cable installations. Students will complete their freshman capstone project, which requires each student to redraw a two story residential home to scale. They will then perform the design work and layout all of the wiring required by the National Electrical Code and ensuring that it will meet the minimum adequacy requirements of a prospective homeowner. Students will then complete a spreadsheet containing all the components with their complete descriptions that are necessary to complete the Capstone project. Schematic and wiring diagrams are required for each circuit and outside of lab, report and analysis writing is necessary.

ELTR - 3156 Electrical Power Systems, 6.00 Credits
Prerequisite(s): ELTR 1156 with D or better and ELTR 1166 with D or better and ELTR 1176 with D or better and ELTR 2156 with D or better and ELTR 2166 with D or better and ELTR 2176 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $17.00
This course will provide instruction in the applied mathematics, operation, design methodology, installation requirements, and National Electrical Code requirements for alarms and special systems.

ELTR - 3326 Magnetic Motor Controls, 6.00 Credits
Prerequisite(s): ELTR 1156 with D or better and ELTR 1166 with D or better and ELTR 2156 with D or better and ELTR 2166 with D or better and ELTR 2176 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $17.00
This course is designed to teach foundational concepts of motors and motor control. Safe work practices and code compliment procedures will be reinforced. The student will be introduced to the basic circuits, devices and components used in their control; advanced circuits of alternating, sequencing, latching, and time delay operations of motor control will be presented. The lab will progressively lead the student to a basic understanding of individual control devices. The student will apply the basic knowledge and safety protocol towards integration into a totally automated system using magnetic and solid state controls. Throughout all projects, from basic to fully automated systems, the student will be taught troubleshooting techniques of industrial motor controls. Students will be evaluated to assess the troubleshooting skills and techniques within the lab practicums.

ELTR - 3336 Photovoltaic & Wind Tbrn Sysm In, 6.00 Credits
Prerequisite(s): ELTR 1156 with D or better and ELTR 1166 with D or better and ELTR 1176 with D or better and ELTR 2156 with D or better and ELTR 2166 with D or better and ELTR 2176 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $17.00
The course will cover the fundamentals of photovoltaic and wind power generation, installation and maintenance practices. The course content will include the components used in stand alone systems, grid interconnect systems, and grid connected systems with battery back-up. Areas of focus will be: safe work practices and PPE, site evaluation, system sizing, zoning restrictions, funding resources, and installation practices in accordance with National Electrical Code, Building Code and NABCEP training objectives and requirements.

ELTR - 3356 Pgrmbble Cntrls for Ind Autono, 6.00 Credits
Prerequisite(s): ELTR 1156 with D or better and ELTR 1166 with D or better and ELTR 1176 with D or better and ELTR 2156 with D or better and ELTR 2166 with D or better and ELTR 2176 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $17.00
This course presents the origin and evolution of programmable logic controllers. Special emphasis is placed on the fundamentals of Relay Ladder Logic (RLL) programming methods and the analysis of circuit operations as well as various applications of Programmable Logic Controllers (PLCs) used in modern industrial applications. Students will receive the necessary hands-on experience in lab to be able to design, program, construct, troubleshoot, and perform preventive maintenance of all components of a PLC controlled process. Students will be evaluated on troubleshooting techniques, terminations of input and output devices, and the proper maintenance of at least two different types of PLC Manufactures.
ENGR - 1201 Engineering Sci Orientation, 1.00 Credit
Prerequisite(s): ENGR 1201 with D or better
Level: Lower
Applied Learning-Practicum, Course Fee $17.00

This course involves the study of effective process control theory. A systems approach is used in an effort to understand each instruments' function within the system. The course will also examine how pneumatic, hydraulic, servo motors, and system automation are used in industry today for the manufacturing of products. This course also involves the practice of hands-on effective process control theory. A systems approach is used in an effort to understand each instruments' function within the system.

EMET - ELECTROMECH ENGR TECH

EMET - 5004 Instrumentation, 4.00 Credits
Prerequisite(s): ( PHYS 2023 with D or better or PHYS 2044 with D or better ) and ( MATH 1063 with D or better or MATH 1084 with D or better )
Level: Upper
Upper Level

This course introduces the student to general characteristics of electromechanical sensors and transducers, electrical measurement systems, electronic signal conditioning, data acquisition systems, and response characteristics of instruments. The lectures focus on the selection, calibration techniques and applications of electromechanical transducers. The laboratory has industrial equipment, such as a punch press, drill press, and metal lathe, which are equipped with sensors that are configured to measure physical quantities such as force, strain, displacement, velocity, and acceleration. Data acquisition and real-time software applications are applied in a laboratory environment.

EMET - 6004 Feedback Control Systems, 4.00 Credits
Prerequisite(s): MATH 6114 with D or better
Level: Upper
Upper Level

Feedback control systems with topics in time response, stability, criteria, system representation, root locus diagrams, and compensation. The systems include electrical, mechanical, and electromechanical networks. The laboratory features simulation of electrical and mechanical systems using MATLAB and SIMULINK as well as a variety of physical controllers.

ENGR - ENGINEERING SCIENCE

ENGR - 1201 Engineering Sci Orientation, 1.00 Credit
Level: Lower
An examination of strategies for success, including organizational and study skills, and transfer and career opportunities for engineering students in industry. There will be at least a dozen textbook and research readings followed by written assignments on topics to include the variety of engineering transfer institutions and engineering majors, diversity in society and the technical workplace, personal assessments of goals, values, strengths and weaknesses as related to student and technical career success, employment application techniques such as resume writing, letters of application, interviewing, follow-up communications, and an introduction to MS word and Excel.

ENGR - 2001 Engineering Computing Applictns, 1.00 Credit
Prerequisite(s): MATH 1084 with D or better
Level: Lower
Lower Level

This is an introductory, software-oriented, engineering computing course using an interactive, high-performance, scientific and engineering software package which integrates computation and visualization in a programming environment to solve engineering applications problems. Topics will include embedded mathematical function, complex numbers, matrix manipulation, plotting, user defined script and function files, matrix algebra, numerical techniques and graphical user interfaces.

ENGR - 2201 Engineering Science Seminar, 1.00 Credit
Prerequisite(s): ENGR 1201 with D or better
Level: Lower
Lower Level

The purpose of this course is to assist sophmore engineering science students in choosing and transferring to the college or university of their choice in order to complete a bachelor's degree in engineering. Transfer advisor students are invited to classes and there may be class trips to potential transfer institutions depending on the interest of the students. This is a required course for the Engineering Science associate degree.

ENGR - 3004 Circuit Analysis I, 4.00 Credits
Prerequisite(s): MATH 2094 with D or better
Corequisite(s): MATH 2094 with D or better
Level: Lower
Lower Level

This Calculus-based course covers dc circuit analysis including voltage, current, resistance, power and energy. Circuit analysis techniques and Kirchhoff's laws are applied to series, parallel and combined circuits. Thereafter, Norton's, Norton's and Superposition theorems are applied to ac circuits. Operational amplifiers are introduced. Inductance and capacitance are introduced and the transient response of RL, RC and RLC circuits to step inputs is studied using differential equations. The laboratory incorporates use of manual and computer-controlled equipment and simulation software to reinforce lecture concepts. Computational software is required for circuit calculations.

ENGR - 3213 Analytical Mechanics I, 3.00 Credits
Prerequisite(s): MATH 2094 with D or better and PHYS 1064 with D or better
Level: Lower
Lower Level

This course covers statics at the intermediate level. Equilibrium of particles and rigid bodies in two and three dimensions, centroids, centers of gravity, analysis of structures, friction, area and mass moments of inertia. Calculus and vector mathematics are employed throughout.

ENGR - 3254 Systems Dynamics I, 4.00 Credits
Prerequisite(s): MATH 6114 with D or better and PHYS 1064 with D or better
Level: Lower
Lower Applied Learning-Practicum

This course covers analysis, modeling and design of dynamic and feedback control systems using a common methodology regardless of physical discipline. Mathematical modeling, block diagrams, transfer functions, system excitation, response and stability of linear, mechanical and electrical systems in both time and frequency domains will be studied using classical techniques, state space representation, matrix notation and Laplace transforms.

The laboratory will include programming and simulation of independent and coupled, first and second order electrical and mechanical systems using appropriate software such as MATLAB and SIMULINK. An experimental project or simulation will be required.

ENGR - 4004 Circuit Analysis II, 4.00 Credits
Prerequisite(s): ENGR 3004 with D or better and MATH 6114 with D or better
Level: Lower
Lower Level

This course covers ac circuit analysis beginning with the study of sinusoidal steady-state solutions for circuits in the time domain. Nodal, loop and mesh methods of AC circuit analyses and the Thevenin, Norton and Superposition theorems are applied to the complex plane, ac power, transistors, mutual induction, three-phase circuits and two-port networks are introduced and used for analysis. Laplace and Fourier Transforms and the Fourier Series are applied to circuit analyses. Complex frequency analysis is introduced to enable discussion of transfer functions, frequency dependent behavior, resonance phenomenon and simple filter circuits. The laboratory incorporates use of manual and computer-controlled equipment and simulation software to reinforce lecture concepts. Computational software is used for circuit calculations.

ENGR - 4213 Analytical Mechanics II, 3.00 Credits
Prerequisite(s): ENGR 3213 with D or better
Level: Lower
Lower Level

This course covers dynamics at the intermediate level. Topics in kinematics and kinetics include particles, systems of particles and rigid bodies, mechanical vibrations, force, mass, acceleration, work and energy, impulse and momentum. Calculus and vector mathematics are employed throughout.

ENGR - 4246 Engr Mechanics of Materials, 4.00 Credits
Prerequisite(s): ENGR 3213 with D or better and ( MATH 2094 with D or better or MATH 2094 with D or better )
Level: Lower
Lower Level

Course Fee $46.00

This course is a calculus-based study of advanced concepts in Mechanics of Materials. It addresses the behavior of deformable mechanical components when subjected to tension, compression, torsion, flexure/bending or a combination of these loads. Extensive use is made of free body diagrams as well as Mohr's Circle for stress and strain. Experience is gained in the analysis of beams, beam loading, shafts in torsion, power, column buckling and thin walled pressure vessels. Analysis includes examination of stress concentrations, elastic and inelastic response, residual stresses, indeterminate structures and thermal effects. Superposition, singularity functions and theories of failure are studied. Laboratory experiences include traditional mechanical material testing and computer software applications.

ENGR - 4800 Directed Study, 1.00 TO 6.00 Credits
Level: Lower

A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

ENVIR - ENVIRONMENTAL TECHNOLOGY

ENVIR - 4411 Environmental Capstone Seminar, 1.00 Credit
Prerequisite(s): ENVR 4424 with D or better *
Level: Lower
Lower Level

This course is intended for students in the last semester of the Environmental Technology program. Current environmental issues are considered by utilizing guest speakers, an alumni panel, and audiovisual resources. Field trips are made to regional sites of environmental interest. A job search is organized and resumes are prepared with cover letters.

ENVIR - 4413 Environmental Law, 3.00 Credits
Prerequisite(s): BIOL 2801 with D or better and BIOL 2803 with D or better
Level: Lower
Lower Level

This course is a non-technical overview of environmental law and public policy. Included in the course are laws, regulations and policies governing water pollution, air pollution, solid waste, hazardous waste, global commons, land use, pesticides, energy, and public lands. The social concerns of environmental regulation such as environmental economics, risk assessment and environmental impact statements are also explored. The conflict/perceived conflict of economic development with environmental protection is particularly stressed. In addition, environmental problems, public policy, administration, politics and philosophy are studied.

ENVIR - 4424 Environmntl Chem & Microbiology, 4.00 Credits
Prerequisite(s): BIOL 2801 with D or better and BIOL 2803 with D or better and ( CHEM 2984 with D or better or CHEM 2124 with D or better )
Level: Lower
Applied Learning-Field Study, Course Fee $118.00

This is the "capstone" course for students in the Environmental Technology curriculum. The course includes a survey of the techniques used for sampling and laboratory analysis of soil, water, and microbiological samples. Chemistry topics include a review of inorganic and organic chemicals of environmental concern. Microbiology topics include the biology of microorganisms in soil, water, and waste treatment.

ENVIR - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower

A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

ENVIR - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Upper Level

A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.
### FNAT - Fine Arts

#### FNAT - 1013 Art Appreciation, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

Art Appreciation will introduce the student to the meaning of what Art is and is about. Special emphasis will be placed on open discussion to create awareness of men and women who have valued the arts which have become a driving force as they developed and became civilized. Students will see how the arts are really part of their daily lives by reading, viewing slides and works of art, and by creating. Writing is continued in assignments related to readings, class discussions, and lectures.

#### FNAT - 1023 Introduction to Theatre, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

The primary objective of this course is to develop knowledge and appreciation of theatre arts. This will be done through a study of theatrical traditions and dramatic literature from classical to the contemporary. Writing is continued in assignments related to readings, class discussions, and lectures.

#### FNAT - 1133 Surv of Art Hist:Ancnt Grk Art, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

Art is the highest expression of a culture. Political, historical, and social changes are the "heart of art." Works of art are a reflection of the ages in which they are produced and are often referred to as a "road" to comprehending messages. This course will consider the development of art through the centuries and how it affected today's arts, with a focus on the main artistic movements starting with Ancient Greece through the Baroque period in Italy. Guided tours will help students to experience first-hand the main artistic expressions in Campania and Rome.

#### FNAT - 1303 Architectural History I, 3.00 Credits
- **Prerequisite(s):** COMP 1503 with D or better
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

This is a survey course of the origin and development of historically notable architecture throughout the world from 9000 BCE to 1900. From the settlement of Jericho in the Neolithic Era through Etruscans, the era of stylistic revivals in the late 19th century, the students will be exposed to a wide variety of buildings, as well as introduced to the corresponding cultures and religions.

#### FNAT - 1313 Art History, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

Art History is a comprehensive survey course which views the visual arts as a humanistic discipline. Students will see the condition of our western tradition as encountered from the magic of caveman to the complexities of the twentieth century. Emphasis will be placed on the variety of purposes for which art has been produced. Writing is continued in assignments related to readings, class discussions, and lectures.

#### FNAT - 1403 Survey of Interactive Media, 3.00 Credits
- **Level:** Lower
- **Liberal Arts and Science**

This course presents students with the history of interactive media and entertainment. Topics include board games, the video game industry, interface design on the world wide web, and the development of the graphic user interface. Students will explore how developments in technology, as well as changes in other fields (cinema, graphic design, music) have changed in interactive media. Students will examine works of interactive entertainment both inside and outside of class, and will discuss theory and criticism relevant to the field. Additional focus will be given to intersections of Interactive Media with social issues, including issues of race, gender, economics and politics.

#### FNAT - 2333 Survey of Design, 3.00 Credits
- **Prerequisite(s):** COMP 1503 with D or better
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

Students will be introduced to basic design principles, theories, historical periods, disciplines, practices, and technologies. The areas of conceptual development, styles, materials, patterns, structures, and relationships in design will be examined. Major disciplines and fields in design will be considered, compared, and evaluated. The course will focus on how design influences architecture, industry, graphic and visual communication, digital media, print media, and culture. Students will evaluate design by reading, writing, researching, speaking about, and analyzing concepts related to the discipline.

#### FNAT - 2423 3D Design/Color, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

In this course, the student examines relationships between form, structure (response to gravity), process, skill, and intention in regard to three-dimensional visual art making. This inter-relationship dictates that every project incorporate some element of each of these concerns. Emphasis is placed on providing a wide range of experiences through projects which gradually increase in complexity as the student gains skills and awareness.

#### FNAT - 2453 Figure and Motion, 3.00 Credits
- **Level:** Lower
- **Gen Ed:** Arts, Liberal Arts and Science

This course builds upon the fundamental skills learned in the Foundations: Form/Space Relationship (DGM 1413) course through the use of the human model. Proportion, perspectives, plus structural and locomotion dynamics will be studied. Students will focus on the mechanics of motion.
FRSC - FORENSIC SCIENCE

FRSC - 1001 Intro to Forensic Science Tech I, 1.00 Credit
Level: Lower Forensic Science 1001 is an introductory expository course designed for forensic science technology majors to complete during their first semester of enrollment in the program. It is the first in a two-semester required sequence (along with FRSC 2001) for forensic science technology majors. Students are introduced to the requirements and expectations for success within the forensic science technology program as well as various technical disciplines and skills commonly brought to bear during a criminal investigation. Students are required to demonstrate written and oral communication skills by completing a project in a topic relevant to the class material.

FRSC - 1003 Forensic Science Concepts, 3.00 Credits
Level: Lower This course provides an overview of forensic science concepts and techniques as they relate to a criminal investigation. Topics covered range from a historical perspective of forensic science within the criminal justice system to specific methodologies often performed by a first responder or crime scene investigator. The proper identification, collection, and preservation of various types of physical evidence is presented. In addition, an introduction to the field and laboratory tests that may be performed on physical evidence is discussed. This course is intended for non-forensic science technology majors. Students cannot receive credit for FRSC 1101 if they are in the Forensic Science or Biological Sciences curricula.

FRSC - 2001 Intro to Forensic Science Tech II, 1.00 Credit
Prerequisite(s): FRSC 1001 with C or better Level: Lower Forensic Science 2001 is the continuation of a required two-semester sequence for forensic science technology majors. It is an introductory expository course designed for forensic science technology majors to complete during their second semester of enrollment in the program. Students are introduced to further technical disciplines and skills commonly brought to bear during a criminal investigation as well as current topics relevant to the field of forensic science. Students are required to demonstrate written and oral communication skills by completing a project in a topic relevant to the class material.

FRSC - 2001 Topics in Forensic Science I, 1.00 Credit
Prerequisite(s): FRSC 2001 with C or better Level: Lower The focus of this course is to explore various topics of concern in the field of forensic science and hold in-class debate style presentations to discuss these topics. Each student participates in one debate style presentation during the semester. Each student is responsible for the introduction of the topic, selecting a point of view to debate regarding the topic, and encouraging the class to offer comments and ask questions. Topics for discussion may be directly related to material discussed during other curriculum coursework or may originate from current media sources, as long as the student has established familiarity with the topic.

FRSC - 3113 Forensic Pathology, 3.00 Credits
Prerequisite(s): BIOL 1104 with C or better or BIOL 2303 with C or better or BIOL 1404 with C or better Level: Lower This course provides an overview of forensic pathology and the medicolegal death investigation system in the United States. Students will be introduced to the role and jurisdiction of the Medical Examiner as they relate to the determinations of cause, manner, and mechanism of death. Specific patterns of injury, types of deaths referred to the Medical Examiner, postmortem decompositional changes, and special topics of interest in death investigation will be discussed.

FRSC - 4001 Topics in Forensic Science II, 1.00 Credit
Prerequisite(s): FRSC 3001 with C or better Level: Lower The focus of this course is to expose students to peer-reviewed reference journal articles relevant to the field of forensic science and to expand on topics discussed during other coursework. The format of the course is reading and discussion with student accepting responsibility for serving as a discussion leader on a chosen journal article once during the semester. The discussion leaders' roles are to introduce the article topic, to provide background information about the topic, and to encourage the class to offer comments and ask questions.

FRSC - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

FRSC - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper Upper Level A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

FRSC - 6214 Microscopy and Criminalistics, 4.00 Credits
Prerequisite(s): CHEM 5414 with C or better Level: Upper Applied Learning-Practicum, Course Fee $53.00, Upper Level This course is an exploration of the basic theory and practice of traditional criminalistics and microscopic techniques commonly performed in forensic science. Topics covered include: crime scene investigation; evidence collection and handling; microscopic theory and techniques; analysis of trace evidence to include hair, fiber, paint, soil, and glass evidence; analysis of fingerprint evidence; analysis of firearms and ammunition; analysis of gurshot residue evidence; and analysis of impression and toolmark evidence.

FRSC - 7214 Forensic Chemistry, 4.00 Credits
Prerequisite(s): FRSC 6214 with C or better and CHEM 6614 with C or better Level: Upper Applied Learning-Practicum, Course Fee $100.00, Upper Level This course is an exploration of the basic theory and practice of commonly performed examinations on chemical evidence in forensic science. Topics covered include: principles of various chemical and instrumental separation techniques; sampling plans and uncertainty in measurements; an introduction to quality control and quality assurance concepts; principles and techniques of controlled experiments; principles and techniques of forensic toxicology; principles and techniques of fire debris and explosive evidence examinations; and principles and techniques of material analysis to include inks, dyes, colors, colorants and polymers.

FRSC - 8111 Forensic Science Tech Capstone, 1.00 Credit
Prerequisite(s): FRSC 7214 with C or better Corequisite(s): FRSC 7214 with C or better Level: Upper Applied Learning-Creative Work, Upper Level This course is intended for students to complete during the eighth and final semester of their enrollment in the forensic science technology program. It is to be taken concurrently with FRSC 8113. The course is designed to prepare the student to enter the workforce and/or continue their education at the graduate level. Students complete a capstone project requiring the analysis of physical evidence in a simulated casework setting. Students also apply the fundamentals of proper forensic laboratory report writing by producing a professional quality laboratory report suitable for admission into a court of law that communicates their findings. In addition, students are required to prepare and deliver expert witness testimony in a simulated mock courtroom setting.

FRSC - 8213 Forensic Science Prof Prep, 3.00 Credits
Prerequisite(s): FRSC 7214 with C or better Corequisite(s): FRSC 7214 with C or better Level: Upper Applied Learning-Practicum, Upper Level This course is an exploration of the basic theory and practice of commonly performed examinations on biological evidence in forensic science. Topics covered include: principles and techniques of serological examinations to include identification of body fluids, species determinations, and enzymatic analysis; blood spatter evidence interpretation and crime scene reconstruction; principles and techniques of forensic DNA examinations to include polymerase chain reaction, variable number tandem repeat profiling, short tandem repeat profiling and an introduction to Y-STR and mitochondrial DNA; and introductory principles and techniques of forensic pathology and forensic photography.

FRSC - 8214 Forensic Biology, 4.00 Credits
Prerequisite(s): FRSC 7214 with C or better Level: Upper Applied Learning-Practicum, Course Fee $158.00, Upper Level This course is an exploration of the basic theory and practice of commonly performed examinations on biological evidence in forensic science. Topics covered include: principles and techniques of serological examinations to include identification of body fluids, species determinations, and enzymatic analysis; blood spatter evidence interpretation and crime scene reconstruction; principles and techniques of forensic DNA examinations to include polymerase chain reaction, variable number tandem repeat profiling, short tandem repeat profiling and an introduction to Y-STR and mitochondrial DNA; and introductory principles and techniques of forensic pathology and forensic photography.

FRSC - 8703 Senior Research Project, 3.00 Credits
Prerequisite(s): BIOL 7723 with C or better or BIOL 8823 with C or better Level: Upper Applied Learning-Research, Course Fee $47.00, Upper Level This course is intended for students in the final year of the four-year forensic science technology curriculum. Students are required to complete an approved research project in an area of special interest in forensic science. The student will submit a plan for research acceptable to the forensic science technology program director and to the department chair. The instructor and student will confer regularly regarding the progress of study and research. The student will be required to prepare a formal presentation to the campus community upon completion of the research project. Students will be encouraged to present their findings at a national or regional forensic science conference.

FRSC - 8713 Forensic Science Tech Internship, 3.00 Credits
Prerequisite(s): CHEM 6614 with C or better and FRSC 6214 with C or better Level: Upper Applied Learning-Internship, Pass/Fail, Upper Level This course is intended for students in the final year of the Bachelor of Science in Forensic Science Technology. A student completes a 3-credit hour (120 hour total) internship at an approved off-campus site. The internship is intended for non-forensic science technology majors to complete during their first semester of enrollment in the program. It is intended for students to complete during their eighth and final semester of their enrollment in the forensic science technology program. It is to be taken concurrently with FRSC 8113. The course is designed to prepare the student to enter the workforce and/or continue their education at the graduate level. Students complete a capstone project requiring the analysis of physical evidence in a simulated casework setting. Students also apply the fundamentals of proper forensic laboratory report writing by producing a professional quality laboratory report suitable for admission into a court of law that communicates their findings. In addition, students are required to prepare and deliver expert witness testimony in a simulated mock courtroom setting.

FRSC - 8714 Forensic Science Internship, 3.00 Credits
Prerequisite(s): CHEM 6614 with C or better and FRSC 6214 with C or better Level: Upper Applied Learning-Internship, Pass/Fail, Upper Level This course is intended for students in the final year of the Bachelor of Science in Forensic Science Technology. A student completes a 3-credit hour (120 hour total) internship at an approved off-campus site. The internship is intended for non-forensic science technology majors to complete during their first semester of enrollment in the program. It is intended for students to complete during their eighth and final semester of their enrollment in the forensic science technology program. It is to be taken concurrently with FRSC 8113. The course is designed to prepare the student to enter the workforce and/or continue their education at the graduate level. Students complete a capstone project requiring the analysis of physical evidence in a simulated casework setting. Students also apply the fundamentals of proper forensic laboratory report writing by producing a professional quality laboratory report suitable for admission into a court of law that communicates their findings. In addition, students are required to prepare and deliver expert witness testimony in a simulated mock courtroom setting.

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FRSC - 8900 Directed Study, 1.00 TO 6.00 Credits
Preerequisite(s): CHEM 6614 with C or better
Level: Upper
Upper Level
This course is designed to allow students to pursue advanced work in an area of special interest or obtain extended internship opportunities in Forensic Science Technology. A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor, to the Forensic Science Technology Program director, and to the department chair. The instructor and student will confer regularly regarding the progress of the study.

FSMA - FINANCIAL SERVICES MANAG
FSMA - 5003 Investment Planning, 3.00 Credits
Preerequisite(s): BUAD 4133 with D or better and BUAD 4023 with D or better
Level: Upper
Upper Level
This course teaches the student how to prudently plan investments to take maximum advantage of investment opportunities as they arise. Portfolio planning will include the present changing economic environment to investment prices and determining if those prices are related to traditional fundamentals of value. The student will also be able to construct portfolios and analyze the social impact of investment choices. Tax implications of various choices will also be discussed.

FSMA - 5103 Tax Planning, 3.00 Credits
Preerequisite(s): ACCT 3453 with D or better
Level: Upper
Upper Level
This course covers tax-planning considerations for both individuals and businesses. The student will analyze current tax laws and the steps involved in managing one’s tax liability by using IRS regulations as part of an overall investment strategy. A final project will be required. The students will be given a set of facts and an overall objective. They must then research the applicable tax laws, recommend a course of action, and defend that course action with the supporting IRS regulations. An oral and written presentation of the student’s project will be required.

FSMA - 5900 Directed Study, 1.00 TO 6.00 Credits
Level: Upper
Pass/Fail, Upper Level
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

FSMA - 6003 Employee Benefit Planning, 3.00 Credits
Preerequisite(s): BUAD 4023 with D or better
Level: Upper
Upper Level
This course will enable the student to evaluate employee benefits from the employer’s and employee’s perspective and articulate the regulations and compliance necessary to maintain employee benefit plans. The course will focus on group benefits, fringe benefits and retirement plans and will require case studies and team projects to synthesize the knowledge acquired in the course.

FSMA - 7023 Estate Planning, 3.00 Credits
Preerequisite(s): BUAD 3043 with D or better or BUAD 7023 with D or better
Level: Upper
Upper Level
This course is designed to expose students to the estate planning process. It explores the many issues to consider when assisting people to enhance and maintain their financial security and welfare. The student must have a good understanding of the function of the income tax law in the context of one’s overall investment planning. The student will be given a set of facts and an overall objective. The student must then research the applicable tax laws, recommend a course of action, and defend that course of action with the supporting IRS regulations. An oral and written presentation of the student’s project will be required.

FSMA - 7103 Money & Banking, 3.00 Credits
Preerequisite(s): ECON 1013 with D or better and ECON 2023 with D or better
Level: Upper
Upper Level
This course is an exploration of the role and importance of money in effective monetary policy as a solution for inflation and unemployment. The operation, function, and structure of the banking system and the functions of the central banking system will be the focus. The role of monetary theories, money management, and monetary policy will also be studied. The theoretical foundations of conceptual and practical banking will be discussed within the context of historical and current perspectives.

FSMA - 7123 Pensi Finan Planning Capstone, 3.00 Credits
Preerequisite(s): BUAD 4023 with D or better and BUAD 4193 with D or better and BUAD 5033 with D or better * and FSMA 7023 with D or better * and FSMA 5003 with D or better and FSMA 5103 with D or better *
Level: Upper
Applied Learning Other, Upper Level
The primary purpose of this course is to bring together all the academic and professional knowledge you have learned so that you will be able to launch successfully into the professional world. This course focuses on the application of the knowledge base acquired in the prerequisites courses as part of the financial planning process. Emphasis will be on the analysis of data, critical thinking with regard to the client’s circumstances, the presentation of information and the subsequent recommendations to a client. The interrelationship of all planning areas in the construction of a comprehensive plan will be highlighted. Assignments, presentations, quizzes, and other evaluations will be used to hone the student’s analytical, presentation, and financial planning skills.

FSMA - 8112 Financial Planning Internship, 12.00 Credits
Level: Upper
Applied Learning Internship, Pass/Fail, Upper Level
Students complete 15 weeks of supervised field work in a selected financial service provider setting. The student must be engaged in bona fide financial planning work in at least one of the six core areas of investment planning, tax planning, estate planning, retirement planning, employee benefit planning, or insurance risk management. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor of financial services and/or financial planning in an organization.

GEOL - GEOLOGY
GEOL - 1113 Introduction to Geology, 3.00 Credits
Level: Lower
Applied Learning- Intl/Dom Trvl, Liberal Arts and Science
The course is an introduction to the science of geology. In particular, the main types of rocks are analyzed with an emphasis on genetic processes and in relationship to plate tectonics theory. This basic knowledge will provide a background to understand and study the main geological risks, such as volcanoes, earthquakes, floods and landslides. Specific examples from the Apennines mountain chain and Campanian plain will be examined to contextualize these topics in the Italian environment. In addition, a significant aim of this course is for students to gain a conscious relationship with the environment. The Campania region is an ideal place for experimental learning via site visits, with the opportunity for students to witness a wide range of geological features. The evaluation for the course will include midterm and final written exams, a presentation and graphical exercises.

GEOL - 1233 Volcanology, 3.00 Credits
Level: Lower
Applied Learning- Intl/Dom Trvl, Liberal Arts and Science
The course is an introduction to the main elements of geological sciences including stratigraphy laws, the main types of rocks, and an understanding of faults and folds. These elements will be used to understand Plate Tectonics theory. Using this theory, different kinds of volcanoes will be analyzed, examining different magmatic compositions, igneous and pyroclastic rocks and their geodynamic environments. The role of geologic and geochronologic processes and risks will be analyzed. The course will also study landslides in volcanic soils (the case of Sarno mounts) and groundwater flow in volcanic aquifers and exploitation of thermal waters (the case of Ischia).

GLST - GLOBAL STUDIES
GLST - 2113 Global & Diverse Perspectives, 3.00 Credits
Level: Lower
Gen Ed - DFL & Social Justice, Gen Ed - Other World Civilizat, Liberal Arts and Science
This course will introduce students to the important role of general education as a means of expanding knowledge areas, enhancing personal growth, and promoting civic engagement. Students investigate their own values and consider the global context, which values behavior and ethical decisions. The student examines the historical and contemporary societal factors that shape the development of individual and group identities and analyze the role that complex networks of social structures and systems play in the creation and perpetuation of the dynamics of power, privilege, oppression, and opportunity. Through a collection of readings, discussion, personal reflection, writing, and research, students will develop skills to think critically about their social world, broaden their awareness and understanding of cultural and social diversity, and apply the principles of rights, access, equity, and autonomous participation to past, current, or future social justice action. As a result, students will develop a greater awareness of, and sensitivity about, social and cultural issues on both a local and global level.

HIST - HISTORY
HIST - 1113 Hist of West Civil Since 1668, 3.00 Credits
Level: Lower
Gen Ed - DFL & Social Justice, Gen Ed - Other World Civilizat, Liberal Arts and Science
This course provides an introduction to the political, military, intellectual, cultural, technological, religious, and economic features of Western Civilization from the early modern period to the twenty-first century. It also considers the relationship between Europe and the United States, and between Europe and the wider world. Finally, the course discusses contemporary Europe.

HIST - 1123 History of the Mafia, 3.00 Credits
Level: Lower
Liberal Arts and Science
This course examines the history of the Mafia from its origins to the present day. How the Mafia works and has succeeded as well as approaches, including those by civil society organizations, to combat the Mafia. Attention is paid to examples of Mafia enterprises, its past and present role in politics, and its evolution from a regional organization to one with an international reach. A research project, with both a paper and an oral presentation, is required.

HIST - 1143 Surv of American History I, 3.00 Credits
Level: Lower
Gen Ed - American History, Gen Ed-US Hist & Civc Engage, Liberal Arts and Science
This course is an introductory survey of American history from the early Native People and the European colonization through the Civil War and Reconstruction. Topics include Native cultures, European heritage, the colonial experience, revolution, and new republic. Emphasis will be placed on the formation of the Constitution, reform movements and political compromises. Special attention will be paid to the common institutions in American society and their effects on different groups.

HIST - 2153 Surv of American History II, 3.00 Credits
Level: Lower
Gen Ed - American History, Gen Ed-US Hist & Civc Engage, Liberal Arts and Science
This is an introductory survey of American History from the Civil War Reconstruction to the present. Topics include western migration, the impact of industrialization and urbanization, the rise of organized labor, and the rise of the United States as a world power. This course will cover the social, political, cultural, and economic life of the people of the United States, with a special focus on unity and diversity during the 19th and 20th centuries.

HIST - 2900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
Liberal Arts and Science
This course allows students who have successfully completed a history course to continue study in that subject. A student may contract for one to four credit hours. However, directed study may be contracted by a student only with the approval of the directing instructor and the department chairperson.
COURSE DESCRIPTIONS

HIST - 5003 World History II, 3.00 Credits
Prerequisite(s): HIST 3003 with D or better or HIST 1113 with D or better
Level: Upper
Gen Ed - Other World Civilizat, Gen Ed-World Hist/Global Aware, Liberal Arts and Science, Upper Level
This course discusses the formation of the modern world from the beginning of the 1500s to the present. The course will focus on the development of the modern Western world and its impact on the rest of the world. The course will also examine the role of the United States and other Western countries in the world, and the impact of the United States on the rest of the world.

HIST - 5023 Exploring Ireland's History, 3.00 Credits
Level: Upper
Applied Learning/Int'l Dom Trvl, Liberal Arts and Science, Upper Level
This course introduces students to the history of Ireland, focusing on the period from the early medieval period to the present. The course will cover the development of the Irish state, the impact of the Norman invasion, and the development of the Irish nation. The course will also examine the role of the Catholic Church in Irish history, and the impact of the Protestant Reformation on Ireland.

HIST - 5133 Africa and the West, 3.00 Credits
Level: Upper
Gen Ed - Other World Civilizat, Gen Ed-World Hist/Global Aware, Liberal Arts and Science, Upper Level
This course introduces students to the history of Africa and the Western world. The course will cover the development of the African continent, the impact of European colonialism, and the post-colonial period. The course will also examine the role of the United States and other Western countries in Africa, and the impact of African history on the rest of the world.

HIST - 5203 End of Life Dilemmas, 3.00 Credits
Level: Upper
Liberal Arts and Science, Upper Level
This course is designed to provide the student with a critical understanding of the ethical issues that arise in end-of-life care. The course will cover the basic principles of bioethics, and the role of medical professionals in making ethical decisions. The course will also examine the impact of cultural differences on end-of-life care, and the role of family and friends in making decisions.

HLTH - HEALTH TECHNOLOGY
HLTH - 5113 Complementary & Altive Medicine, 3.00 Credits
Prerequisite(s): BIOL 2504 with D or better or BIOL 2214 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This course is designed to provide a fundamental knowledge of the principles of marketing technology through current day and beyond. What are the advantages, challenges, laws and regulations related to information systems? How do information systems impact healthcare? Emerging technologies such as electronic health record (EHR), telehealth and mobile applications are explored. The current healthcare landscape will be investigated to determine how healthcare informatics impacts quality outcome measures and private and governmental reimbursement methodology.

HLTH - 5223 Info Systems in Healthcare, 3.00 Credits
Level: Upper
Upper Level
An internet based course that examines how health information technology impacts healthcare delivery in all settings. This course explores a historical perspective of information technology through current day and beyond. What are the advantages, challenges, laws and regulations related to information systems? How do information systems impact healthcare? Emerging technologies such as electronic health record (EHR), telehealth and mobile applications are explored. The current healthcare landscape will be investigated to determine how healthcare informatics impacts quality outcome measures and private and governmental reimbursement methodology.

HLTH - 5333 Healthcare Law and Ethics, 3.00 Credits
Prerequisite(s): BIOL 3153 with D or better or TMGT 7153 with D or better
Level: Upper
Upper Level
This course is designed to provide a fundamental knowledge of the principles of marketing technology through current day and beyond. What are the advantages, challenges, laws and regulations related to information systems? How do information systems impact healthcare? Emerging technologies such as electronic health record (EHR), telehealth and mobile applications are explored. The current healthcare landscape will be investigated to determine how healthcare informatics impacts quality outcome measures and private and governmental reimbursement methodology.

HLTH - 5433 Healthcare Marketing, 3.00 Credits
Level: Upper
Applied Learning-Other, Upper Level
This course is designed to provide a fundamental knowledge of the principles of marketing technology through current day and beyond. What are the advantages, challenges, laws and regulations related to information systems? How do information systems impact healthcare? Emerging technologies such as electronic health record (EHR), telehealth and mobile applications are explored. The current healthcare landscape will be investigated to determine how healthcare informatics impacts quality outcome measures and private and governmental reimbursement methodology.

HLTH - HEALTH TECHNOLOGY
HUSR - Human Services

HUSR - 1074 Practicum in Human Services, 4.00 Credits
Prerequisite(s): PSYC 1063 with C or better and (HUSR 2083 with C or better or HUSR 4033 with C or better)
Level: Lower

Applied Learning-Practicum
This senior project course is designed to provide students with supervised work experience in human services agencies. In addition, students participate in a weekly class that combines the principles of small group dynamics with the acquired skills, knowledge and experience that students have obtained from their field experience. Students produce a final project and a portfolio to document learning. Students should consult the Practicum Pre-requisites listed in the Human Services program description section in the college catalog. Civic Engagement Intensive (CEI) sections exist.

HUSR - 1303 Intro Alcohol & Substnc Abuse, 3.00 Credits
Level: Lower

This course is intended to provide students with a basic yet comprehensive understanding of substance abuse and dependence. Attention will be given to understanding the effects of alcohol and other drugs on the mind and body, the components of addiction, the concept of alcoholism as a progressive disease, the recovery process, and the effects on society.

HUSR - 2083 Introduction to Human Services, 3.00 Credits
Level: Lower

This course is designed to give students an understanding and working knowledge of the human services profession: its goals and objectives, structure, organization, legal and ethical standards and client populations. An emphasis will be placed on the generalist approach to human services.

HUSR - 4033 Issues in Human Services, 3.00 Credits
Level: Lower

Major issues related to the field of human services are discussed in this course. Emphasis is placed on the ethical standards within the field of Human Services. Students are expected to develop the necessary skills, values and knowledge to enhance their ability to gain employment and advancement within the human service profession.

HUSR - 5003 Community Organizations, 3.00 Credits
Prerequisite(s): HUSR 1074 with B or better
Level: Upper

Upper Level
This course is an upper level human services methods course focusing on major theories and paradigms of community organizing with applications in urban, suburban, transitional and rural communities. It provides a framework for assessment, and intervention with regard to the structures and processes of neighborhoods, communities, and organizations as they influence and are influenced by the many stakeholders in the human services arena. It explores the potential for the use of technology in organizing communities.

HUSR - 5103 Social Policy & Human Services, 3.00 Credits
Prerequisite(s): HUSR 1074 with B or better
Level: Upper

Upper Level
This course examines the evolution of American social problems and the response of the social welfare policy systems and programs at the national, state, regional and local levels. A basic framework for comparison with international social welfare systems will also be provided. The course will focus on the following aspects of the social welfare system: the impact of social policy on the delivery of human services, social welfare policy, and the systematic analysis of social welfare policy; understanding of social welfare policy analysis from both historical and current standpoints, and the organization, community and policy practice settings requiring advocacy and policy formulation; comprehension of social welfare policy analysis in the areas of welfare reform, homelessness/housing, poverty, mental health, substance abuse and health care; and individual communication skills in describing, analyzing, synthesizing and presenting a letter to the editor, a letter to a legislator, and a social welfare policy analysis response to a current societal problem. Applications in social welfare advocacy at all levels will be explored.

HUSR - 5203 Grants Contracts Organ Adv HS, 3.00 Credits
Level: Upper

Applied Learning-Practicum, Upper Level
This course will provide students with the tools needed to be successful with proposal writing, program and strategic planning, fund raising and institutional advancement. Specific areas to be addressed will include how to identify appropriate funding sources, how to market and organize charitable fundraising events and campaigns, how to complete applications for funding assistance, and how to respond to requests for proposals from public and private resources. Civic Engagement Intensive (CEI) sections exist.

HUMM - Humanities

HUMM - 2114 Culture of Italy in Context, 4.00 Credits
Prerequisite(s): COMP 1503 with C or better and (LITR 2033 with D or better or LITR 2343 with D or better or LITR 2703 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2900 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3233 with D or better or LITR 4333 with D or better or LITR 7003 with D or better)
Level: Lower

Gen Ed - Humanities, Liberal Arts and Science
While there are many definitions of “culture”, most have in common the characteristic behaviors, values, and beliefs of a group and those items of excellence influenced by those values, beliefs, and behaviors. This course will examine the culture of Italy from the point of view of Americans who are alert to their own country’s culture. Through academic and first-hand field experiences, students will search out the values and characteristics perhaps unique to the Italians, make comparisons and contrasts with their own culture, and thereby increase their own intercultural competency. Learning will involve class discussions, lectures, introspective and public writing, workshops, oral presentations, and field trips.

HUSR - Human Services
HUSR - 5213 Case Management Systems, 3.00 Credits
Prerequisite(s): HUSR 1047 with B or better
Level: Upper

This course in case management will familiarize students with various approaches used by human services professionals to meet the service needs of the client. The use of case management with children and families, elderly, chronically mentally ill, developmental and physically disabled, and those in human service settings will be investigated. Approaches used in case management will be compared with the use of case management skills. Case management will be demonstrated including grouping, goal setting, recording, case monitoring, advocacy, and outcome evaluation. Use of automated data systems and electronic records in case management will be explored.

HUSR - 5314 Human Svcs Field Prct & Sem, 14.00 Credits
Prerequisite(s): ( HUSR 5003 with C or better and HUSR 5103 with C or better and HUSR 5203 with C or better ) or ( HUSR 5003 with C or better and HUSR 5103 with C or better and HUSR 5213 with C or better ) or ( HUSR 5003 with C or better and HUSR 5203 with C or better and HUSR 5213 with C or better ) or ( HUSR 5103 with C or better and HUSR 5203 with C or better and HUSR 5213 with C or better ) and HUSR 5174 with B or better
Level: Upper

Applied Learning-Practicum, Upper Level

This seminar course is taken concurrently with a structured, supervised work experience in a human service agency. Students must successfully complete a minimum of 400 clock hours of work in human services management at an approved human services agency. In addition, students participate in this weekly seminar that synthesizes theoretical knowledge and didactic learning with the acquired skills, knowledge, and experience that the students have obtained through their field experience. The internship may be at distant locations. Faculty supervision and communication may be through various technologies that students must utilize. A complete list of practicum requirements is in Human Services Management program description in the college catalog. Civic Engagement Intensive (CEI) sections exist.

IDST - INTERDISCIPLINARY STUDIES

IDST - 1103 College and Career Success, 3.00 Credits
Level: Lower

This course has been designed for students to explore various components of life planning specific to college and career readiness. In this course the student will learn strategies for learning; use of resources; self-awareness and exploration; academic success; effective communication; and management of time, health, and financial resources. Further, this course challenges students to make a decision-making model designed to help students make career-life choices. Students will read and respond to articles, participate in class discussions, and engage in a variety of career assessments/activities. Much of the work required to accomplish these components is experiential in nature and emphasizes application in both student's personal and professional development.

IDST - 4102 Individual Studies Capstone, 2.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower

Applied Learning-Civic Engage

In this course, students will investigate their concentration including current field entrance requirements, necessary skills and job opportunities. Students will create a capstone project demonstrating their skills and knowledge in their chosen concentration. Students will demonstrate their technology proficiency by creating an online portfolio. Students will identify their educational and career goals considering assessments related to their career interests, values, personality and personal strengths. Students will identify and investigate potential four-year transfer programs that will meet their educational and career pathway goals, utilizing information literacy skills. Students will explore the concept of citizenship through critical thinking and analyzing current challenges in their target work environment. Students will design and implement a proposal and plan that demonstrates critical thinking strategies and will promote positive civic outcomes.

IDST - 5002 Interdisc Studies Capstone Des, 2.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Upper

Upper Level

In this semester students investigate the nature of interdisciplinary studies, complete personal assessments and reflect on their strengths and goals. A course-taking plan, based on extensive research and written justification, will be created. A portfolio will be designed to include a projection of their chosen concentration(s) along with a 4-semester registration plan, with justification and a collection of supporting documentation. Students will design an individual project demonstrating a plan for integrating their individual lower level core coursework with their upper level area(s) of concentration choices for completion in IDST 7001. Students will present these designs to the student's project supervisor/advisor.

IDST - 5900 Directed Study, 1.00 TO 4.00 Credits
Prerequisite(s): COMP 5703 with D or better and IDST 5002 with D or better
Level: Upper

Upper Level

This capstone course includes both proof of purpose and goals of a student's chosen coursework and an individual project demonstrating the integration of their core area with their areas of concentration. Projects may take a range of forms appropriate to the student's concentration and future goals, e.g. a research essay, demonstration, marketing study, computer program or curriculum design. Projects must be approved by the student's advisor and project supervisors. Students will present their projects to their faculty supervisors and peers at the end of the course.

IDST - 7001 Interdisc Studies Capstone Prj, 1.00 Credit
Prerequisite(s): COMP 5703 with D or better and IDST 5002 with D or better
Level: Upper

Upper Level

This capstone course involves the design, implementation, and evaluation of an interdisciplinary research project. Students will apply the BROAD method of interdisciplinary research as they gather, organize, synthesize and analyze current research literature and create an interdisciplinary research prospectus.

IDST - 8006 Interdisc Studies Internship, 6.00 Credits
Prerequisite(s): IDST 5002 with D or better
Level: Upper

Applied Learning-Civic Engage, Upper Level

This internship will assist the student in making the transition from the classroom to the professional work environment. The intent of the internship is to provide students with the experiential learning opportunity to experience an interdisciplinary situation within their field(s) of study. This internship course will provide both proof of purpose and goals of a student's chosen course-work and the integration of their core area with their areas of concentration. Students will complete supervised fieldwork in a selected business, industry, government agency or other educational or professional setting related to their two concentration areas. Students carry out a planned program of educational experiences under direct supervision of an owner, manager or supervisor in their technical field or professional area. Written and oral reports along with a journal of work experience activities will be required. Evaluation will be based on the quality of experiences gained from the internship, student work performance, and on-time completion of hours.

IMSC - IMAGING SCIENCE

IMSC - 5004 Cross Sect. Anat. in Med. Imag, 4.00 Credits
Level: Upper

Upper Level

The content of this course is designed to study sectional anatomy of computed tomography images, diagrams, textbook, and anatomical atlases (skelton). Knowledge of sectional anatomy is essential to the technologists in the practice of computed tomography in identifying areas of interest, what is normal imaging, and what is abnormal. Cross-Sectional Anatomy is the study of sectional Anatomy for Imaging Professionals. The course is designed to provide the student an overview of human anatomy, viewed in body sections, as it relates to the imaging professional.

IMSC - 5103 Intro to CT & Patient Care, 3.00 Credits
Level: Upper

Upper Level

This course introduces the basic concepts of the operation of Computed Tomography (CT) device with patient care topics. Students learn to operate CT equipment as well as to provide appropriate care for their patients. Students must be certified in ARRT Radiologic Technology to enroll in this course.

IMSC - 5203 Computed Tomography Physics, 3.00 Credits
Level: Upper

Upper Level

Topics included in this course are the history of computed tomography, fundamentals of computers, scanning methods, digital imaging, quality control, and radiation protection. Students must be ARRT certified in Radiologic Technology.

IMSC - 5603 MRI Imaging I, 3.00 Credits
Level: Upper

Upper Level

This course reviews the history of Magnetic Resonance Imaging (MRI) and explains basic principles through MRI physics. Students explore MRI systems and magnetic fields within the systems. Students learn resonance, interaction of radiofrequency, gradients, and hardware required for production of Magnetic Resonance Images to include magnet, image processor, radiofrequency, and computer system. The course explores solutions to avoid artifact appearance. Students must be ARRT certified in Radiology, Nuclear Medicine, or Ultrasound.

IMSC - 6003 Protocol, Pathology, & Pt Care, 3.00 Credits
Level: Upper

Upper Level

This course encompasses whole body Computed Tomography (CT) imaging and provides formal specialized training in CT whole body imaging prior to independent performance. Topics reviewed include patient care and management, whole body cross-sectional anatomy, pathology, imaging procedures with protocols, and special procedures in CT. This class combines patient care, scanning, human anatomy, image detail, and pathology.

IMSC - 6103 CT Clinical I, 3.00 Credits
Prerequisite(s): IMSC 5004 with D or better
Level: Upper

Upper Level

This course provides students with a hands-on application necessary to become a registered computed tomography technologist in a hospital and/or a radiology imaging environment. Assessments are based on the competency requirements from the ARRT.

IMSC - 6303 MRI Clinical I, 3.00 Credits
Prerequisite(s): IMSC 5004 with C or better and IMSC 6403 with C or better and IMSC 5603 with C or better
Level: Upper

Upper Level

In this course students apply principles learned about Magnetic Resonance Imaging procedures. Clinical hours are under the supervision of a qualified registered American Registry of Radiologic Technologists (ARRT) (MRI) technologist. Placement of clinical assignment is approved by the program coordinator. MRI exam competencies are obtained and exam proficiency is expected.
ITAL - 4603 MRI PT Care & Procedures, 3.00 Credits
Level: Upper
This course provides a detailed explanation of procedures for MRI imaging including indications for the procedure, patient history and assessment, patient preparation, orientation and positioning, selection of scan parameters, and the use of contrast media. MRI procedures are taught for differentiation of specific structures and pathology. MRI images are reviewed for quality, artifacts, anatomy, and pathology. Students must be ARRT certified in Radiology, Nuclear Medicine, or Ultrasound to enroll in this course.

ITAL - 6603 MRI Imaging II, 3.00 Credits
Level: Upper
Upper Level
This course continues instruction in the physical principles and instrumentation involved in magnetic resonance imaging (MRI). Data acquisition and processing, sequence parameters, imaging options, quality control and quality assurance are explained. Students must be ARRT certified in Radiology, Nuclear Medicine, or Ultrasound to enroll in this course.

ITAL - 7003 Advanced Imaging Pathology, 3.00 Credits
Level: Upper
Upper Level
This course describes pathology of the brain, vascular system, head, neck, spine, thorax, abdomen, pelvis, and extremities as it appears in the advanced imaging scans including Computed Tomography and Magnetic Resonance Imaging Scans. Students learn to distinguish between normal and pathological tissue as it appears in each imaging modality. Associated symptoms, disease progression, as well as treatment options are discussed.

ITAL - 7203 Accred. & Regs. in Imaging, 3.00 Credits
Level: Upper
Upper Level
This course describes the need for quality management in the imaging science department and the difference between quality assurance, quality control, and quality management. Students learn management tools and procedures specific to imaging departments, digital imaging equipment requirements, mammography standards, sonography, and nuclear medicine quality assurance.

ITAL - ITALIAN

ITAL - 1303 Italian I, 3.00 Credits
Level: Lower
Gen Ed - Foreign Language, Liberal Arts and Science
This course focuses on developing the student’s ability to speak, to write, and to read Italian. Additional emphasis is given to learning about Italian culture. Instruction centers on oral communication, written communication, reading for comprehension, and cultural awareness. Writing and speaking are emphasized in assignments related to readings, class discussions, and lectures.

ITAL - 2303 Italian II, 3.00 Credits
Prerequisite(s): ITAL 1303 with D or better
Gen Ed - Foreign Language, Liberal Arts and Science
This course focuses on developing the student’s ability to understand Italian sentences and frequently used expressions that relate to personal and family information, instruction centers on oral communication, written communication, reading for comprehension, and cultural awareness. Writing and speaking are emphasized in assignments related to readings, class discussions, and lectures.

ITAL - 3303 Italian III, 3.00 Credits
Prerequisite(s): ITAL 2303 with D or better
Liberal Arts and Science
This course will focus on developing the student’s ability to understand Italian sentences and frequently used expressions that relate to personal and family information, shopping, local geography, and employment. Oral communication will be emphasized in simple tasks that require a direct exchange of information on familiar and routine matters. Writing is emphasized in assignments related to readings, class discussions, and lectures. The course focuses on an intermediate level of reading, speaking, and writing in Italian.

ITAL - 5303 Italian V, 3.00 Credits
Prerequisite(s): ITAL 4303 with D or better
Liberal Arts and Science, Upper Level
This advanced course will focus on developing the student’s ability to understand a wide range of demanding, longer texts and recognize implicit meaning; the student will be able to express themselves fluently and spontaneously and use language flexibly and effectively for social, academic, and professional purposes. The students will be expected to produce clear and detailed text on complex subjects, and they will be expected to show controlled use of organizational patterns, vocabulary, and cohesive devices.

ITAL - 5333 Medieval Italian Literature I, 3.00 Credits
Prerequisite(s): ITAL 4303 with D or better
Liberal Arts and Science, Upper Level
This course will focus on developing the student’s ability to understand a wide range of demanding, longer texts and recognize implicit meaning; the student will be able to express themselves fluently and spontaneously and use language flexibly and effectively for social, academic, and professional purposes. The students will be expected to produce clear and detailed text on complex subjects, and they will be expected to show controlled use of organizational patterns, vocabulary, and cohesive devices.

ITAL - 5443 Medieval Italian Literature II, 3.00 Credits
Prerequisite(s): ITAL 4303 with D or better
Liberal Arts and Science, Upper Level
This course will focus on developing the student’s ability to understand a wide range of demanding, longer texts and recognize implicit meaning; the student will be able to express themselves fluently and spontaneously and use language flexibly and effectively for social, academic, and professional purposes. The students will be expected to produce clear and detailed text on complex subjects, and they will be expected to show controlled use of organizational patterns, vocabulary, and cohesive devices.
LITR - 2913 Introduction to Poetry, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science
This course is designed as a continuation of JAPN 1205; this course further develops the student's ability to speak, to write, and to read Japanese. Additional emphasis is given to learning about Japanese culture, instruction centers on oral communication, written communication, reading for comprehension, and cultural awareness. Writing and speaking are emphasized in assignments related to readings, class discussions, and lectures. This course also provides students with the ability to communicate in Japanese in their pursuit of travel, business, academic endeavors, and personal pleasure.

LITR - 2900 Directed Study, 1.00 TO 4.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science
Survey of British Literature I is the first of two courses surveying British literature from the Middle Ages to the present; this course examines literature in the Middle Ages, the Early Modern Period, and the Restoration and eighteenth century. Emphasis is placed on the critical study of works such as Beowulf and authorities such as Chaucer, Chippendale, Cumberland, Defoe, Spenser, Shakespeare, Milton, Dryden, Swift, Pope, Johnson, and Boswell. Writing is emphasized in assignments related to readings, class discussions, and lectures.

LITR - 4333 Survey of American Lit I, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science
This course is a continuation of Survey of American Literature I with special attention to the works of Twain, Howells, Dickinson, James, Crane, Dreiser, Robinson, Frost, O'Neill, Eliot, Hemingway, Faulkner, Bellow, Updike. Writing is continued in assignments related to readings, class discussions, and lectures.

LITR - 4900 Directed Study, 1.00 TO 4.00 Credits
Level: Lower
A student may contract for an independent study through an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

LITR - 5133 Special Topics in Literature, 3.00 Credits
Prerequisite(s): COMP 1503 with C or better and LITR 2603 with C or better or LITR 2033 with C or better or LITR 2503 with C or better or LITR 2603 with C or better or LITR 2813 with C or better or LITR 2903 with C or better or LITR 2913 with C or better or LITR 3333 with C or better or LITR 4333 with C or better or LITR 7003 with C or better )
Level: Upper
Liberal Arts and Science, Upper Level
Students will study selected literature of the past five centuries through the lens of a particular social movement, such as the American experience, or Life During Wartime, or Global Colonization, or the Women's Rights Movement, or Political Movements Left and Right, or any topic of special interest to the instructor and relevance to students. Reading from selected literary works, students will apply historical, literary, and rhetorical analyses to determine key elements of composition, argument, historical setting, sociological context, and cultural interpretation. Students will be expected to actively participate and contribute to class discussion. Typical critical approaches to literature include these: the formalist approach or "new criticism", the biographical approach, the psychoanalytic approach including the theories of Freud and Jung, the economic and social class approach, gender-focused criticism, the mythological perspective, the structuralism approach, the deconstructive approach, and the cultural studies perspective. A research paper will be required.

LITR - 5900 Directed Study, 1.00 TO 4.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better or LITR 2503 with D or better or LITR 2603 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 7003 with D or better )
Level: Upper
Liberal Arts and Science, Upper Level
The student may contract for one to four credit hours of independent study through an agreement with the instructor. The student must submit a plan acceptable for the instructor and the department chairperson. To be substituted for the listed humanities requirements, a directed study course must be so designated by the department chair. Writing is continued in assignments related to readings, class discussions, and lectures.

LITR - 6003 Interactive Narratives, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better or LITR 2503 with D or better or LITR 2603 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better or LITR 7023 with D or better )
Level: Upper
Applied Learning-Creative Work, Gen Ed - Humanities, Liberal Arts and Science
Upper Level
In this course, students will examine interactive media, such as video games, ads, and texts, for literary techniques, movies, including narrative approach, setting, theme, symbol, allegory, and rhetorical strategies. Students will engage various genres and forms of interactive media to compare storytelling approaches and to evaluate how literary techniques transform across media.

LITR - 3313 Creative Writing: Travel & Expr, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
Gen Ed - Arts, Gen Ed - Humanities, Liberal Arts and Science
This course will have students write creative non-fiction focusing on the experience of travel. Student will read and be exposed to different works of non-fiction (travel writing and instructional, how-to writing), and published fiction (poetry, stories, and novels) revolving around travel. Class readings will also expose students to various writing styles and provide examples of the successes and strategies of other writers. Class time will be spent discussing the writer's craft and the assigned readings, and critiquing student writing in a workshop setting.
LITR - 7033 Native American Literature, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and (LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2503 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3133 with D or better or LITR 3233 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 5133 with D or better or LITR 7003 with D or better) 
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science, Upper Level
This course will trace the evolution of Native American literature from oral tradition to written narrative. Students will analyze Native American texts for their narrative techniques, historical and cultural significance, themes, symbols, as well as their place in the American literary tradition. Course texts will include selections of oral storytelling, a selection of Native American myths, documentaries, nonfiction, fiction, and feature films produced by Native Americans. In addition, the course will investigate the myths and realities of reservation education, alcoholism, suicide, the welfare system, Hollywood portrayals, family structures, and intercultural relations. Students will be required to write a personal reflection paper, research papers on the readings/flims, and a revision of one of the essays. Students must demonstrate the ability to write analytically and coherently, in ways appropriate to the discipline, and they must display the ability to revise and improve their writing in both form and content.

LITR - 7023 Alternate World Literature, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and (LITR 2603 with D or better or LITR 2033 with D or better or LITR 2343 with D or better or LITR 2503 with D or better or LITR 2703 with D or better or LITR 2813 with D or better or LITR 2903 with D or better or LITR 2913 with D or better or LITR 3133 with D or better or LITR 3233 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better) 
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science, Upper Level
This course focuses on literature set in other worlds, including alternate realities, possible universes, and imaginative realms. To discover new perspectives and deepening understanding of their own reality, students will critically analyze the extrapolation and adaptation of human life into other worlds and vice versa. Selections may include films, video games, novels, plays, poems, and short stories.

LSCM - LOGISTICS & SUPPLY CHAIN
LSCM - 7003 Log, Warehousing, Invent, Distr, 3.00 Credits
Prerequisite(s): (BUAD 3153 with D or better or TMGT 7153 with D or better) and BUAD 7033 with D or better 
Level: Upper
Gen Ed - Business, Upper Level
This course is an introduction to logistics as part of the supply chain process. The course will focus on logistics, the inbound and outbound of a supply chain, warehousing, packaging, transportation management - that ensure the customer receives the desired product at the right time and place with the right quality and price. Students will apply learning to case studies focusing on organizational and managerial issues in logistics.

LSCM - 7113 Enterprise Resource Planning, 3.00 Credits
Prerequisite(s): (BUAD 3153 with D or better or TMGT 7153 with D or better) and BUAD 7033 with D or better and LSCM 7003 with D or better 
Level: Upper
Gen Ed - Business, Upper Level
In this course, students will gain the increasingly important process-centric perspective of the modern business environment. Reflecting on real-world business processes, students will study how the integration of business operations and enterprise systems, on a global scale, are managed and implemented. Students will gain a deep appreciation for the role of enterprise systems in efficiently managing processes from multiple functional perspectives.

LSCM - 8503 Global Supply Chain Mgmt., 3.00 Credits
Prerequisite(s): (BUAD 3153 with D or better or TMGT 7153 with D or better) and BUAD 7033 with D or better 
Level: Upper
Gen Ed - Business, Upper Level
Supply chain management (SCM) is a system approach to managing the entire flow of information, materials, and services from raw materials suppliers through operations facilities and warehouses to the end customer. This course is an introduction to, and application of, theoretical approaches and practices to managing a global supply chain. Course focus will be on managing material and information outside of the factory walls including aspects of production planning and control, purchasing, supply chain design, transportation, technology, and rationalization. Students will work in teams to develop a supply chain solution for a fictional company. Students will learn how supply chain strategies support corporate strategies.
**MATH - 1104**

**Quantway Core, 3.00 Credits**

Corequisite(s):
- Level: Lower
- Gen Ed - Mathematics, Initial College-level Math, Liberal Arts and Science
- Quantway Core focuses on math for everyday life. It integrates fluency with numbers, proportional reasoning, data interpretation, algebraic reasoning, models, and communicating quantitative information. Mathematical concepts are investigated through group problems and class discussions and real-life contexts of citizenship, personal finance, and model literacy. A grade of C or better is required to register for any subsequent math course. The course prepares students to take college level non-STEM courses in mathematics, such as MATH 1014, MATH 1113, MATH 1114, MATH 1123 or MATH 1233.

**Prerequisite(s):** MATH 1014 with C or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- This is a 3 credit, one-semester course which provides an introduction to and understanding of the basic concepts of statistics. Actual computation will be minimal; computers will be used whenever calculations are necessary. Emphasis will be placed on the meaning of statistical results and context will include experiments, measurement, organizing data, and statistical indices. Optional topics include probability, time trends, survey design and basic inference concepts.

**MATH - 1104**

**Quantway II, 4.00 Credits**

Corequisite(s):
- MATH 1104 with C or better or MATH 1143 with C or better or MATH 1014 with C or better
- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science, Quantway 2
- This course uses mathematical and statistical reasoning in everyday life decision-making. The course integrates percentages, probability, mathematical modeling, and statistical thinking within quantitative statistics. This course is the first of a two-semester sequence in statistics. Students will learn to analyze data, apply statistical tools, and create designs by combining geometric shapes. They will identify the rules used in modeling tools will be used extensively to enhance spatial intelligence skills and awareness of properties. Students will learn to analyze designs by identifying their geometric component parts and create designs by combining geometric shapes. They will identify the rules used in creating the design and will create new designs by varying some of those rules.

**Prerequisite(s):** MATH 1014 with C or better or MATH 1034 with C or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- Topics of this course include trigonometric functions and their properties with the study of identities, formulas, equations, and graphs. Also included are the study of right and oblique triangles using the law of sines and cosines with emphasis placed on contextual applications and solving. Exponential and logarithmic functions with related problem solving are included. A graphing calculator is required. Students cannot receive credit for MATH 2043 if they have credit for MATH 1054, MATH 1063, MATH 1084, or any course for which MATH 1053 or MATH 1084 are prerequisites.

**MATH - 2074**

**Technical Calculus II, 4.00 Credits**

Prerequisite(s):
- MATH 1084 with D or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- A continuation of MATH 1063 with further study in differentiation and integration of both the algebraic and transcendental functions. Applications will be included in each topic. An introduction to Matrix Algebra may be included. Graphing Calculator required. Student cannot receive credit for MATH 2074 if they have received credit for MATH 1084.

**MATH - 2094**

**Calculus II, 4.00 Credits**

Prerequisite(s):
- MATH 1084 with D or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- This course is designed as a continuation of MATH 1084 with a concentrated study of integration techniques and applications along with applications. Applications include but are not limited to areas, volumes, and arc length. The course involves the methods of integration and applications as they apply to both the algebraic and transcendental functions. Infinite series and Taylor series will be included. A graphing calculator is required. Student cannot receive credit for both MATH 2094 and MATH 2074.

**MATH - 2124**

**Statistical Methods & Analysis, 4.00 Credits**

Prerequisite(s):
- MATH 1033 with C or better or MATH 1034 with C or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- This is a one-semester, non-calculus based course, which covers descriptive as well as inferential statistics. Included are topics on collecting, organizing, and summarizing data. Other topics include confidence intervals, and hypothesis testing as applied to the mean, standard deviation, and sample proportion. Uses of technology and calculator statistical packages for analysis is introduced.

**MATH - 2125**

**Discrete Mathematics, 3.00 Credits**

Prerequisite(s):
- MATH 1033 with C or better or MATH 1034 with C or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- This course is designed for Information Technology and Mathematics and Science students. The course will introduce and discuss the following topics: functions, relations, sets, logic, counting methods, methods of proof, network graphs and trees, algorithmic complexity, and combinatory and matrices. A graphing calculator is required.

**MATH - 2900**

**Directed Study, 1.00 TO 4.00 Credits**

Prerequisite(s):
- Level: Lower

- Liberal Arts and Science
- A student may contract for from one to four credit hours of independent study in mathematics through an arrangement with an instructor of mathematics. The student and instructor will develop a course of study which is approved by the department chairman and the school dean. The instructor and the student will confer regularly regarding the student’s progress.

**MATH - 3003**

**Linear Algebra, 3.00 Credits**

Prerequisite(s):
- MATH 1084 with C or better or MATH 1063 with C or better

- Level: Lower
- Gen Ed - Mathematics, Liberal Arts and Science
- This course is an introduction to linear algebra. Topics covered include systems to solutions of linear equations, linear independence, matrix algebra, vector spaces, eigenvalues and eigenvectors. Students will learn how to use technology (e.g. calculators, MAPLE, MATLAB, or Mathematica) to perform related tasks.

**MATH - 4900**

**Directed Study, 1.00 TO 6.00 Credits**

Prerequisite(s):
- Level: Lower

- Liberal Arts and Science
- A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chair. The instructor and student will confer regularly regarding the process of the study.
MATH - 5023 Math Foundations Cryptography, 3.00 Credits
Prerequisite(s): MATH 1048 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This course is designed to develop the mathematical skills that a student would need in order to analyze and implement historical and modern day cryptography. Historical cryptography will include discussion of the following ciphers: shift, affine, block, substitution, Vigenere, Playfair, Feistel, DES, AES, RSA and ElGamal public key encryption. Applications of modern day cryptography will include digital signatures and e-commerce. Maple software will be used to perform encryption and decryption. Prerequisite: MATH 1084 or permission from instructor.

MATH - 6104 Multivariate & Vector Calculus, 4.00 Credits
Prerequisite(s): MATH 2048 with D or better or MATH 2074 with D or better or MATH 6114 with D or better
Level: Upper
Gen Ed - Mathematics, Liberal Arts and Science, Upper Level
This course is designed as a continuation of Integral Calculus. Topics will include: parametric equations, polar, cylindrical and spherical coordinate systems, vectors and vector valued functions, functions of several variables, partial derivatives and applications, multiple integrals, and vector analysis, including Green’s theorem, Stokes’ theorem, and Gauss’ theorem. The course will include several major projects outside of class.

MATH - 6114 Differential Equations, 4.00 Credits
Prerequisite(s): MATH 2048 with D or better or MATH 2074 with D or better
Level: Upper
Gen Ed - Mathematics, Liberal Arts and Science, Upper Level
This is the beginning study of the solution of differential equations with emphasis on both analytic and numerical solutions. Topics include first and second order differential equations and their solutions, series solutions, Laplace transforms, linear equations of higher order, numerical solutions or ordinary differential equations using Euler’s method, and the use of Eigenvalue methods to solve linear systems. In addition, this course emphasizes the development of differential equations as mathematical models for a variety of practical applications. The course will include several major projects outside of class.

MATH - 7113 Economic Analys for Engr Techr, 3.00 Credits
Prerequisite(s): MATH 1063 with D or better or MATH 1048 with D or better
Level: Upper
Gen Ed - Mathematics, Liberal Arts and Science, Upper Level
This course covers basic pricing formulas, cost estimation techniques, present economic studies, time-value of money, evaluating a single alternative, comparison and selection among multiple alternatives, and depreciation.

MATH - 7123 Statistics for Engr Tech & Sci, 3.00 Credits
Prerequisite(s): MATH 2074 with D or better or MATH 2048 with D or better
Level: Upper
Gen Ed - Mathematics, Liberal Arts and Science, Upper Level
This course offers the theoretical basis for probability and statistics related to engineering applications. Topics include data analysis techniques, correlation and regression, probability, probability distributions, confidence intervals, and hypothesis testing methods and standard deviations. Graphing calculators are required. Computer applications may be included.

MATT - MACHINE TOOL TECHNOLOGY

MATT - 1004 Basic Industrial Machining, 4.00 Credits
Level: Lower
Course Fee $119.00
This introductory course is designed to instill safe shop methods and procedures along with the proper and safe use of all equipment associated with Machine Tool Technology. Also incorporated in this introductory course is the proper use of basic measuring tools and hand tools. Students will be instructed in the proper operation of the power saw, drill press and pedestal grinder.

MATT - 1014 Industrial Machining I, 4.00 Credits
Level: Lower
Applied Learning-Practicum
Students will be instructed in the proper operation of power Basic lathe operations will be presented. The student will demonstrate their proficiencies on this equipment by producing specifically assigned projects.

MATT - 1024 Industrial Machining II, 4.00 Credits
Level: Lower
Applied Learning-Practicum
This course is designed to develop basic skills on the vertical milling machine. Projects will be assigned to allow the student to demonstrate the various skill levels required.

MATT - 1234 Industrial Machining III, 4.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $119.00
The student will be instructed in advanced lathe operations and procedures. These will include precision turning, maintaining closer tolerances, and gage threading with the use of carbide tool cutters. The student will demonstrate the various skills required by producing assigned advanced level projects.

MATT - 1244 Industrial Machining IV, 4.00 Credits
Level: Lower
Applied Learning-Practicum
The student will be instructed in advanced vertical milling operations and procedures. These will include advanced vertical milling machine set-up (i.e. sine plates and indexing heads) and operations (i.e. dove tail and t-slot cutting). The student will demonstrate the various skills required by producing assigned advanced level projects.

MATT - 1254 Industrial Machining V, 4.00 Credits
Level: Lower
Applied Learning-Practicum
The student will be instructed in the safe operation of the horizontal milling machine and the surface grinder. The student will demonstrate the various skills required by producing assigned projects.

MATT - 1713 Reading Engineering Drawings, 3.00 Credits
Level: Lower
This transfer of ideas from the Engineering Department to the manufacturing area is accomplished through the use of Engineering drawings. This course will explain how information is conveyed through the use of ANSI standard drafting procedures and the correct interpretation of that information by the machinist.

MATT - 1723 Reading Engineering Drawings II, 3.00 Credits
Level: Lower
The transfer of ideas from the Engineering Department to the manufacturing area is accomplished through the use of engineering drawings. This course will be a continuation of MATT 1713 and will explain how advanced information is conveyed through the use of ANSI standard drafting procedures. The correct interpretation of this advanced information will be used by the machinist to produce mechanical parts on the various machine tools in the shop. These major topics will be included: auxiliary views, assembly drawings, weldment drawings, and threads and fasteners.

MATT - 1913 Machinist Calculations I, 3.00 Credits
Level: Lower
Basic mathematical functions used by the machinist in the performance of their duties will be the subject of this course. Mathematical operations such as multiplication of fractions, decimals, and unilaterally converting between the two and into the metric measurement system along with calculating speeds and feeds, tapers and depths of cut will be taught in this course. Successful completion of this course requires a grade of "C" or better.

MATT - 1923 Machinist Calculations II, 3.00 Credits
Level: Lower
This course is a combination of both basic geometry (both plane and solid) and trigonometry. Both of these branches of mathematics will be trade related and will focus on the math needed by the machinist, CAD drafter, and welder to perform their required tasks. Successful completion of this course requires a grade of "C" or better.

MATT - 3003 Geometric Dimensioning & Tolr, 3.00 Credits
Level: Lower
Geometric Dimensioning and Tolerancing is dimensioning associated with the tolerancing of individual characteristics of a part where permissible variations relate to form, profile, radial relationship to an axis, orientation of one feature to another, and location of features. Applications of all symbols and proper interpretation will be stressed. Application of various principles referenced in the current specification will be presented.

MATT - 3005 Intro to CNC Machine Program, 5.00 Credits
Level: Lower
Applied Learning-Practicum
The student will use the horizontal and vertical mill in a safe manner, and will perform various external and internal operations including drilling, power tapping, milling of slots, keyways, boring, laying out bolt circles using x and y coordinates. Students will write step-by-step procedures and will use math formulas to calculate machine time and will draw basic prints for machining purposes.

MATT - 3025 CNC Industrial Machining I, 5.00 Credits
Level: Lower
Applied Learning-Practicum
The mechanical components of the lathe are explained in this module. The terminology established here is used throughout the balance of the instruction. Because of the variety of turret styles and automatic tool handling mechanisms found on CNC lathes, several configurations are shown along with an explanation of how each operates.

MATT - 4003 Senior Project, 3.00 Credits
Level: Lower
Applied Learning-Creative Work
This course is designed as a capstone project to verify a student’s ability in all aspects of machining. The student will be required to identify a need for a new product or improvement on an existing product. After identification, the completion of the project will occur with minimal instructor guidance, which will allow the student to demonstrate their ability to perform independently. Upon completion, the student will demonstrate the functionality of their project in the form of a formal presentation.

MATT - 4005 CNC Industrial Machining III, 5.00 Credits
Level: Lower
Applied Learning-Practicum
An industrially accepted CAD/CAM system to generate CNC programs will be used throughout this module. The students will be able to produce full programs and download these to the CNC lathe and mill producing a part. Trouble shooting and correction of program errors will be stressed. Proper fixturing and setup of rough material will be presented.

MATT - 4015 CNC Industrial Machining IV, 5.00 Credits
Level: Lower
Applied Learning-Practicum
CNC programs may be refined regardless of mode of generation. Through this module the students will learn to correct flaws and will produce a finished part within the tolerance of the print and be geometrically correct. The concepts of fixturing and machining will be related using geometric dimensioning and tolerancing.

MATT - 4025 CNC Industrial Machining V, 5.00 Credits
Level: Lower
Applied Learning-Practicum
The student will be required to set up many various complex parts. Students will use all of their recently acquired knowledge for previous courses to complete set-ups in conjunction with programming using canned cycles on the turning and machining centers. The student will be expected to develop the programming for the desired part, download to the proper machine, and produce the desired part. All of these tasks will be performed with minimum supervision.
MCET - MECHATRONICS TECH

MCET - 2423 Circuits Fundamentals, 3.00 Credits
Prerequisite(s): MATH 1033 with D or better or MATH 1034 with D or better or MATH 2043 with D or better or MATH 1054 with D or better or MATH 2074 with D or better or MATH 2094 with D or better or MATH 6114 with D or better
Corequisite(s): MATH 1053 with D or better or MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or MATH 2074 with D or better or MATH 2094 with D or better or MATH 6114 with D or better
Level: Lower
This course is a one-semester overview of electrical circuit theory. The course defines voltage and current; and use Kirchhoff's Laws to analyze series and parallel circuits. The course begins with dc analysis of resistive circuits. Students will learn about capacitors and then magnetic circuits to describe inductance. Sinusoidal alternating current sources are introduced leading to series-parallel analysis of R-L-C networks using phasors. Power calculations are performed for dc, single-phase ac and three-phase ac networks.

MCET - 2461 Circuits Fundamentals Lab, 1.00 Credit
Corequisite(s): Level: Lower
Applied Learning-Other
This is the companion laboratory to MCET 2423, Circuits Fundamentals. The laboratory's goal is to reinforce the theory presented in class. Students will build, simulate, and analyze electrical circuits involving series and parallel connections of resistors, capacitors and inductors. Circuit power sources will be both dc and ac. Students will learn the use of digital multimeters, electronic power supplies, oscilloscopes and waveform generators.

MCET - 5004 Instrumentation, 4.00 Credits
Prerequisite(s): ( PHYS 2023 with D or better or PHYS 2044 with D or better ) and ( MATH 1033 with D or better or MATH 1034 with D or better ) Level: Upper
Applied Learning-Upper
This course introduces the student to general characteristics of electromechanical sensors and transducers, electrical measurement systems, electronic signal conditioning, data acquisition systems, and response characteristics of instruments. The lectures focus on the selection, calibration techniques and applications of electromechanical transducers. The laboratory has industrial equipment, such as a punch press, drill press, and metal lathe, which are equipped with sensors that are required to measure physical quantities such as force, strain, displacement, velocity, and acceleration. Data acquisition and real-time software applications using LabVIEW are applied in a laboratory environment.

MCET - 7143 Process Controls, 3.00 Credits
Prerequisite(s): ELET 6143 with D or better Level: Upper
Applied Learning-Practicum, Upper Level
In this course, students will learn about a manufacturing process line. Students will study the details of sensors and actuators. Hands-on connections and assemblies are required. Programmable logic controllers will be programmed for the task. Electromechanical and pneumatic actuators will be used. Students will learn about the programming and networking of controllers to create sequential operations. The course is predominantly laboratory time. Study materials will come from manufacturer's specifications and laboratory training manuals.

MECH - MECHANICAL ENGR TECH

MECH - 1003 Intro to Mechanical Eng Tech, 3.00 Credits
Level: Lower
This course prepares students who are new to the mechanical engineering technology field for success at the college level. Topics covered include mechanical engineering technology as a career, problem solving techniques, right triangle geometry, data analysis, significant figures, unit conversion, and data collection and analysis. Career options and opportunities and diversity and inclusion will be presented using guest speakers from industry. Students will produce professional process documentation, organized solutions to basic engineering problems, engineering diagrams, and engineering presentations. Students will also explore campus tools for academic success.

MECH - 1203 Materials Science, 3.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $37.00
This course is a first semester, freshman level course. It is a broad introductory study of the basic characteristics of engineering materials. The course will emphasize the selection of metals, plastics, ceramics, and composites for mechanical design purposes. The relationships of structure, material properties, and material selection to the design process will be emphasized. The course will study the basic characteristics of engineering materials. The course will emphasize the selection of metals, plastics, ceramics, and composites for mechanical design purposes. The relationships of structure, material properties, and material selection to the design process will be emphasized. The study will be enhanced by laboratory experience where the student will study mechanical testing equipment as well as chemical, mechanical and heat treatments important on material properties. The course will include the study of such areas as corrosion, strength, rigidity, wear resistance, thermal expansion, elasticity and plasticity principles of the common engineering materials. The course includes the use of equipment such as mechanical testing, light microscopes, electron microscopes, metallograph, furnaces and controllers. Data interpretation is also an important emphasis. The students also have substantial preparation work for the weekly labs.

MECH - 1603 Manufacturing Processes, 3.00 Credits
Level: Lower
Applied Learning-Practicum
Graphics/CAD involves the visualization, sketching, and geometric construction of mechanical components. Students will layout and create 2D working industrial drawings that adhere to industry standards. This course will illustrate CAD drawing construction techniques that implement graphical communication through the use of the alphabet of lines, orthographic projection, sections, auxiliary views and the creation of assembly and detail mechanical components. This course will also use the ASME Standard Y14.5M-1994 for Geometric Dimensioning & Tolerancing to facilitate the communication of geometry requirements for associated features on detail components and assemblies.

MECH - 1663 Manufacturing Processes, 3.00 Credits
Level: Lower
Applied Learning-Practicum
The basic equipment, processes and services required to produce a product are studied. This course is designed to give the student the knowledge and vocabulary to generally comprehend the complex and inter-related design and manufacturing functions that must be accomplished to produce the end product. The processes covered include the making of iron and steel, casting, plastics production, hot and cold forming, machining, fastening, non-traditional machining, grinding, etc. Equipment covered in the lab include: lathes, grinders, milling machines, band saws, drill presses, precision measurement devices etc. As time or student experience permit, the topic of basic C.N.C. machine operations and programs may be introduced. Safety and pre-manufacturing procedures will be emphasized.

MECH - 2543 Advanced CAD Applications, 3.00 Credits
Prerequisite(s): MECH 1603 with D or better Level: Lower
Applied Learning-Other
This course is a continuation of the basic drafting standards and techniques facilitated through the course pre-requisite, MECH 1603. Delving into other mechanical drafting disciplines, this course will help students develop additional skill sets required in a variety of other mechanical fields. This course will cover, but not be limited to, machine design, weldments, structural steel, process piping, and pressure vessels. The major emphasis of this course will be the creation of working industrial drawings for fabrication and or successful integration into a mechanical design environment.

MECH - 3124 HVAC Systems, 4.00 Credits
Level: Lower
Applied Learning-Other
This course introduces the student to the fundamental principles of heating, ventilation and air conditioning systems. Topics include psychrometric principles and processes, equipment selection, heating and cooling load calculations and heating system principles including forced warm air, hot water, electric and steam systems, and geothermal heating and cooling systems. Weekly laboratory experiences address topics with organized experiments and applied projects.

MECH - 3203 Computer Aided Manufacturing, 3.00 Credits
Prerequisite(s): MECH 1603 with D or better Level: Lower
Applied Learning-Practicum
This course is a study of Computer Aided Manufacturing (CAM) using software, programming language and methods to produce Computer Numerical Control (CNC) machine programs. CAD software is used to develop detailed drawings of student projects. Laboratory exercises include programming, machine tool setup and machine operation. Communication between the student laptops and the machine tools using current communication protocol is also studied.

MECH - 3223 Mechanical Design Principles, 3.00 Credits
Prerequisite(s): MECH 4003 with D or better Level: Lower
Applied Learning-Other
This course will emphasize the application of mechanical design for industrial machinery. The lecture material for this course will be enhanced through a laboratory experience with design techniques that include the creation of working industrial drawings, parametrically driven spreadsheet solutions of design problems, and component sizing and dimension determinations. The course will include the study of mechanical power systems such as gear trains, belt and chain drives, linkages, clutch-coupling brake components, torque transmission devices, shaft and component design calculations. The techniques of component design will also include the extensive use of online database information, standards and manufacturers specifications. At all times in this class, the design and development for manufacturability will be paramount.

MECH - 3334 Statics, 4.00 Credits
Prerequisite(s): ( MATH 1054 with D or better or MATH 2043 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or PHYS 1044 with D or better or PHYS 1064 with D or better ) Level: Lower
Applied Learning-Other
This course is a study of introductory mechanics through the application of the principles of statics. Students will focus on the equilibrium of particles and rigid bodies in two and three dimensions. Additional topics will include centroids, centers of gravity, and analysis of structures, friction, area and mass moments of inertia. The course will also emphasize the importance of problem-solving in statics by using algebraic and trigonometric computations.

MECH - 3643 Manufacturing Management, 3.00 Credits
Level: Lower
This course supplements the study of manufacturing processes with emphasis on techniques, processes and factors that contribute to manufacturing management decision making. Previous manufacturing process exposure is desirable but not essential. Selected topics to be discussed include: motion and time study, engineering economics, project planning and scheduling, Computer Integrated Manufacturing/Management (CIM). Just in time manufacturing strategy, Lean manufacturing for manufacturability, Statistical Process Control (SPC), Quality Control (QC), and other management policies and strategies.

MECH - 4003 Solid Modeling, 3.00 Credits
Level: Lower
Applied Learning-Practicum
This course is an introduction to 3D solid modeling techniques utilizing feature-based, constraint-based parametric design. This course encourages the student to visualize parts in three dimensions and have a design intent plan for each part in which they will design. The use of design intent will help in the arrangement of assemblies, parts, features, and dimensions to meet design requirements.
COURSE DESCRIPTIONS

MECH - 4024 Dynamics, 4.00 Credits
Prerequisite(s): ( MATH 1063 with D or better or MATH 1084 with D or better ) and ( MECH 2603 with D or better or MECH 3113 with D or better or MECH 3334 with D or better or ENGR 3213 with D or better )
Level: Lower

The course will emphasize applications of material involving the two basic concepts of dynamics, i.e., kinematics and kinetics and will introduce the students to vibrations. The course will include the study of levers, links, slide mechanisms, screw jacks and the principles of force, torque, velocity, acceleration, inertia and friction. The course will use the principles of Equilibrium, Work-Energy and Impulse-Momentum along with Newton’s Second Law to examine a variety of problems.

MECH - 4121 Geo. Dimension and Tolerancing, 1.00 Credit
Prerequisite(s): MECH 1663 with D or better and MECH 3223 with D or better and MECH 4003 with D or better
Level: Lower

Geometric Dimensioning and Tolerancing (GD&T) is a language of symbols used to describe a part’s nominal geometry and the allowable tolerance for variation. Permissible variations in manufactured components are communicated between the design engineer and the manufacturer using standard GD&T symbols. These variations may relate to form, profile, radial relationship to an axis, orientation of one feature to another, or location of features. Application of all symbology and proper interpretation will be stressed.

MECH - 4124 Geo. Dimensioning&Tolerancing, 4.00 Credits
Prerequisite(s): ( MECH 1603 with D or better or MECH 4003 with D or better ) and MECH 3223 with D or better and MECH 1663 with D or better
Level: Lower

This course covers Geometric Dimensioning and Tolerancing (GD&T) which is a language of symbols used to describe a part’s nominal geometry and the allowable tolerance for variation. Students will examine permissible variations in manufactured components which are common to components that are compatible with renewable energy systems. They will then install and wire the components. Finally, students will optimize the simulated smart home for energy efficiency with a programmable microcontroller.

MECH - 4204 Industrial Automation, 4.00 Credits
Prerequisite(s): MECH 4523 with D or better and ( MATH 2043 with D or better or MATH 1063 with D or better or MATH 1084 with D or better )
Level: Lower

Applied Learning-Practicum

This course is a survey of current and future energy generation with a semester-long applied learning lab project. After a review of energy and power and the current state of energy generation, students will learn the fundamental renewable energy options available for power generation. The course is organized by renewable energy technology, and the basic engineering design and implementation considerations for each technology will be discussed. In the laboratory component of this course, students will produce and test a simulated, energy efficient smart home. Students will identify and specify system input and output components that are compatible with renewable energy systems. They will then install and wire the components. Finally, students will optimize the simulated smart home for energy efficiency with a programmable microcontroller.

MECH - 4224 Mechanical Systems Design, 4.00 Credits
Prerequisite(s): MECH 3224 with D or better or MECH 3223 with D or better
Level: Lower

Applied Learning-Other

This course will emphasize the application of mechanical design for industrial machinery. The lecture material for this course will be enhanced through a laboratory experience using design techniques that include the creation of working industrial drawings, parametrically driven spreadsheet solutions of design problems, and component sizing and dimension determinations. This course will include the study of rigid coupling design and flywheels. Also covered in this class are spring design and selection, bolted and welded joint design, column support and lifting lug design. The techniques of component design will also include the study of levers, links, slide mechanisms, screw jacks and the principles of force, torque, velocity, acceleration, inertia and friction. The course will use the principles of Equilibrium, Work-Energy and Impulse-Momentum along with Newton’s Second Law to examine a variety of problems.

MECH - 4333 CAM II, 3.00 Credits
Prerequisite(s): MECH 3233 with D or better
Level: Lower

Advanced CAM is a follow-up course to MECH 3204 and MECH 3203 CAM (Computer Aided Manufacturing) and MECH 4003 (Solid Modeling). The course will introduce advanced Computer Aided Manufacturing topics such as APT (Automatically Programmed Tools) programming, additional CNC machine programming, solid modeling and Reverse Engineering Projects using a Coordinate Measurement Machine/System (CMM).

MECH - 4523 Control System Fundamentals, 3.00 Credits
Prerequisite(s): MATH 1063 with D or better or MATH 1034 with D or better or MATH 1054 with D or better or MATH 1063 with D or better or MATH 1084 with D or better or MATH 2003 with D or better or MATH 2074 with D or better or MATH 2094 with D or better or MATH 6114 with D or better
Level: Lower

Applied Learning-Practicum

This course introduces students to the electronic components commonly used to monitor and control mechanical systems. Topics include principles of measurement, instrumentation, data acquisition, and control systems with an emphasis on mechanical engineering technology applications. Students build simulated control systems using switches and both traditional and solid state relays common on modern industrial machinery. Safety interlock systems, delay circuits, and motor circuits are designed and wired. Lab projects allow students to experience a variety of design solutions and troubleshoot electronic control systems.

MECH - 4554 Computer Aided Mfg Fundamentals, 4.00 Credits
Level: Lower

This course applies the skills from manufacturing processes and solid modeling to a modern production manufacturing environment. It introduces basic skills in word address programming as well as advanced computer aided manufacturing topics such as automatically programmed tool (APT) programming, computer numeric control machine programming, solid modeling and the use of computer aided design and manufacturing software. Reverse engineering projects using a coordinate measurement machine will also be performed. The course includes a final project where students design and produce a component using modern manufacturing techniques.

MECH - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower

A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the department chairperson. The instructor and student will confer regularly regarding the progress of the study.

MECH - 5334 Mechanics of Materials, 4.00 Credits
Prerequisite(s): ( MATH 2074 with D or better or MATH 2094 with D or better ) and MECH 3334 with D or better
Level: Upper

Applied Learning-Practicum, Course Fee $15.00, Upper Level

This course is a calculus-based study of stressed loaded structures. It emphasizes techniques, processes, and factors that contribute to manufacturing processes and operations decision making. Selected topics to be discussed include: 6 sigma, DfMAIC, Kaizen, 5S, work flow and project planning and scheduling. Computer Integrated Manufacturing/Management System (CMIS, Just In Time). The emphasis is on the application of computer-aided design and manufacturing software. Students will learn about a manufacturing process line, understanding of the basic elements underlying mechatronics systems. Students will study the details of sensors and actuators. Hands-on connections and assemblies are required. Programmable logic controllers will be programmed for the task. Electromechanical and pneumatic actuators will be used. Students will learn about the programming and networking of controllers to create sequential operations and measurement instrumentation. The course is predominantly laboratory. Study materials will come from manufacturer’s specifications and laboratory training manuals.

MECH - 6643 Fluid Mechanics, 4.00 Credits
Prerequisite(s): MATH 2074 with D or better or MATH 2094 with D or better
Level: Upper

Applied Learning-Practicum, Upper Level

This course is an introduction to the theory and application of continuum fluid mechanics. Fluid properties and state relations are studied. Incompressible laminar and turbulent flows are investigated using control volume and momentum and energy equations. The Navier-Stokes Equations are developed. Flow rate, pipe sizing and minor losses in pipe systems are addressed. Compressible flow and gas dynamics are introduced and include topics in boundary layer theory. Mach number, stagnation properties and shock waves. Turbomachinery, pumps and turbines are included. Weekly laboratory experiences address most of the above topics with applied projects and organized experiments.

MECH - 6643 Process Engineering & Manufact, 3.00 Credits
Prerequisite(s): MATH 1663 with D or better or ELET 1142 with D or better or Corequisite(s): MECH 1663 with D or better or ELET 1142 with D or better
Level: Upper

Applied Learning-Practicum, Upper Level

This course emphasizes techniques, processes, and factors that contribute to manufacturing processes and operations decision making. Selected topics to be discussed include: 6 sigma, DfMAIC, KAIZEN, 5S, work flow and project planning and scheduling. Computer Integrated Manufacturing/Management System (CMIS, Just In Time). The emphasis is on the application of computer-aided design and manufacturing software. Students will learn about a manufacturing process line, understanding of the basic elements underlying mechatronics systems. Students will study the details of sensors and actuators. Hands-on connections and assemblies are required. Programmable logic controllers will be programmed for the task. Electromechanical and pneumatic actuators will be used. Students will learn about the programming and networking of controllers to create sequential operations and measurement instrumentation. The course is predominantly laboratory. Study materials will come from manufacturer’s specifications and laboratory training manuals.

MECH - 7114 Applied Thermodynamics, 4.00 Credits
Prerequisite(s): MATH 2074 with D or better or MATH 2094 with D or better
Level: Upper

Applied Learning-Practicum, Upper Level

This course applies the skills from manufacturing processes and solid modeling to a modern production manufacturing environment. It introduces basic skills in word address programming as well as advanced computer aided manufacturing topics such as automatically programmed tool (APT) programming, computer numeric control machine programming, solid modeling and the use of computer aided design and manufacturing software. Reverse engineering projects using a coordinate measurement machine will also be performed. The course includes a final project where students design and produce a component using modern manufacturing techniques.

MECH - 7114 Applied Thermodynamics, 4.00 Credits
Prerequisite(s): MATH 2074 with D or better or MATH 2094 with D or better
Level: Upper

Applied Learning-Practicum, Upper Level

This course applies the skills from manufacturing processes and solid modeling to a modern production manufacturing environment. It introduces basic skills in word address programming as well as advanced computer aided manufacturing topics such as automatically programmed tool (APT) programming, computer numeric control machine programming, solid modeling and the use of computer aided design and manufacturing software. Reverse engineering projects using a coordinate measurement machine will also be performed. The course includes a final project where students design and produce a component using modern manufacturing techniques.
MEDR - 1133 Medical Terminology, 3.00 Credits
Prerequisite(s): MEDR 1114 with C or better
Level: Lower
This is a lecture and lab-based online course. Topics of study include health
management (data collected, reliability, accuracy, validation of electronic
health record and information system; data sources according to
organizational policies, external regulations and health information
management standards.
Topics include the following: legal, regulatory, departmental, and organizational
policies and procedures for data/information standards for internal and external
use, exchange, confidentiality, privacy and security measures, access and
disclosure, retention and destruction of patient protect electronic health information,
and the use of software in the completion of HIPPS. This course also includes a review of the processes used in
the selection and implementation of electronic health information management systems
including project management methodologies and vendor/contract management,
information analytic strategies and report generation technologies to facilitate decision-making and
support enterprise-wide decision support for strategic planning, and the current trends and
future challenges in health information technology.
MEDR - 3124 Hlth Data Mgmt & Hltcare Stat, 4.00 Credits
Prerequisite(s): MEDR 1114 with C or better and MEDR 1113 with C or better and ( BIAD
4403 with D or better or BI03 1003 with D or better )
Level: Lower
This is a lecture and lab-based online course. Topics of study include health
management (data collected, reliability, accuracy, validation of electronic
health record and information system; data sources according to
organizational policies, external regulations and health information
management standards.
Topics include the following: legal, regulatory, departmental, and organizational
policies and procedures for data/information standards for internal and external
use, exchange, confidentiality, privacy and security measures, access and
disclosure, retention and destruction of patient protect electronic health information,
and the use of software in the completion of HIPPS. This course also includes a review of the processes used in
the selection and implementation of electronic health information management systems
including project management methodologies and vendor/contract management,
information analytic strategies and report generation technologies to facilitate decision-making and
support enterprise-wide decision support for strategic planning, and the current trends and
future challenges in health information technology.
MEDR - 3114 Electronic Health Record Mgmt, 4.00 Credits
Prerequisite(s): MEDR 1114 with C or better
Level: Lower
This is a lecture and lab-based course that includes the completeness, reliability, accuracy,
and validity of electronic health record and data and electronic data sources according to
organizational policies, external regulations and health information management standards.
Topics include the following: legal, regulatory, departmental, and organizational
policies and procedures for data/information standards for internal and external
use, exchange, confidentiality, privacy and security measures, access and
disclosure, retention and destruction of patient protect electronic health information,
and the use of software in the completion of HIPPS. This course also includes a review of the processes used in
the selection and implementation of electronic health information management systems
including project management methodologies and vendor/contract management,
information analytic strategies and report generation technologies to facilitate decision-making and
support enterprise-wide decision support for strategic planning, and the current trends and
future challenges in health information technology.
MEDR - 3114 Electronic Health Record Mgmt, 4.00 Credits
Prerequisite(s): MEDR 1114 with C or better
Level: Lower
This is a lecture and lab-based course that includes the completeness, reliability, accuracy,
and validity of electronic health record and data and electronic data sources according to
organizational policies, external regulations and health information management standards.
Topics include the following: legal, regulatory, departmental, and organizational
policies and procedures for data/information standards for internal and external
use, exchange, confidentiality, privacy and security measures, access and
disclosure, retention and destruction of patient protect electronic health information,
and the use of software in the completion of HIPPS. This course also includes a review of the processes used in
the selection and implementation of electronic health information management systems
including project management methodologies and vendor/contract management,
information analytic strategies and report generation technologies to facilitate decision-making and
support enterprise-wide decision support for strategic planning, and the current trends and
future challenges in health information technology.
MEDR - 266
MEDR - 4022 Advanced Coding Applications, 2.00 Credits
Prerequisite(s): MEDR 1234 with C or better and MEDR 1244 with C or better
Level: Lower
This online lecture and lab-based course focuses on the advanced practices and conventions of ICD-10-CM/PCS, CPT, and HCPCS. Students examine online and code intermediate and advanced surgical and medical scenarios related to various body systems and medical specialties. This course will allow the student to continue improving their quality and accuracy in code selection, based on their knowledge of coding guidelines for conventional and HIPAA coded electronic claims, along with other official coding references (CPT Assistant, AHA Coding Clinic, National Correct Coding Initiative Edits). Application-based assignments allow students to demonstrate their mastery of coding conventions and coding principles through the use of encoder/grouper coding software, and computer-assisted coding applications.

MEDR - 4111 Health Informan Tech Seminar, 1.00 Credit
Prerequisite(s): MEDR 1114 with C or better and MEDR 1223 with C or better and MEDR 1244 with C or better and MEDR 1234 with C or better and MEDR 3414 with C or better and MEDR 4214 with C or better and MEDR 4322 with C or better * and MEDR 4213 with C or better *
Level: Lower
A lecture-based online course that includes content new to the health information management (HIH) profession and to which students did not receive instruction in previous courses. Examples of such content includes, but is not limited to, new and revised coding classification systems, federal and state statutes (laws) and regulations, information technology initiatives, and so on. Appropriate preparation for taking the Registered Health Information Technology (RHIT) exam is integrated throughout the course, during which students will complete practical exams in HIM content areas and interact with the instructor(s) in discussion board forums to receive clarification about concepts and study techniques. This course should be taken in the student's last semester of study.

MEDR - 4213 Leadership in Health Info Tech, 3.00 Credits
Prerequisite(s): MEDR 3414 with C or better and MEDR 4514 with C or better *
Level: Lower
This is a lecture-based online course covering the study of leadership and management topics specific to the health information technology including team leadership, change management, work processes and goals, utilization of data in management roles, labor regulations, resource requisitions, training and development methodology, cultural issues affecting health, healthcare quality, cost, and programs, and policies that support a culture of diversity.

MEDR - 4214 Insurance&Reimbursement Processing, 4.00 Credits
Prerequisite(s): MEDR 1114 with C or better and MEDR 1234 with C or better
Level: Lower
This is a lecture- and lab-based online course that includes a study of clinical classification systems, reimbursement methodologies, and financial management. The course includes completion of CMS-1500 claims for inpatient, outpatient, emergent department, and physician office encounters as well as a review of inpatient and outpatient cases to identify issues of fraud and abuse.

MEDR - 4312 HIM Operations PPE, 2.00 Credits
Prerequisite(s): MEDR 1114 with C or better and MEDR 1223 with C or better and ( MEDR 5114 with C or better or MEDR 3114 with C or better ) and MEDR 1244 with C or better and MEDR 1234 with C or better and MEDR 4214 with D or better * and MEDR 4514 with D or better * and BIOL 1114 with C or better and BIOL 2214 with C or better and BIOL 4403 with C or better and MEDR 3414 with C or better
Level: Lower
This is a lecture- and lab-based course covering the study of health information management department. On site at the healthcare facility, students will undertake the supervision of a qualified Health Information Administrator (RHIA), Registered Health Information Technician (RHIT), or other qualified personnel to whom they are assigned. If the PPE is designed to help students to obtain actual clinical experience in theoretical and application-based procedures previously studied. Students will complete a maximum of 80 unpaid hours on site. Students will be required to complete weekly logs, discussion of their experience, and submit a completed student handbook along with a final project at the end of their PPE. If a student is not able to be placed at a healthcare facility, remote projects/assignments may be substituted and are supervised by the accepting professional practice site. Additional internet-based laboratory projects/assignments to meet course objectives are assigned and evaluated by college faculty to stimulate professional practice experience as needed.

MEDR - 4322 Coding PPE, 2.00 Credits
Prerequisite(s): MEDR 1114 with C or better and ( MEDR 3114 with C or better or MEDR 5114 with C or better ) and MEDR 1244 with C or better and MEDR 1234 with C or better and MRE 4214 with C or better * and BIOL 1114 with C or better and BIOL 2214 with C or better and BIOL 4403 with C or better Level: Lower
This is a lecture- and lab-based course covering the study of health information management department to provide coding opportunities utilizing ICD-10-CM/PCS, CPT, and HCPCS level II codes. On site at the healthcare facility students will be under the supervision of a qualified Health Information Administrator (RHIA), Registered Health Information Technician (RHIT), or other qualified personnel to whom they are assigned. The PPE is designed to enable students to obtain actual practical experience in theoretical and application-based procedures previously studied. Students will complete a maximum of 80 unpaid hours on site. Students will be required to complete weekly logs, discussion board postings of their experience, and submit a completed student handbook along with a final project at the end of the PPE. If a student is not able to be placed at a healthcare facility, remote projects/assignments may be substituted and are supervised by the accepting professional practice site. Additional internet-based laboratory projects/assignments to meet course objectives are assigned and evaluated by college faculty to stimulate professional practice experience as needed.

MEDR - 4514 Alternate Care Hth Info Mgmt, 4.00 Credits
Prerequisite(s): MEDR 1114 with C or better * and MEDR 1233 with C or better * and ( MEDR 5114 with C or better or MEDR 3114 with C or better )
Level: Lower
This is a lecture- and lab-based online course that includes a study of health information management (HIM) consulting, cancer registry management, healthcare information requirements and standards in alternate healthcare settings (e.g., behavioral healthcare facilities, correctional facilities, etc.), clinical classification systems for alternate health care (e.g., DSM-5, ICD-O-3, SNOMED-CT), alternate healthcare delivery systems, HIM human resources, and HIM financial and resource management.

MEDR - 4900 Directed Study, 1.00 TO 6.00 Credits
Level: Lower
This is an internet-based elective course for students interested in advanced work in health information management in an area of special interest. Enrollment is limited in order to allow each student the opportunity to pursue his/her area of special interest.

MKTG - MARKETING

MKTG - 1033 Advertising Principles, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Lower
Students will learn the uses and power of advertising and how to apply these concepts to daily business. Students will get a basic understanding of advertising concepts and how to apply them to various media. Utilizing good design and marketing techniques, students will analyze and create advertisements for business use.

MKTG - 1063 Principles of Sales, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Lower
This course examines the principles and methods of sales with respect to the salesperson, their company, products, and customers. Emphasis is placed on the selling process: prospecting, pre-contact, pre-presentation, meeting objections, and closing. Students will design and implement an industrial sales presentation.

MKTG - 2073 Principles of Marketing, 3.00 Credits
Level: Lower
This course examines the principles and methods of sales with respect to the salesperson, their company, products, and customers. Emphasis is placed on the selling process: prospecting, pre-contact, pre-presentation, meeting objections, and closing. Students will design and implement an industrial sales presentation.

MKTG - 3153 Web Design & Marketing, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Lower
This course will examine the uses and power of the Internet, web pages, and e-commerce and how to apply these concepts to daily business. Integration of marketing and web design techniques will be utilized in the creation of effective web pages.

MKTG - 3203 Digital Marketing Fundamentals, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Lower
Digital Marketing today has taken on many technological forms of communicating brand recognition of products and services through websites, various social media platforms for business to consumer (B2C) and business to business (B2B), email correspondence, and mobile devices. These digital platforms have allowed businesses to broaden their consumer target marketing and global scope. Digital marketing platforms are also trending to be the most widely used communication tools among millennials. Gen Z, and Alpha generation. These new digital platforms are being used to target consumers for the delivery of marketing offerings with meaningful customer value. Students will participate in classroom presentations, discussions, team problem solving and analysis of real-life marketing situations. The creation of a comprehensive marketing plan will be required.

MKTG - 3513 Web Design & Marketing, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Lower
This course examines the principles and methods of sales with respect to the salesperson, their company, products, and customers. Emphasis is placed on the selling process: prospecting, pre-contact, pre-presentation, meeting objections, and closing. Students will design and implement an industrial sales presentation.

MKTG - 5003 Consumer Behavior, 3.00 Credits
Prerequisite(s): MKTG 2073 with D or better
Level: Upper
This course reviews the science and pragmatic approaches of consumer thought processes that affect decisions made to purchase goods and services. Students learn how consumers gravitate toward the latest digital forms of e-commerce through web and mobile apps, use various social media platforms, are influenced by lifestyle and ethnic subcultures, desire emerging trends, and connect with businesses on social, environmental, ethical, and global issues. Students learn the concepts of “push-pull” strategies won't win over consumers that businesses must adapt to as consumers demand more knowledge and transparency from brands.

MKTG - 6003 Strategic Marketing, 3.00 Credits
Level: Upper
Strategic Marketing provides students with an overview of the marketing discipline and a framework that presents marketing as a value creation process. Participants learn how to evaluate marketplace potential and risk from the perspective of the entity’s unique ability to develop and deliver goods and services of meaningful customer value. Students participate in classroom presentations, discussions, team problem solving, and in-depth analysis of a series of real-life marketing situations with a diverse range of entities and industries. The course explores the principal concepts and tools of contemporary marketing management, from market segmentation and product positioning to the design of distribution channels and communications strategy, in order to maximize the value delivered to customers. A Strategic Marketing Plan will be required. Civic Engagement Intensive (CEI) sections exist.
### COURSE DESCRIPTIONS

<table>
<thead>
<tr>
<th>COURSE</th>
<th>CREDITS</th>
<th>PREREQUISITES</th>
<th>LEVEL</th>
<th>APPLIED LEARNING-PRACICUM</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOTO - 1005 Basic Electrical Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will introduce the students to electrical fundamentals including circuit designs and circuit calculations. Common electrical components, operation, and testing will also be included.</td>
</tr>
<tr>
<td>MOTO - 1015 Welding &amp; Fabrication, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will familiarize the student with all common welding and fabrication techniques, using a variety of equipment including oxy-acetylene torches, arc welders, M.I.G. welders, T.I.G. welders, plasma cutters, metal breaks, and metal sheers.</td>
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<tr>
<td>MOTO - 1025 Brake Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover brake systems used on all types of motorcycles and powersport vehicles. Topics covered include: component identification, hydraulic principles and component operation including anti-lock brakes; diagnosis and service of brake systems.</td>
</tr>
<tr>
<td>MOTO - 2005 Starting &amp; Charging Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover starting and charging systems used on all types of motorcycles and powersport vehicles. Topics covered include: starter types, alternator/generator types, system wiring, testing, and diagnosis.</td>
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<tr>
<td>MOTO - 2015 Suspension &amp; Steering Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover suspension and steering systems used on all types of motorcycles and powersport vehicles. Topics covered include: component identification, operation of suspension and steering systems; wheel alignment principles, measurement, and adjustments; diagnosis of steering and suspension concerns; steering and suspension component removal and replacement.</td>
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<tr>
<td>MOTO - 2035 Fuel &amp; Ignition Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover ignition and fuel systems used on all types of motorcycles and powersport vehicles. Topics covered include: carburetion, fuel injection, points type ignitions, and electronic ignition.</td>
</tr>
<tr>
<td>MOTO - 3003 Diesel Engines, 3.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover diesel engines used on all types of power sport vehicles. Topics covered included: engine operation, fuel systems, diagnosis, and service procedures.</td>
</tr>
<tr>
<td>MOTO - 3010 Adv Fuel &amp; Exhaust Systems, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover the air and liquid cooled engines used on all types of motorcycles and power sports vehicles. Topics covered include engine operation, transmission and clutch operation, diagnosis, and service procedures.</td>
</tr>
<tr>
<td>MOTO - 3023 Final Drive Systems, 3.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover all types of motorcycle and powersport vehicle drive systems. Topics covered include drive system types, operation, diagnosis, and service procedures.</td>
</tr>
<tr>
<td>MOTO - 4005 Advanced Drivability, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover all types of motorcycle and powersport vehicles. Topics covered included: intake, fuel and exhaust systems, forced induction, diagnosis, and service.</td>
</tr>
<tr>
<td>MOTO - 4070 Electrical &amp; Computer Systems, 1.50 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover all types of motor vehicles. Topics covered included: engine operation, diagnosis, and service procedures.</td>
</tr>
<tr>
<td>MOTO - 4075 Advanced Applications, 5.00 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover all types of motorcycle and powersport vehicles. Topics covered included: intake, fuel and exhaust systems, forced induction, diagnosis, and service.</td>
</tr>
<tr>
<td>MOTO - 4077 Advanced Manufacturing, 1.50 Credits</td>
<td>Lower</td>
<td>Applied Learning-Practicum</td>
<td>Lower</td>
<td>This course will cover all types of power sports vehicles. Topics covered included: engine operation, transmission and clutch operation, diagnosis, and service procedures.</td>
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</tbody>
</table>
NURS - 1133 Nursing 1 Lab, 3.00 Credits
Prerequisite(s): BIOL 1404 with C+ or better *
Concurrent(s): BIOL 1404 with C+ or better *
Level: Lower
Applied Learning-Clinical Pcm, Clinical Liability Insurance, Course Fee $17.00
The development of basic nursing skills begins in a structured campus laboratory setting and continues in the clinical setting. The campus laboratory and clinical settings will afford practical experience in application of the principles and skills taught in the theory portion of the class. Students will be expected to demonstrate beginning competency and application of the nursing process. The student will develop beginning skills in assisting clients with major health concerns to meet their basic needs.

NURS - 2201 Seminar in Nursing II, 1.00 Credit
Level: Lower
Clinical Liability Insurance
This course is designed to familiarize students with the expectations of the nursing program. It is a required course to be completed by all interested students before their first nursing course. The objectives focus on an overview of the philosophy of nursing, theoretical and practical applications of nursing process concepts, and roles of the nurse. Classroom discussions, observations of actual nursing classes and field trips are planned to enhance the student's awareness of the expectations of the nursing program.

NURS - 2055 Nursing II, 5.00 Credits
Prerequisite(s): BIOL 1404 with C+ or better and ( NURS 1055 with C or better and NURS 1133 with C or better ) or NURS 1108 with C or better and NURS 1109 with C or better and BIOL 2504 with C+ or better *
Concurrent(s): BIOL 1404 with C+ or better and ( NURS 1055 with C or better and NURS 1133 with C or better ) or NURS 1108 with C or better and NURS 1109 with C or better and BIOL 2504 with C+ or better *
Level: Lower
Pass/Fail
In Nursing II, the student uses the nursing process to assess, plan, implement, and evaluate nursing care of clients with major health concerns. The course prepares students to provide nursing care to clients with acute and chronic medical conditions. Emphasis is placed on individual needs and how these vary, depending on their physical and emotional state and level of development. The student uses a variety of methods to acquire competence in learning objectives and demonstrates proficiency in their responsibility for learning.

NURS - 2133 Nursing II Lab, 3.00 Credits
Prerequisite(s): ( NURS 1055 with C or better and NURS 1133 with C or better ) or NURS 1108 with C or better and NURS 1109 with C or better and BIOL 1404 with C+ or better and BIOL 2504 with C+ or better *
Concurrent(s): ( NURS 1055 with C or better and NURS 1133 with C or better ) or NURS 1108 with C or better and NURS 1109 with C or better and BIOL 1404 with C+ or better and BIOL 2504 with C+ or better *
Level: Lower
Applied Learning-Clinical Pcm, Clinical Liability Insurance, Course Fee $14.00
The development of basic nursing skills continue in a structured campus laboratory and clinical setting. The campus laboratory and clinical settings will afford practical experience in application of the principles and skills taught in the theory portion of the class. Students will be expected to demonstrate competency and application of nursing process. The student continues to develop skills in assisting clients with major health concerns. Observational experiences include rotations to obstetrics, operating and recovery rooms.

NURS - 2208 Nursing II, 8.00 Credits
Prerequisite(s): NURS 1108 with C or better and NURS 1109 with C or better
Level: Lower
Applied Learning-Clinical Pcm, Clinical Liability Insurance
In Nursing II, the student uses the nursing process to assess, plan, implement, and evaluate nursing care to meet basic needs of clients with major health concerns. Health problems are studied in depth with emphasis on client education, and disease prevention. Areas of concentration include: crisis, maternal-child health, the surgical experience, diabetes, and care for individuals with respiratory, cardiovascular and gastrointestinal problems. The campus laboratory continues to build on assessment, practice, and evaluation of technical skills. In the clinical area, the student cares for clients whose conditions are relatively stable and predictable. Observational experiences include rotations to obstetrics, operating and recovery rooms. The student uses a variety of methods to acquire competence in learning objectives and demonstrates increased responsibility for learning.

NURS - 3055 Nursing III, 5.00 Credits
Prerequisite(s): BIOL 4254 with C+ or better * or BIOL 5254 with C+ or better and BIOL 1404 with C+ or better and BIOL 2504 with C+ or better and ( NURS 2055 with C+ or better and NURS 2133 with C+ or better ) or NURS 2208 with C or better and NURS 2209 with C or better or NURS 2208 with C or better and BIOL 4254 with C+ or better * or BIOL 5254 with C+ or better and BIOL 1404 with C+ or better and BIOL 2504 with C+ or better and ( NURS 2055 with C+ or better and NURS 2133 with C+ or better ) or NURS 2208 with C or better and NURS 2209 with C or better
Level: Lower
Pass/Fail
In Nursing III, the student applies the nursing process to access, plan, implement, and evaluate nursing care to clients with major health concerns that are studied in depth but are not limited to: psychiatric, pediatrics and other medical/surgical conditions. The student uses a variety of methods to acquire competence in learning objectives and demonstrates increased responsibility for learning by building on past knowledge.

NASC - 2003 Astronomy II, 3.00 Credits
Prerequisite(s): MATH 1033 with C or better and ( BIOL 1104 with D or better or BIOL 1304 with D or better or BIOL 2803 with D or better or BIOL 1404 with D or better or CHEM 1114 with D or better or CHEM 1984 with D or better or NASC 1003 with D or better or PHYS 1024 with D or better or PHYS 1044 with D or better or PHYS 1064 with D or better )
Level: Upper
Upper Level
In this course, students will apply quantitative reasoning and qualitative reasoning to a variety of areas as they relate to sustainability; the goal of meeting the needs of the present while ensuring that the needs of the future are met while maintaining the ability of the future to meet its needs. Students will establish ways in which these areas relate to the three pillars of sustainability: environmental, social and economic. The student will develop an awareness of the expectations of the nursing program.

NASC - 1043 Physical Science Survey, 3.00 Credits
Level: Lower
Gen Ed - Natural Sciences, Liberal Arts and Science
This course is a survey of the principles and applications of the physical and earth science. The course covers basic topics in physics, astronomy, geology, meteorology, environmental science and earth science. The nature and practice of science will also be discussed.

NASC - 2003 Astronomy I, 3.00 Credits
Level: Lower
Gen Ed - Natural Sciences, Liberal Arts and Science
This course is designed as a continuation of NASC 1003, Astronomy, or as a separate introduction to stellar evolution and cosmology. It will introduce advanced topics from the fields of astronomy and cosmology. Emphasis will be placed on scientific process and critical thinking. This course is suitable for science majors or as a science elective. Topics to be covered are: star cycles, galactic evolution and cosmology. An optional laboratory course will be offered.

NASC - 6003 Topics in Sustainability, 3.00 Credits
Prerequisite(s): MATH 1033 with C or better and ( BIOL 1104 with D or better or BIOL 1304 with D or better or BIOL 2803 with D or better or BIOL 1404 with D or better or CHEM 1114 with D or better or CHEM 1984 with D or better or NASC 1003 with D or better or PHYS 1024 with D or better or PHYS 1044 with D or better or PHYS 1064 with D or better )
Level: Upper
Upper Level
In this course, students will apply quantitative reasoning and qualitative reasoning to a variety of areas as they relate to sustainability; the goal of meeting the needs of the present while ensuring that the needs of the future are met while maintaining the ability of the future to meet its needs. Students will establish ways in which these areas relate to the three pillars of sustainability: environmental, social and economic. The student will develop an awareness of the expectations of the nursing program.

NURS - 1101 NURS Living Learning Comm I, 1.00 Credit
Level: Lower
Pass/Fail
Nursing Seminar- Conceptual Skill Building is the beginning foundation of concept based learning in nursing. The course content includes the concepts of critical thinking, observational skills, career planning, and recognizing self-development. Emphasis is placed on individual skill building and enhancing self-confidence. The student is also introduced to the development of an individual portfolio to assist in meeting personal goals and reflect on accomplishments. Emphasis is placed on the college culture will be explored through a designated living area in a residence hall, planned tours of college resources, and increased faculty contact during engaging concept based learning activities. Conceptual skill building and self-development skills will facilitate student transition into a healthy life style and reduce stress while participating in the Associate Degree Nursing program.

NURS - 1055 Nursing I, 5.00 Credits
Prerequisite(s): BIOL 1404 with C+ or better *
Concurrent(s): BIOL 1404 with C+ or better *
Level: Lower
Nursing I is the foundation course in the nursing curriculum. It's content represents the primary skills required for the subsequent nursing courses. Emphasis is placed on basic needs of an individual and how these vary, depending on their physical and emotional state and level of development. The student is introduced to the nursing process with an emphasis on assessment and planning. The student develops beginning skills in assisting patients with major health concerns to meet their basic needs. Areas of concentration include but are not limited to: legal/ethical responsibilities of the nurse, concepts of mental health, therapeutic communication and asepsis principles are incorporated throughout the course. The development of basic nursing skills begins in a structured campus lab setting and continues in the clinical lab.

NURS - 1108 Nursing I, 8.00 Credits
Level: Lower
Applied Learning-Clinical Pcm, Clinical Liability Insurance
Nursing I is the foundation course in the nursing curriculum. It's content represents the primary skills required for the subsequent Nursing I course. Emphasis is placed on basic needs of an individual and how these vary, depending on their physical and emotional state and level of development. The student is introduced to the nursing process with an emphasis on assessment and planning. The student develops beginning skills in assisting patients with major health concerns to meet their basic needs. Areas of concentration include but are not limited to: legal/ethical responsibilities of the nurse, concepts of mental health, therapeutic communication and asepsis principles are incorporated throughout the course. The development of basic nursing skills begins in a structured campus lab setting and continues in the clinical lab.
NURS - 4410 Nursing IV, 5.00 Credits
Prerequisite(s): BIOL 4254 with C+ or better or BIOL 5254 with C or better and BIOL 1404 with C+ or better and BIOL 2504 with C+ or better and NURS 2208 with C or better or NURS 2209 with C or better and NURS 3310 with C+ or better
Corequisite(s): NURS 4410 with C+ or better and NURS 4415 with C+ or better and NURS 4055 with C+ or better
Level: Lower
Applied Learning-Clinical Plcm, Course Fee $12.00
In Nursing IV, the student synthesizes the nursing process to assess, plan, implement, and evaluate nursing care to clients with more critical and complex situations. The student further develops their role as a teacher by formulating and implementing teaching based upon a client’s individual needs. Integrates critical thinking in clinical setting incorporating therapeutic verbal and nonverbal communication skills. Experiences include rotation to intensive care unit, and departmental emergency. To develop the role as a professional, the student participates in a group leader rotation.

NURS - 3310 Nursing III, 00 To 10.00 Credits
Prerequisite(s): ( NURS 2208 with C or better or NURS 2209 with C or better ) and ( BIOL 4254 with C+ or better or BIOL 5254 with C+ or better )
Level: Lower
Applied Learning-Clinical Plcm, Clinical Liability Insurance
In Nursing III, the student applies the nursing process to assess/analyze, plan, implement, and evaluate nursing care for two or more clients with chronic and/or critical health concerns. The student further develops their role as a teacher by formulating and implementing teaching based upon a client’s individual needs. Major health concerns include but are not limited to: psychiatric, blood disorders, hepatic problems, immunological, musculoskeletal disorders, cancer, gout, gouty, gynecological problems, neurological disorders, and acute cardiac problems. The student continues consideration of the major health problems of children. The student begins to care for clients in more complex situations in the clinical setting incorporating therapeutic verbal and nonverbal communication skills.

NURS - 4055 Nursing IV, 3.00 Credits
Prerequisite(s): BIOL 4254 with C+ or better or BIOL 5254 with C or better and NURS 2208 with C or better or NURS 2209 with C or better or NURS 3315 with C+ or better or NURS 3310 with C+ or better
Corequisite(s): NURS 4055 with C+ or better and NURS 3315 with C+ or better and NURS 3310 with C+ or better
Level: Lower
Applied Learning-Clinical Plcm, Course Fee $12.00
In Nursing IV, the student synthesizes the nursing process to assess, plan, implement, and evaluate nursing care to clients with major health concerns that are studied to include critical care teaching. Building on prior knowledge. The student uses a variety of methods to acquire competence in learning objectives and demonstrates proficiency in their responsibility for learning.

NURS - 4155 Nursing IV Lab, 0.00 Credits
Prerequisite(s): ( NURS 2208 with C or better or NURS 2209 with C or better ) and ( BIOL 4254 with C+ or better or BIOL 5254 with C+ or better ) and ( NURS 3315 with C+ or better or NURS 3310 with C+ or better ) and ( NURS 3311 with C+ or better )
Corequisite(s): NURS 4155 with C+ or better and NURS 2208 with C or better or NURS 2209 with C or better or NURS 3315 with C+ or better or NURS 3310 with C+ or better
Corequisite(s): NURS 3311 with C+ or better
Level: Lower
Applied Learning-Clinical Plcm, Course Fee $12.00
In Nursing IV, the student synthesizes the nursing process to assess, plan, implement, and evaluate nursing care to clients with major health concerns that are studied to include critical care teaching. Building on prior knowledge. The student uses a variety of methods to acquire competence in learning objectives and demonstrates proficiency in their responsibility for learning.

NURS - 4410 Nursing IV, 00 To 10.00 Credits
Prerequisite(s): ( NURS 3311 with C+ or better or NURS 3310 with C+ or better ) and ( BIOL 4254 with C+ or better or BIOL 5254 with C+ or better )
Level: Lower
Applied Learning-Clinical Plcm, Clinical Liability Insurance
In Nursing IV, the student increases skills in applying the nursing process to a group of clients with chronic and/or critical health problems. The student develops his/her professional role as a leader and manager and is prepared for the transition from student to graduate. Nursing IV involves the student in specialty areas such as the Emergency Department, Intensive Care Unit and Community Agencies. Major health areas which are investigated include, but are not limited to: Endocrine, Neurology, Cardiac, Respiratory, Obstetrical and Trauma Emergencies. To develop the role as a professional, the student participates in a group leader rotation. Clinical experiences include a variety of settings, including a pediatric experience and a preceptorship. Students continue to focus on prevention and health education in the clinical and community settings. In the clinical lab, the student cares for a group of clients with more critical and complex situations. The student will demonstrate proficiency in critical thinking in applied learning environments.

NURS - 5003 Ethical Issues in Health Care, 3.00 Credits
Prerequisite(s): NURS 2209 with C or better or NURS 2208 with C or better or ( NURS 2055 with C or better and NURS 2133 with C or better )
Level: Upper
Upper Level
This course examines ethical positions arising from the advancement of modern medicine. Emphasis is placed on ethical theories and principles that guide decision-making in healthcare. Critical reasoning skills are used to analyze ethical issues and to help students understand how to make autonomous decisions for controversial healthcare questions. Aspects of inquiry and ways of knowing are explored, relative to selected ethical dilemmas or issues.

NURS - 5023 Contemporary Nursing, 3.00 Credits
Prerequisite(s): NURS 2208 with C or better or NURS 2209 with C or better or ( NURS 2055 with C or better and NURS 2133 with C or better )
Level: Upper
PHIL - 2173 Ethics, 3.00 Credits
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science
Ethics is a course designed to inquire into the nature of values and how we acquire them. It studies some major ethical theories derived from such values that have been used to evaluate man's conduct. It encourages students to discuss theories as applied to existing moral dilemmas. Writing is continued in assignments related to readings, class discussions, and lectures.

PHIL - 1014 Introductory Ethics, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and LITR 2603 with D or better or LITR 2033 with D or better or LITR 2543 with D or better or LITR 2503 with D or better or LITR 2703 with D or better or LITR 2913 with D or better or LITR 2902 with D or better or LITR 2913 with D or better or LITR 3333 with D or better or LITR 4333 with D or better or LITR 7003 with D or better or LITR 7013 with D or better )
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science, Upper Level
This course will introduce students to historical ethical foundations that will serve as frameworks for discussion, activities, and projects. Students will examine how to manage relationships both internal and external to the workplace, determining how best to manage those relationships despite challenges such as privacy and conflict of interest. In addition to determining how to resolve workplace conflict ethically and justly, students will assess the difficulties and conflicts that may arise between individuality and workplace standards.

PHYS - 1014 College Physics I, 4.00 Credits
Level: Lower
Gen Ed - Natural Sciences, Liberal Arts and Science
This course is appropriate for students lacking a strong math and science background and will develop physical concepts in the classroom in a highly interactive laboratory.

PHYS - 1046 Physics for Engr & Science I, 4.00 Credits
Prerequisite(s): MATH 1033 with D or better or MATH 1043 with D or better or MATH 1045 with D or better or MATH 1084 with D or better
Level: Lower
Applied Learning-Other, Gen Ed - Natural Sciences, Liberal Arts and Science
This is the first semester of a two-semester physics sequence, which is appropriate for Liberal Arts students or technical students who plan to pursue a four year degree in the biological sciences. In this course, students will learn how to explain natural phenomena both qualitatively and quantitatively. Problem solving skills are emphasized. Topics include: motion, force, energy, collisions, rotational motion, and the dynamics of rotational momentum. The course includes laboratory work covering some of these topics.
This is a continuation of PHYS 1044. It is appropriate for a Liberal Arts or technical student who has completed a previous course in modern physics. It is also designed to provide students with information about the discoveries made, ideas and concepts advanced, and the knowledge gained in physics since 1900. Topics include: special theory of relativity, relativistic calculation, modern experiments, atomic structure, matter waves, quantum mechanics, and applications. Hands-on lab activities require students to make appropriate measurements, perform data analysis, and discuss the results to reinforce their understanding of the subject matter.

PLSC - POLITICAL SCIENCE

PLSC - 1043 American Government, 3.00 Credits
Prerequisite(s): Gen Ed - American History, Gen Ed-US Hist & Civic Engage, Liberal Arts and Science
This course is an introduction to American government. Students will examine the basic framework and institutions of government, including the U.S. Constitution and branches of government. The development and quantum theory of hydrogen. Hands-on lab activities require appropriate measurements, perform data analysis, and discuss the results to reinforce their understanding of the subject matter.

PSYC - PSYCHOLOGY

PSYC - 1013 General Psychology, 3.00 Credits
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
The major emphasis of this course is on the scientific study of the behavioral and mental processes of human beings. Both the biological structure of the human organism and the effect of the environment upon behavior are studied. The major areas of psychological study, including research methods, sensation and perception, learning theories, and cognitive processes are surveyed.

PSYC - 1023 Human Development, 3.00 Credits
Prerequisite(s): PSYC 1013 with D or better
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This course is designed to introduce students to the basic concepts and principles of physical, cognitive, and psychosocial development at each major stage of life - from conception until old age. Major theories are explained and fully integrated throughout the human life span.

PSYC - 1033 Human Relations, 3.00 Credits
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This course covers the problems of human adjustment using the psychoanalytic, social-learning, and humanistic perspectives. The course also focuses on stress, its effects and its management. The third area of study concerns interpersonal and social aspects of human behavior.

PSYC - 1063 Basic Helping Skills, 3.00 Credits
Prerequisite(s): PSYC 1013 with D or better
Level: Lower
Applied Learning-Practicum, Gen Ed - Social Sciences, Liberal Arts and Science
This course is designed to assist the student in developing the helping skills necessary to conduct a productive, helping session. Helping models, ethical considerations, and interview methods will be examined, particularly as they apply to the human services field.
RADT - 3014 Radiographic Procedures II, 4.00 Credits
Prerequisite(s): RADT 2014 with C or better and RADT 2013 with C or better
Level: Lower
Applied Learning Practicum
This course provides the theoretical basis for performing radiographic procedures with specific patient positioning instruction in the laboratory. The examination protocols and imaging evaluation for fluoroscopy, the skull, special views of the spine, bone surveys, arthograms, pediatrics, and genitalic procedures, and trauma radiography will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing and skill practice. Image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

RADT - 3023 Diagnostic Imaging I, 3.00 Credits
Level: Lower
This course provides a comprehensive understanding of the current image analysis and digital imaging guidelines for radiographic imaging and related positioning. Included are the importance of optimal imaging standards, discussion of a problem-solving technique for image evaluation and the factors that can affect image quality. Actual images are critiqued for analysis.

RADT - 3024 Diagnostic Imaging II, 3.00 Credits
Level: Lower
This course provides a foundation in ethics and law related to the practice of medical imaging. In addition, accreditation, regulatory agencies, professional credentialing, professional organizations and professional development and advancement will be discussed. Students will examine a variety of ethical and legal issues found in clinical practice. The course will also revisit the professional responsibilities of the radiographer.

RADT - 3043 Radiology Clinical III, 3.00 Credits
Prerequisite(s): RADT 3044 with C or better
Level: Lower
Applied Learning Practicum, Clinical Liability Insurance
This course provides ongoing experience in the radiology department clinical setting allowing implementation of advanced learning objectives and skills. This course allows for the continued progression of skills in the clinical setting. Procedural competence and the acquisition of additional competencies in radiography is the focus. Continued assessment of learning and proficiency is conducted using summative competencies and advanced level learning objectives. This clinical experience consists of 360 hours, which will be completed 24 hours per week for 15 weeks.

RADT - 4003 Intro to Adv Diagnostic Imaging, 3.00 Credits
Prerequisite(s): RADT 3023 with C or better and RADT 4023 with C or better
Level: Lower
This course introduces the many advanced imaging modalities that are included in the radiology department. Computer tomography (CT) and its operation is discussed along with department archival systems and digital medical image storage. The course then introduces basic mechanisms of x-ray acquisition, basic operating principles and applications for the advanced imaging modalities of magnetic resonance imaging (MRI), nuclear medicine, positron emission tomography (PET) and single-photon emission computed tomography (SPECT) imaging, ultrasound, radiation therapy and interventional radiography including arteriograms, cardiac angiography and venograms.

RADT - 4013 Prof Development in Imaging Sc, 3.00 Credits
Level: Lower
This course is an overview of the radiographer's continued professional development. The course is designed to encourage active participation in professional organizations and a development of lifelong learning. The course will culminate in a senior research project and presentation on a topic within the field of radiologic science and imaging.

RADT - 4023 Diagnostic Imaging III, 3.00 Credits
Prerequisite(s): RADT 3023 with C or better and RADT 3043 with C or better
Level: Lower
Applied Learning Practicum, Clinical Liability Insurance
This course provides a foundation in ethics and law related to the practice of medical imaging. Accreditation, regulatory agencies, professional credentialing, professional organizations and professional development and advancement are discussed. Students examine a variety of ethical and legal issues found in clinical practice. The course also revisits the professional responsibilities of the radiographer.

RADT - 4043 Radiology Clinical IV, 3.00 Credits
Prerequisite(s): RADT 3043 with C or better
Level: Lower
Applied Learning Practicum, Clinical Liability Insurance
This course is designed to allow for expanded experience in radiology by implementing advanced proficiencies in the clinical setting. Various imaging modalities will be introduced and experienced including computed tomography (CT) scanning, special procedures, magnetic resonance imaging (MRI), nuclear medicine and ultrasound. Procedural competencies and characteristics of an entry-level radiographer will be demonstrated at the conclusion of this final clinical experience as documented by the terminal competencies and mastery level objectives. This clinical experience will consist of 360 hours, which will be completed 24 hours per week for 15 weeks.

RADT - 4900 Directed Study, 1.00 Credit
Prerequisite(s): RADT 3043 with D or better
Level: Lower
This course is an elective course designed to allow students to pursue advanced work in radiologic technology or clinical extended clinical experience. A student may carry for one credit hour of independent study through an arrangement with the clinical coordinator, who agrees to direct such a study. Enrollment is limited by clinical site participation.

RELG - RELIGION
RELG - 7003 Faith and Compassion: Expl Wrld, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science, Upper Level
Students will explore diverse religious perspectives with a focus on the concepts of faith and compassion. Through the study of primary religious scripture, practice and film, the student will develop a broad understanding of the diversity of religions that have shaped and continue to influence and direct the course of human civilization. Class sessions emphasize student discussion, and assignments encourage student reflection about the meaning and role of religion and religious diversity in their lives and those of others. Research and substantial writing assignments will further develop the student's writing, interpretation, critical thinking, and information literacy skills. This course is particularly useful for individuals preparing for helping professions.

SOCI - SOCIOLOGY
SOCI - 1163 General Sociology, 3.00 Credits
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
Sociology is the scientific study of society and social groups. This introductory course discusses the research methods, basic concepts, theories and perspectives used by sociologists. Among the topics covered are culture, socialization, social structure, deviance, social stratification, diversity, globalization, minority groups, gender, and selected social institutions.

SOCI - 1183 Contemporary Social Problems, 3.00 Credits
Prerequisite(s): SOCI 1163 with D or better
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
The purpose of this course is to acquaint the student with a broad spectrum of social problems within contemporary United States. The factors causing social and cultural problems will be emphasized. Students are required to conduct research using social science methodologies, analyze a specific social problem, and create new policy to deal with the social problem. Students' research will culminate in a research document that makes an intellectual or creative contribution to the discipline. Students will discuss and critically analyze social policies that address social topics discussed in class.

SOCI - 1193 Marriage & Family Acrs Wrld Clt, 3.00 Credits
Level: Lower
Gen Ed - Other World Civilizat, Gen Ed - Social Sciences, Gen Ed-World Hist/Global Aware, Liberal Arts and Science
This course provides a cross-cultural perspective on marriage and family while giving students the opportunity to explore similarities and differences in marriage and family practices. Various cultures will be examined to enhance student understanding of cultural and environmental influences on beliefs, values and practices relating to kinship patterns.

SOCI - 1223 Power, Privilege, & Difference, 3.00 Credits
Prerequisite(s): SOCI 1163 with D or better
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This course examines the social forces at work directing the distribution of power and privilege in American society. Using a sociological perspective, students learn about the multiple hierarchies defined by class, race/ethnicity, gender, and sexuality and the consequences of one's location in them. Students will learn intersectionality theory and its application to the study of inequality; that "difference" is socially constructed in systems of privilege to create "otherness," and, in turn, prejudice and discrimination.

SOCI - 1243 Criminology, 3.00 Credits
Prerequisite(s): SOCI 1163 with D or better
Level: Lower
Gen Ed - Social Sciences, Liberal Arts and Science
This course introduces the study of crime, criminal behavior, and the justice system. Included in this study is the process of making laws, breaking laws, and society's reaction to the breaking of laws. Students will be introduced to theories of crime as demonstrated in the current policies of crime and punishment. In addition, there will be an overview of the criminal justice system: law enforcement, the courts, and corrections.

SOCI - 5023 Research Methods, 3.00 Credits
Prerequisite(s): MATH 1123 with D or better or MATH 1113 with D or better or MATH 2124 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This upper-level course focuses on the how and why of doing research in the social and behavioral sciences, including evaluation research. The research techniques used by human services practitioners and social and behavioral scientists are emphasized including correlational and experimental methods. Ethical ways to conduct research and to build knowledge through research are examined. Writing in professional formatting style is stressed, as is understanding the parts of a journal article, the methods utilized within those professional journal articles, and how research is disseminated at professional conferences.

SOCI - 5033 Soc. Life & Visn. of the Fut., 3.00 Credits
Prerequisite(s): SOCI 1163 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This course teaches sociological thinking by examining our world and visions of future social life. Concepts and themes from the social sciences will be mapped to representations of future social life as students develop their sociological understanding. Students will think critically about modernization, social change, the relationship between comfort and society, and the interplay of group identity and personal identity as well as the intersection of class, race gender and sexuality in our contemporary social life. Dystopian and utopian visions of the future will provide fruitful "counterfactuals" to compare with current and historical lived experiences.
SONO - 2013 US Physics & Instrument I, 3.00 Credits
Preerequisite(s): SONO 2003 with D or better
Level: Lower
This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the female pelvis, abdominal organs, pelvic cavity and organs, and superficial/smal parts such as thyroid and scrotum will be introduced. This laboratory setting reinforces the theoretical foundation of the lecture through demonstration, role-playing, and skill practice in the laboratory. Sonographic image analysis will be included and requires problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 2024 Sonographic Procedures I, 4.00 Credits
Level: Lower
Applied Learning-Practicum
This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the abdominal organs, pelvic cavity and organs, and superficial/small parts such as thyroid will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role-playing and skill practice in the laboratory. Sonographic image analysis will be included and requires problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 2024 Sonographic Procedures II Lab, 1.00 Credit
Preerequisite(s): SONO 2023 with C+ or better OR SONO 2024 with C+ or better Corequisite(s): SONO 2023 with C+ or better OR SONO 2024 with C+ or better Level: Lower
This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the female pelvic organs, obstetrical (first, second and third trimester), carotid, peripheral arterial and venous vascular scanning will be introduced. The laboratory setting reinforces the theoretical foundation of the lecture through demonstration, role-playing, and skill practice in the laboratory. Sonographic image analysis is included and requires problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 2033 Sonographic Procedures II, 3.00 Credits
Preerequisite(s): SONO 2024 with D or better OR SONO 2023 with D or better Corequisite(s): SONO 2024 with D or better OR SONO 2023 with D or better Level: Lower
This course provides the theoretical basis for performing sonographic procedures. The examination protocols and imaging evaluation for the female pelvic organs, obstetrical (first, second and third trimester), carotid, peripheral arterial and venous vascular scanning will be introduced. The laboratory setting reinforces the theoretical foundation of the lecture through demonstration, role-playing, and skill practice in the laboratory. Sonographic image analysis is included and requires problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 3001 Sonographic Procedures II Lab, 1.00 Credit
Preerequisite(s): SONO 2003 with C+ or better OR SONO 2024 with C+ or better Corequisite(s): SONO 2023 with C+ or better OR SONO 2024 with C+ or better Level: Lower
This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the female pelvic organs, obstetrical (first, second and third trimester), carotid, peripheral arterial and venous vascular scanning will be introduced. The laboratory setting reinforces the theoretical foundation of the lecture through demonstration, role-playing, and skill practice in the laboratory. Sonographic image analysis is included and requires problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.
SONO - 4003 Professional Dev in Sonography, 3.00 Credits
Level: Lower
This course is an overview of the radiographer's continued professional development. The course is designed to encourage active participation in professional organizations and a development of lifelong learning. The course will culminate in a senior research project and presentation on a topic within the field of radiologic science and imaging. Students will be expected to prepare for the Registry Exam(s).

SONO - 4013 Advanced Physics and Prob Solv, 3.00 Credits
Prerequisite(s): SONO 3013 with D or better and SONO 3013 with D or better
Level: Lower
This course is designed to educate the student on how new technology, equipment, and sonographic procedures impact the use of ultrasound physics and instrumentation in the clinical setting. This course continues to build upon the content and theory previously learned in Ultrasonic Physics and Instrumentation I and II. Various case studies and course materials will be utilized to help students enhance critical thinking skills towards application in the clinical setting.

SONO - 4024 Sonography Clinical III, 4.00 Credits
Prerequisite(s): SONO 3024 with C+ or better
Level: Lower
Applied Learning-Clinical Plcm, Clinical Liability Insurance
This course allows for the continued progression of skills in the clinical setting. Procedural competence and the assessment of additional procedures in diagnostic medical sonography are the focus of this clinical experience. Continued assessment of learning and proficiency is conducted using summative competencies and advanced and mastery level learning objectives during the clinical rotation. This clinical experience consists of 40 hours per week for the duration of the course offering (minimum of 180 hours required). Clinical schedule will be appointed based on availability of affiliated clinical site.

SONO - 4031 Sonographic Procedures III Lab, 1.00 Credit
Prerequisite(s): SONO 3031 with D or better and SONO 3033 with D or better
Corequisite(s): SONO 3031 with D or better and SONO 3033 with D or better
Level: Lower
This course provides students with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the breast, superficial tissues, musculoskeletal, GI tract, interventional, and vascular scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing, and skill practice. Overview of Safety with regards to biologic effects and quality control will be introduced. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 4034 Sonographic Procedures III, 4.00 Credits
Level: Lower
Applied Learning-Practicum
This course provides the theoretical basis for performing sonographic procedures with specific patient scanning instruction in the laboratory. The examination protocols and imaging evaluation for the Breast; Thyroid; Scrotum; Musculoskeletal; GI Tract; Interventional; and Pediatric Scanning will be introduced. The laboratory setting will reinforce the theoretical foundation of the lecture through demonstration, role playing and skill practice in the laboratory. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality of the images obtained in the laboratory.

SONO - 4033 Sonographic Procedures III, 3.00 Credits
Prerequisite(s): SONO 3033 with D or better and SONO 4031
Corequisite(s): SONO 3033 with D or better and SONO 3031 with D or better and SONO 4031 *
Level: Lower
This course provides the theoretical basis for performing sonographic procedures. The examination protocols and imaging evaluation for the breast, musculoskeletal, GI tract, interventional, pediatric scanning will be introduced. This includes the disease processes for each organ/organ system with application to sonographic and Doppler patterns. Sonographic image analysis will be included and require problem solving and critical thinking skills to evaluate diagnostic quality.

SONO - 4035 Prof. in Son & ARDMS Prep, 3.00 Credits
Prerequisite(s): SONO 1003 with D or better and SONO 3023 with D or better
Level: Lower
The course will provide new sonographers with the professional skills necessary to obtain employment in the field of sonography. The course is designed to encourage active participation in professional organizations and the development of lifelong learning. Advanced interpretation and critique of abdominal, OB/GYN, vascular, superficial, and small parts sonographic images are discussed. The course will review the basic theories of law and ethics, diversity, and cultural concerns. Subject review and preparation for credentialing exams will be completed. This course will culminate in a project and presentation of a topic within the field of sonography and imagining.

SPAN - SPANISH
SPAN - 1203 Spanish I, 3.00 Credits
Level: Lower
Gen Ed - Foreign Language, Liberal Arts and Science
This course focuses on developing the student's ability to speak, to write, and to read Spanish. Additional emphasis is given to learning about the diverse cultures of the Spanish-speaking world. Instruction centers on oral communication, grammar (especially formation of verbs), and cultural awareness. Writing is continued in assignments related to readings, class discussions, and lectures.

SPAN - 2203 Spanish II, 3.00 Credits
Prerequisite(s): SPAN 1203 with D or better
Level: Lower
Gen Ed - Foreign Language, Liberal Arts and Science
This second semester course is designed to suit the needs of persons who wish to learn to communicate orally in the Spanish language for purposes of travel, business, personal pleasure, and academia environment. The student's listening, speaking, reading and writing skills in Spanish will be further developed.

SPCH - SPEECH
SPCH - 1083 Effective Speaking, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better
Level: Lower
Gen Ed - BC-COMP1503/SPCH1083, Gen Ed - BC-COMP3503/SPCH1083, Liberal Arts and Science
This course deals with preparing, presenting, and criticizing the basic speech types: reporting, demonstrating, debating, and arguments. Special attention is given to collecting, selecting, and arranging of material; to presenting and delivering; and to active listening and critical evaluating. The course stresses principles of intrapersonal and interpersonal communication and provides a basis for the understanding of speech through utilizing various media. The course is designed to help students obtain the speaking skills with which to respond to various oral communication situations encountered throughout college and in professional, civic, and social areas before and after graduation. Students will be required to deliver presentations to a live audience of mature adults in both traditional and online classes.

SPCH - 4003 Intercultural Communication, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and SPCH 1083 with D or better
Level: Lower
Gen Ed - Humanities, Liberal Arts and Science
This course is in the theories and applications of Intercultural Communication. Students will investigate how culture shapes communication norms and analyze the verbal and nonverbal communication styles of various cultures. The course will also focus on the causes of and effective responses to intercultural conflict. Emphasis will be placed on applying intercultural competency to practical contexts.

SPCH - 5003 Mediated Argu. in Pub. Spheres, 3.00 Credits
Prerequisite(s): SPCH 1083 with D or better
Level: Upper
Gen Ed - Humanities, Liberal Arts and Science
This course is a study in argumentation in public spheres with a focus on emerging media. Students will develop skills in advanced argument creation, engage in criticism of media artifacts, and understand the history of mediated argumentation in public spheres. Readings will be drawn from academic, professional, and popular criticism of the evolving landscape of public sphere argumentation. Emphasis will be placed on crafting and critiquing effective and sound oral, visual, and procedural arguments. The course culminates in a final project asking students to evaluate established schools of media criticism, rhetorical criticism, and public sphere theory by debating their efficacy in informing public argumentation in emergent and new media environments.

SPCH - 5083 Communication in the Workplace, 3.00 Credits
Prerequisite(s): COMP 1503 with D or better and SPCH 1083 with D or better
Level: Upper
Gen Ed - BC-COMP1503/SPCH5083, Gen Ed - BC-COMP3503/SPCH5083, Liberal Arts and Science
The class is designed to give students the opportunity to obtain the communications skills encountered throughout college and his or her personal and professional life. Special attention is given to the theory of organizational communication, basic communication skills, interpersonal communication, employer-employee relations, group communication, and presentational speaking.

SPCH - 6083 Interpersonal Communication, 3.00 Credits
Prerequisite(s): SPCH 1083 with D or better
Level: Upper
Liberal Arts and Science, Upper Level
This course will cover the study and application of the techniques involved in effective interpersonal communication. Text, lecture, and outside reading will cover the theories and concepts of verbal, vocal, nonverbal, and listening as they relate to communicating in interpersonal contexts. Specifically, the course will address such topics as validation, listening, self-disclosure, conflict resolution, problem solving strategies, and electronic communication. Class participation, group participation, public speaking, and scholarly writing are required of all students.
SPMG - SPORT MANAGEMENT

SPMG - 1123 Intro to Sport Management, 3.00 Credits
Level: Lower
This course is an investigation of the scope of the sport industry, which is a growing major business enterprise in the United States and in much of the world. The course is designed to provide an overview of sports administration with an emphasis on management principles and career opportunities. The various functions of effective management, and the skills, attributes, and roles required of the sport manager are discussed. Attention will be focused on how the managerial process relates to sport organizations and the products they provide. Students will become acquainted with career opportunities in the sport management field.

SPMG - 2003 Sport in Society, 3.00 Credits
Prerequisite(s): SPMG 1123 with D or better
Level: Lower
This course provides an in-depth examination of sport in society, particularly in the United States. A review of the role of sport participants, spectators, and the media on society is included. Various organizational levels of sporting opportunity and sporting behavior, including sport ethics, resulting from the influence of society will be covered.

SPMG - 2013 Sport in Europe Soc Study Abrd, 3.00 Credits
Level: Lower
This course is an investigation of the scope of the sport industry, which is a growing major business enterprise in the United States and in much of the world. The course is designed to provide an overview of sports administration with an emphasis on management principles and career opportunities. The various functions of effective management, and the skills, attributes, and roles required of the sport manager are discussed. Attention will be focused on how the managerial process relates to sport organizations and the products they provide. Students will become acquainted with career opportunities in the sport management field.

SPMG - 3001 Field Experience I, 1.00 Credit
Prerequisite(s): SPMG 1123 with C or better
Level: Lower
Applied Learning-Internship, Pass/Fail
This course encompasses a semester of supervised, hands-on experience working in the field of sport management. A minimum of 45 hours of work throughout the semester is required.

SPMG - 4001 Field Experience II, 1.00 Credit
Prerequisite(s): SPMG 1123 with C or better and SPMG 3001 with D or better
Level: Lower
Applied Learning-Internship, Pass/Fail
This course encompasses a semester of supervised, hands-on experience working in the field of sport management. A minimum of 45 hours of work throughout the semester is required.

SPMG - 4123 Sport Facility Management, 3.00 Credits
Prerequisite(s): SPMG 1123 with C or better
Level: Lower
This course investigates the elements, issues, and problems that shape the planning and management of sport facilities and events. Similarities and differences of facility types, reasons for development, terminology, types of events held, service contracts, financial operations, marketing and economic impacts are some of the issues covered. Building revenues from the sport facility, even services, and financing sources are all critical to the successful management of the multi-million dollar facilities that house today's major sport events. Course content will include lectures, guest speakers, and group discussions. In order to pass this course, students must complete an end-of-program exam hosted by an external vendor.

SPMG - 5003 Sport Business and Finance, 3.00 Credits
Prerequisite(s): SPMG 1123 with D or better and ACCT 1124 with D or better
Level: Upper
Upper Level
This course is a focus on the development, analysis, and pursuit of internship and career goals. Emphasis is placed on the development of a professional portfolio, including cover letters, resumes, and basic interviewing techniques. Related issues, professional ethics, and etiquette will be explored.

SPMG - 5013 Sport Communication, 3.00 Credits
Prerequisite(s): SPMG 1123 with D or better and COMP 1503 with D or better and BUAD 2033 with D or better
Level: Upper
Upper Level
This course is a focus on business topics as they relate to the fiscal and budgetary control of public and private sport organizations, leagues, and facilities. Topics include sources of funding and revenue, the implementation and use of an economic impact analysis, and a review of budgeting and financial statements.

SPMG - 5023 Principles of Coaching, 3.00 Credits
Prerequisite(s): SPMG 1123 with D or better
Level: Upper
Upper Level
This course exposes students to the study of administrative and strategic behaviors of coaches and athletes in various athletic and competitive environments that sets the tone for successful organizations, its impact on athletic performance, and how to facilitate solutions to problems that may arise. The course will include, but not be limited to, the study of different theoretical and applied topics such as planning, organizing, coaching principles, and practices.

SPMG - 5033 Ethics and Leadership in Coach, 3.00 Credits
Prerequisite(s): SPMG 1123 with D or better
Level: Upper
Upper Level
This course helps students learn and practice the disciplines needed to advance their ethical and leadership abilities as a sport coach. It explores the nuances needed to assist athletes to understand and ethical values for sport and help them to become leaders. Topics include but are not limited to sportsmanship, ethical values, gambling, performance enhancing substances, race and gender issues, and leadership development techniques specific to sport applications.
TMGT - TECHNOLOGY MANAGEMENT

TMGT - 5900 Directed Study, 1.0 TO 6.00 Credits
Level: Upper
Pass/Fail, Upper Level
A student may contract for one to six credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

TMGT - 7003 Managing Tech & Innovation Cap, 3.00 Credits
Prerequisite(s): TMGT 7151 with D or better or BUAD 3151 with D or better
Level: Upper
Applied Learning-Practicum, Upper Level
This course is an application of theoretical approaches to technology management and innovation. Major concepts, tools, and processes will be explored through lecture, readings, team activities, and case study applications. Major topics include technology innovation, the assessment of technology and the importance of technology forecasts. Students will learn how to manage innovation, technology, and organizational context for technology management. Additional topics will also include strategic actions required by business, developing a firm’s organizational innovation capabilities, creating and implementing a departmental strategy, new venture development, and challenges to managing innovation. Students will learn about the latest technology methods of AI/AR/VR and be able to apply them through a hands on, team-based PBL simulation.

TMGT - 7153 Principles of Management, 3.00 Credits
Level: Upper
Upper Level
This course deals with understanding management concepts and functions of encouraging employee enthusiasm and creativity; finding shared vision, norms, and values, sharing information and power; and encouraging teamwork and participation. The concepts of planning, organizing, leading, and controlling are explored to show how these basic principles can be used to create a healthy and thriving environment in today’s global environment of business and technology.

TMGT - 8006 Technology Management Internship, 6.00 Credits
Level: Upper
Applied Learning-Internship, Pass/Fail, Upper Level
This internship is designed to assist the student in making the transition from the classroom to industry. This integration of work allows a degree of independence and an element of learning that is not possible in a conventional classroom. The intent of the internship is to provide each student with an experiential learning opportunity in a management situation as a pre-professional supervisor or manager. Students will complete supervised field work in a selected business, industry, government or educational setting. Students carry out a planned program of educational experiences under the direct supervision of an owner, manager, or supervisor in their technical field or professional area. The intern will also be supervised by a faculty member who serves as the Internship Coordinator. Written and oral reports, along with a journal of work activities and experiences, will be required. The final grade will be determined by the Internship Coordinator and the Site Supervisor.

VETS - VETERINARY TECHNOLOGY

VETS - 1002 Applied Veterinary Med Term, 2.00 Credits
Level: Lower
This course will introduce Veterinary Technology students to the animal and procedural terminology they will need during their studies. Students will be expected to learn the acronyms and abbreviations commonly used in the field of Veterinary Medicine.

VETS - 1203 Intro to Veterinary Technology, 3.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $33.00
This course introduces the student to the terminology and specialization of the Veterinary Technology Curriculum. The nature of professional and ethical practices will be explored. Breeds and strains of domesticated animals will be studied and the student will be introduced to the basic concepts of animal behavior. The nature and form of medicines and the calculation of dose and dosages will be studied. The small animal handling laboratories will be held on site using animals from the local SPCA and Humane Society. A kennel assignment will be performed as a required part of the class.

VETS - 1214 Anatomy & Physiology of Animals I, 4.00 Credits
Level: Lower
Applied Learning-Other, Liberal Arts and Science
This course is an introduction to the study of anatomy and physiology using Domestic and Exotic animal species as the primary model. The course provides a functional integration of basic science and clinical information as it relates to the normal healthy animal in an applied lecture and laboratory approach. Histologic slides, kudchromes, and radiographs will also be utilized to enhance organ recognition and understanding of function. The students will explore in greater depth and detail the course materials through questions and discussions fostered by the development of group Power Point presentations on topics that are related to the organ systems studied.

VETS - 2014 Anatomy & Physiology of Animals II, 4.00 Credits
Prerequisite(s): VETS 1214 with D or better and VETS 1203 with C or better
Level: Lower
Applied Learning-Other, Liberal Arts and Science
Anatomy and Physiology of Animals II is a continuation of the study of anatomy and physiology which began using the organ system in VETS 1214 - Anatomy and Physiology of Animals I. This course uses Domestic and Exotic animal species as the models on which we complete the discussion of the normal anatomy and physiologic function of animals. The course provides a functional integration of basic science and clinical information as it relates to health and disease in domestic animals. The students will explore in greater depth and detail the course materials through questions and discussions fostered by the development of group Power Point presentations on topics that are related to organ system studied.

VETS - 2104 Pathophysiology of An Disease, 4.00 Credits
Prerequisite(s): VETS 1214 with C or better and VETS 2014 with C or better and VETS 1203 with C or better and VETS 3013 with C or better
Level: Lower
Pathophysiology of Animal Disease is a course which provides a multidisciplinary approach to the understanding of clinical information as it relates to health and disease in domestic animals. Utilizing a body systems approach, students will receive in-depth exposure to the most common diseases of domestic animals. They will build on their foundation in anatomy and physiology from previous courses to learn how disease affects normal anatomy and physiology. They will learn their role in the diagnosis, management, and prevention of disease in domestic animals.
VETS - 2333 Domestic Animal Behavior, 3.00 Credits
Level: Lower
This course is designed to further develop an understanding of domestic animal behavior for students in the Veterinary Technology Program. It will help the student to work as a veterinary technician with a strong understanding of the behaviors they see and to help educate clients when behavior issues arise. In addition to the text the students will be viewing videos and images of domestic animal behavior. This course may include interactions with live domestic animals (primarily dogs and cats) and behavior modification related to handling issues that commonly arise in the clinic (nail trimming, blood draws, etc.).

VETS - 3003 Animal Health Care, 3.00 Credits
Prerequisite(s): VETS 1203 with C or better and ( VETS 1214 with D or better or ANSC 2114 with C or better )
Level: Lower
Applied Learning Practicum
This course is designed to give first year students involved animal handling skills and familiary with basic priciples such as injections, venipuncture, bandaging, and dosage and fluid therapy calculations. Students will also develop skills to perform proficient physical examination of animals. Common outpatient diagnostic tests used for eye, ear, and skin disease are mastered. Students will be introduced to the currently used veterinary anesthetic drugs and their effect on the animal by utilizing their knowledge of the normal anatomy, physiology as a basis for understanding. In the laboratory the student will be given an introduction to the technical skills necessary to preanesthetize, anesthetize, maintain and recover the animal patient, by utilizing current apropriate anesthetic agents, equipment, and protocols. The students will also learn how to measure packed cell volumes and plasma protein levels in blood samples. Dentistry prophylaxis, recognition of dental abnormalities, and dental charting using both anatomic and Triadan systems will also be covered thoroughly. Students will also visit the local Humane Society to perform technician-related duties.

VETS - 3004 Anesthesia & Surgical Nursing, 4.00 Credits
Prerequisite(s): VETS 2014 with C or better and VETS 3003 with C or better and VETS 3023 with C or better
Level: Lower
Applied Learning Practicum, Course Fee $100.00
This course is designed to prepare the second year Veterinary Technology student to become the individual who can induce, maintain and recover small animal surgical patients. The student will also prepare the animals for surgery and assist in the surgical procedures. Upon completion, the student will possess an understanding of all of the procedures done in vet practice with anesthetics and surgical nursing.

VETS - 3013 Animal Parasitology, 3.00 Credits
Prerequisite(s): VETS 1214 with D or better and VETS 1203 with C or better
Level: Lower
Applied Learning Practicum
Parasitology is a multidisciplinary approach to the study of internal and external parasites of companion, exotic and farm animals. This course will integrate the student's knowledge of anatomy and pharmacology while providing the student the opportunity to understand life cycles, diagnostic protocol, control and treatment of the most common internal and external parasites. The course will also develop the students' understanding of how to appropriately provide both verbal and written communications for the client concerning management, prevention and potential zoonosis of the common parasites. The laboratory will emphasize the collection techniques used to identify the parasites of companion, laboratory and farm animals.

VETS - 3022 Anesthesia & Surgical Nsg I, 2.00 Credits
Prerequisite(s): VETS 2014 with C or better and VETS 3003 with C or better and VETS 3013 with C or better
Level: Lower
This course will provide the student the opportunity to gain an initial understanding of the principles of veterinary anesthesia and veterinary surgical nursing. The students will be introduced to the currently used veterinary anesthetic drugs and their effect on the animal by utilizing their knowledge of the normal anatomy, physiology as a basis for understanding. In the laboratory the student will be given an introduction to the technical skills necessary to preanesthetize, anesthetize, maintain and recover the animal patient, by utilizing current appropriate anesthetic agents, equipment, and protocols. The students will also learn to use critical thinking skills in gathering an understanding about animal disease and treatment. This course is the first of a series of two courses that cover this expansive topic. This second course will combine pathophysiology and pharmacology in a comprehensive method of presenting information about animal disease and treatment. This course is the second of a series of two courses that cover this expansive topic. This second course will continue with the presentation of the pathophysiology of disease and the pharmacologic treatment of that disease. Pathophysiology will be presented by a combination of systems and species control measures, housing, and basic management practices will also be covered. Additional farm experiences outside of regularly scheduled classes will be required for successful completion of this course.

VETS - 4103 Laboratory Animal and Exotics, 3.00 Credits
Prerequisite(s): VETS 1203 with C or better and VETS 3003 with C or better and VETS 3003 with C or better and ( VETS 3024 with C or better or ANSC 1204 with C or better ) and VETS 1214 with D or better
Level: Lower
Applied Learning-Practicum
This course is designed to provide the student with basic knowledge and understanding of veterinary facilities and their function. Students will be instructed in the care and handling of small animals used in the research laboratory. Emphasis will be placed on species differences, housing requirements, nutrition, reproduction, health, sanitation, and laboratory techniques and animal pharmaceutical facilities. Animal handling, observation and management time will be provided in the laboratory time as well as during assigned vivarium duty.

VETS - 4202 Small Animal Nutrition, 2.00 Credits
Prerequisite(s): VETS 1203 with C or better
Level: Lower
This is an introductory course for students accepted in the veterinary technology program, providing identification and function of nutrients, understanding pet food labels, and applications for wellness, life stage, and therapeutic nutrition (prescription food) for dogs and cats. The course will utilize an interactive Internet connection in the classroom.

VETS - 4203 Patho & Pharm of An. Disease 2, 3.00 Credits
Prerequisite(s): VETS 1214 with D or better and ( VETS 2014 with C or better and VETS 3013 with C or better )
Level: Lower
This course will combine pathophysiology and pharmacology in a comprehensive method of presenting information about animal disease and treatment. This course is the second of a series of two courses that cover this expansive topic. This second course will continue with the presentation of the pathophysiology of disease and the pharmacologic treatment of that disease. Pathophysiology will be presented by a combination of systems and species control measures, housing, and basic management practices will also be covered. Additional farm experiences outside of regularly scheduled classes will be required for successful completion of this course.

VETS - 4302 Pharmacology for the Vet Tech, 2.00 Credits
Prerequisite(s): VETS 2013 with C or better or VETS 2104 with C or better
Level: Lower
This course will review and consolidate information on pharmacology that is touched upon in other Veterinary Technology courses and add additional topics in pharmacology to provide the student with a comprehensive and organized overview of veterinary pharmacology.

VETS - 4403 Veterinary Practice Essentials, 3.00 Credits
Prerequisite(s): VETS 1203 with C or better
Level: Lower
This course is designed to prepare students to more easily transition from the academic environment to the veterinary practice environment. The course will provide practice management techniques that give students a broad background in the skills needed to manage a practice from day to day. Instruction will include but not be limited to discussion of inventory control, structure, profit and loss statement analysis, human resource management, effective leadership, employee relations, and customer service. Communication skills are critical in veterinary medicine – both technician to client and technician to fellow veterinary professionals. Communication styles and application of communication skills will be reinforced throughout this course segment. Student communication skills will be strengthened in this course through interactive scenario discussions regarding difficult situations such as discussion about a patient's euthanasia. This segment of the course will also include perfecting interview skills and creating or enhancing professional resumes. The course will also allow students to explore potential career tracks in veterinary technology and the role of a veterinary technician in clinical practice or other venues.

VETS - 4603 Veterinary Technology Precepts., 1.00 Credit
Prerequisite(s): VETS 2014 with C or better and VETS 1203 with C or better and VETS 3013 with C or better and VETS 3003 with C or better and ( VETS 3024 with C or better or ANSC 1204 with C or better )
Level: Lower
Applied Learning-Practicum, Clinical Liability Insurance, Pass/Fail
The American Veterinaryrenoces (AVMA) and the Committee on Veterinary Technology Education require that every student in Veterinary Technology complete a 240-hour preceptorship under the direct supervision of a licensed veterinary technician or a veterinarian. These preceptorship experiences will be provided in private veterinary practices or other venues where the supervisory requirements can be met. Students will gain experiences in real clinical settings in veterinary medicine and develop an appreciation for the role of a veterinary technician in clinical practice or other venues.

VETS - 4700 Patho & Pharm of An. Disease I, 3.00 Credits
Prerequisite(s): VETS 1214 with D or better and ( VETS 2014 with C or better and VETS 3023 with C or better )
Level: Lower
Applied Learning-Practicum
This course is designed to prepare the second year Veterinary Technology student to bring the student with a comprehensive and organized overview of veterinary pharmacology.

VETS - 3103 Patho & Pharm of An. Disease I, 3.00 Credits
Prerequisite(s): VETS 1214 with D or better and VETS 2014 with C or better
Level: Lower
This course will combine pathophysiology and pharmacology in a comprehensive method of presenting information about animal disease and treatment. This course is the first of a series of two courses that cover this expansive topic. This first course will begin with a background presentation of pharmacologic science and then progress to pathophysiology of disease and pharmacologic treatment of that disease. Pathophysiology will be presented by a combination of systems and species control measures, housing, and basic management practices will also be covered. Additional farm experiences outside of regularly scheduled classes will be required for successful completion of this course.

VETS - 3204 Farm Animal Management, 4.00 Credits
Level: Lower
Applied Learning-Practicum, Course Fee $33.00
This course is designed to provide the student insight into the behavior, care and management of farm animals such as horses, sheep, swine, goats and other animals will be discussed. Emphasis will be placed on the practical aspects of veterinary nursing such as proper handling, restraint, examination, medication, treatment, and examination procedures that are necessary to farm animal patients. Students will also work with the major breeds, terminology, disease control measures, housing, and basic management practices will also be covered. Additional farm experiences outside of regularly scheduled classes will be required for successful completion of this course.

VETS - 3301 Veterinary Technology Precept., 1.00 Credit
Prerequisite(s): VETS 2014 with C or better and VETS 1203 with C or better and VETS 3013 with C or better and VETS 3003 with C or better and ( VETS 3024 with C or better or ANSC 1204 with C or better ) and VETS 1214 with D or better
Level: Lower
Applied Learning-Practicum
This course is designed to further develop an understanding of domestic animal behavior for students in the Veterinary Technology Program. It will help the student to work as a veterinary technician with a strong understanding of the behaviors they see and to help educate clients when behavior issues arise. In addition to the text the students will be viewing videos and images of domestic animal behavior. This course may include interactions with live domestic animals (primarily dogs and cats) and behavior modification related to handling issues that commonly arise in the clinic (nail trimming, blood draws, etc.).
This course is designed for the welding student to understand the typical working drawing and fabrication tolerances that are required for metal, fabricated components, and geometric tolerances. The importance of accuracy and proper orientation of weldments will be stressed. This application will address all possible tolerancing and drawing applications the student will need to be effective as an industrial welder.

WELD - 2735 Gas Tungsten Arc Welding I, 5.00 Credits
- Level: Lower
- Applied Learning-Practicum
- Prerequisite(s): WELD 2715 with D or better
- Course Fee: $118.00

This course will cover the principles related to welding metalurgy, the properties of carbon steel metals, and the residual stress and distortion caused by the welding process. Students will learn to locate the essential information for codes and standards pertaining to the industry and work assignments for the materials used. Students will be able to perform inspections of cut surfaces of prepared metals (pre-welding), as well as test welds during and post-welding.

WELD - 4013 Senior Project, 3.00 Credits
- Level: Lower
- Applied Learning-Creative Work
- Prerequisite(s): WELD 3025 with D or better

This course will cover the safety inspections of welding equipment and accessories. Student will be able to make minor repairs to the equipment and accessories, which will include the changing of wire electrodes and cable liners. Students will learn to troubleshoot welding equipment problems, how to recognize them, and the correct procedures in the use of the equipment. Set up and safe operations will be taught for the pulsed transfer method of welding. Students will perform welds on aluminum pipe.

WELD - 4435 Gas Tungsten Arc Welding III, 5.00 Credits
- Prerequisite(s): WELD 3025 with D or better

This course will cover the safety inspections of welding equipment and accessories. Student will be able to make minor repairs to the equipment and accessories, which will include the changing of wire electrodes and cable liners. Students will learn to troubleshoot welding equipment problems, how to recognize them, and the correct procedures in the use of the equipment. Set up and safe operations will be taught for the pulsed transfer method of welding. Students will perform welds on aluminum pipe.
WELD - 4900 Directed Study, 1.00 TO 5.00 Credits
Level: Lower
A student may contract for one to five credit hours of independent study through an arrangement with an instructor who agrees to direct such a study. The student will submit a plan acceptable to the instructor and to the department chairperson. The instructor and student will confer regularly regarding the process of the study.

WGST - WOMEN AND GENDER STUDIES

WGST - 1003 Intro to Women/Gender Studies, 3.00 Credits
Level: Lower
Liberal Arts and Science
This course explores critical questions about the meaning and role of gender in society. The course will expose the students to diverse values, perspectives and backgrounds relating to gender sexuality. Cultural and societal constructs and influences will be examined as they relate to gender. The course will focus on how gender, sex, race, sexual orientation, class and age influence individual attitudes and society’s views.
SUNY Distinguished Professors

ANIKO V. CONSTANTINE (1974) - SUNY Distinguished Teaching Professor, English and Humanities
BA - Hartwick College
MA, PhD - University of Illinois
SUNY Chancellor's Award for Excellence in Teaching, 1979-80
Faculty and Staff

JULIE ABBEY (2021) - Instructional Support Associate, Agriculture & Veterinary
AAS - SUNY College of Technology at Alfred

DANIEL ACOMB (2018) - Instructor, Building Trades
AOS - SUNY College of Technology at Alfred

BRIAN ADAMS (2020) - Instructor, Building Trades
BS - Houghton College

DANIEL AFTUCK (2021) - Instructor, Building Trades

DR. JILL AMATI (2012) - Associate Professor and Department Chair, Social and Behavioral Sciences
BA - University of Washington
MA - Oregon State University
MPA, PhD - Syracuse University

MOLLY E. ANDRUS (2008) - Associate Director, Print and Mail Services
BA - Plattsburgh State University

ANTHONY AQUILINA (2022) - Assistant Professor, Business
BS - SUNY Cortland
MS - Ithaca College

SHELBY AQUILINA (2020) - EOP Academic Counselor, Student Success Center
BA - Alfred University
MA - Sam Houston State University

TRAVIS ARMISON (2011) - Instructional Support Assistant, Agriculture and Veterinary Technology
BT - SUNY Cobleskill

MICHAEL ARMSTRONG (2017) - Head Baseball Coach, Athletics
BA - Ithaca College

RUTHANNE ASHWORTH (2017) - Associate Professor, Nursing
AS - SUNY College of Technology at Alfred
BS - SUNY College at Brockport
MS - SUNY College at Binghamton

AMY BABCOCK (2021) - Academic Advisement Assistant, Student Success Center
BS - SUNY College At Brockport
MA - SUNY At Stony Brook

DR. KARLA M. BACK (2004) - Professor, Business
BA - University of Houston-University Park
MA - University of Houston-Clear Lake
PhD - Texas A&M University
SUNY Chancellor's Award for Excellence in Teaching, 2012-13

ALEXANDER BAILEY (2021) - Assistant Professor, Mechanical and Electrical Engineering Technology
BS - SUNY College Of Technology At Alfred

DR. STEPHEN M. BAUER (2019) - Assistant Professor, Physical and Life Sciences
BA - Saint John Fisher College
MS - University of Rochester
PhD - University of Rochester

CODY BECKWITH (2021) - Staff Assistant, Technology Services
BS - SUNY at Fredonia

JOSHUA BENITEZ (2021) - Residence Hall Director, Residential Services
AOS - SUNY College of Technology at Alfred
BT - SUNY College of Technology at Alfred

CORY BENNETT (2020) - Associate Director of Student Accounts, Student Records and Financial Services
BA - SUNY College at Geneseo

WAYNE BENSLEY (2007) - Associate Professor and Chair, Physical and Life Sciences
BA - Syracuse University
MSFS - University of Alabama at Birmingham

CURTIS BERLEUE (2015) - Network Services Manager, Technology Services
AAS, BT - SUNY College of Technology at Alfred

DR. LUKE BERNFELD (2021) - Assistant Professor, DGMA Game and Interactive Design
BS - Utah Valley University
MA - University of Texas at Dallas
PhD - University of Texas at Dallas

KRISTOFER BIANCHI (2012) - University Police Officer II, University Police
BS - SUNY College at Oneonta

TYLER BILLINGS (2022) - Senior Staff Assistant - Technology Services
AS, AAS - Corning Community College
SCOTT BINGHAM (2006) - University Police Officer II, University Police
AAS - Finger Lakes Community College
SUNY Chancellor's Award for Excellence in Classified Service, 2015-16

DR. ALEX BITTERMAN (2014) - Professor, Architecture and Design
BS - SUNY Buffalo State
MArch, PhD - University at Buffalo

DR. JODY BLANKENSHIP (2021) - Assistant Professor and Department Chair, Nursing
ASN - University of Pittsburgh
BSN - Clarion University
PhD - University of Missouri

KATHLEEN BLISS (2001) - Assistant Professor, Agriculture and Veterinary Technology
AAS - SUNY College of Technology at Alfred
AS, LVT, NYS - Medaille College
BS - Purdue University
MALS - Excelsior College
SUNY Chancellor's Award for Excellence in Teaching, 2014-15

KATHLEEN BLISS (2001) - Assistant Professor, Agriculture and Veterinary Technology
AAS - SUNY College of Technology at Alfred
AS, LVT, NYS - Medaille College
BS - Purdue University
MALS - Excelsior College
SUNY Chancellor's Award for Excellence in Teaching, 2014-15

JOANN BLOXSOM (2019) - Assistant Registrar, Student Records and Financial Services
BA - Ashford University
MA - San Diego State University

DR. MARK BLOXSOM (2015) - Associate Professor and Department Chair, Business
BS - University of Maryland
BS - University of North Carolina at Charlotte
MA - University of California-Irvine
PhD - University of California

AFUA BOAHENE (2020) - Interim Assistant Director of DEI, Equity and Title IX, Office of Student & Faculty Dev
BA - Wells College
MSD - Syracuse University

DR. TIMOTHY BOCCHI (2005) - Assistant Professor, Mathematics and Physics
BS - Purchase College
PhD - CUNY Graduate Center

SCOTT BODENSCHATZ (2018) - Instructional Support Assistant, Allied Health
BS - University of Wisconsin

DR. MELISSA BONNEY (2021) - Assistant Professor, Agriculture and Veterinary Technology
BS - Rensselaer Polytechnic Institute
MS - University of Minnesota
DVM - Cornell University

JEREMY BOORMAN (2016) - University Police Officer I, University Police
AAS - SUNY College of Technology at Alfred
AS - Geneseo Community College

DANIEL BOWEN (2016) - Assistant Professor, Electrical, Machine Tool and Welding Technology
AOS - SUNY College of Technology at Alfred

LISA BOYLE (2013) - Instructor, Physical and Life Sciences
AAS - SUNY College of Technology at Alfred
BS - SUNY Polytechnic Institute

TAMMY BRACKETT (2008) - Assistant Professor and Department Chair, Digital Media and Animation
BA, MFA - Alfred University

DUANE BRUBAKER (2015) - Instructional Support Associate, College Farm

ARIC BRYANT (2016) - Associate Professor and Department Chair, Mechanical and Electrical Engineering Technology
AOS, BS - SUNY College of Technology at Alfred
MS - SUNY at Binghamton

RICHARD BRYSON (2022) - Assistant Professor, Mechanical and Electrical Engineering Technology
AA - Jamestown Community College
BS, MS - SUNY Empire State College Management Information Systems

LESLIE BUCKLEY (2015) - Director of Special Student Programs, Student Success Center
BS - Houghton College
MSED - Alfred University

DR. JAMES BUELL (2004) - Professor, Mathematics and Physics
MS, PhD - University of Oklahoma

DR. ELIZABETH P. BULLOCK (2018) - Assistant Professor, Social and Behavioral Sciences
BA - The Evergreen State College
MA - The University of Chicago
PhD - The Graduate Center, CUNY

CALSEY BUMP (2020) - Assistant Director of First Year Engagement, Student Engagement
BS - Saint Bonaventure University

DEBRA BURCH (1998) - Associate Professor and Department Chair, Culinary Arts
AOS - SUNY College of Technology at Alfred
SUNY Chancellor's Award for Excellence in Faculty Service, 2018-19
SANDRA BURDICK (2009) - Student Union Assistant Director, Student Engagement
AAS, BS - SUNY College of Technology at Alfred

DALE BURNS (2000) - Network Engineer, Technology Services
AAS - SUNY College of Technology at Alfred

YVONNE BUSTAMANTE (2016) - Associate Professor, Social and Behavioral Sciences
BA - Keuka College
MS - Nova Southeastern University

TAYLOR BUTTON (2021) - Head Women’s Basketball Coach, Athletics
BS - Houghton College

STEPHEN CADDY (2018) - Instructor, Building Trades
AAS - Corning Community College

ANN CAMPBELL (2023) - Academic Advisor, Admissions
AAS - Tompkins-Cortland Community College
BS - Alfred University

YVONNE BUSTAMANTE (2016) - Associate Professor, Social and Behavioral Sciences
BA - Keuka College
MS - Nova Southeastern University

TAYLOR BUTTON (2021) - Head Women’s Basketball Coach, Athletics
BS - Houghton College

STEPHEN CADDY (2018) - Instructor, Building Trades
AAS - Corning Community College

ANN CAMPBELL (2023) - Academic Advisor, Admissions
AAS - Tompkins-Cortland Community College
BS - Alfred University

DIEDRA CARDAMONE (2018) - Academic Success Coach, Student Success Center
BS - United States Merchant Marine Academy
MEd - Harvard University

JOY M. CARLSON (1988) - Professor, Architecture and Design
AAS - Genesee Community College
BS, MFA, MArch - University at Buffalo

RICHARD CARLSON (2022) - Assistant Professor, Civil Engineering
BS, MS - New Jersey Institute of Technology
MS - Purdue University

MICHAEL CARUSO (2017) - Instructor, Automotive Trades
BS - Ferris State University

MICHAEL CASE (2002) - Director, Technology Services
AAS - SUNY College of Technology at Alfred
BS - Rochester Institute of Technology

MARY CHAMBERLAIN (2018) - Area Coordinator, Residential Services
BA - Blackburn College
MA - Eastern Illinois University

VIRGINIA CHAMBERLAIN (2013) - Farm Manager, College Farm
BS - University of New Hampshire

MICHAEL CHAPMAN (2022) - Admissions Assistant, Admissions
BA - Kingswood University

HOLLY CHASE (2019) - Assistant Professor, Business
BS - Alfred University
ALM - SUNY College at Oswego

CASEY CHATLEY (2021) - University Police Officer 1, University Police
AAS - Genesee Community College

DEBORAH CLAIRE (1989) - Senior Programmer/Analyst, Technology Services
BA - SUNY Geneseo
SUNY Chancellor’s Award for Excellence in Professional Service, 2009-10

MEGAN CLARK (2017) - Assistant Professor, Nursing
BSN - SUNY College at Buffalo
MSN - Capella University

SARAH CLAUD (2016) - Clinical Coordinator for Diagnostic Sonography, Allied Health
AS - Jefferson Community College
AAS - Upstate Medical University

BRENT COBIN (1998) - Senior Staff Assistant, Print and Mail Services

TIMOTHY J. COCHRAN (1999) - Professor, Mechanical and Electrical Engineering Technology
MS - University of Wisconsin - Madison

ADRIAN COGSWELL (2013) - Lead Programmer/Analyst, Technology Services
BT - SUNY College of Technology at Alfred

MICHAEL A. COLOMAIO (2002) - Assistant Professor, Social and Behavioral Sciences
BS - SUNY Geneseo
MS - Alfred University

REBECCA COMER (1990) - Information Technology Specialist 1, Print and Mail Services
<table>
<thead>
<tr>
<th>Name</th>
<th>Degree/Position/Title</th>
<th>Experience/Institution</th>
<th>Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>JULIE CONKLIN</td>
<td>(2018) - Academic Success Specialist/Adviser, Student Success Center</td>
<td>BS - Daemen College, MSW - Nazareth College of Rochester</td>
<td>Academic Success Specialist/Adviser, Student Success Center</td>
</tr>
<tr>
<td>DR. ANIKO CONSTANTINE</td>
<td>(1976) - Distinguished Teaching Professor, English &amp; Humanities</td>
<td>BA - Hartwick College, MA - PhD - University Of Illinois At Urbana-Champaign</td>
<td>Distinguished Teaching Professor, School of Applied Technology</td>
</tr>
<tr>
<td>GORDON COOK</td>
<td>(1989) - Instructional Support Assistant, School of Applied Technology</td>
<td>BS - SUNY College at Buffalo, MSE - Alfred University</td>
<td>Instructional Support Assistant, School of Applied Technology</td>
</tr>
<tr>
<td>GREG COOK</td>
<td>(2018) - Assistant Professor, Electrical, Machine Tool &amp; Welding Technology</td>
<td>AOS - SUNY College of Technology at Alfred</td>
<td>Assistant Professor, Electrical, Machine Tool &amp; Welding Technology</td>
</tr>
<tr>
<td>JUSTIN CORNELIUS</td>
<td>(2013) - Coordinator of Student Affairs, Student Engagement</td>
<td>BA - SUNY College at Buffalo</td>
<td>Coordinator of Student Affairs, Student Engagement</td>
</tr>
<tr>
<td>CYAN CORWINE</td>
<td>(2016) - Director of Global Education and Civic Wellbeing, Civic Engagement</td>
<td>BA - SUNY College at New Paltz</td>
<td>Director of Global Education and Civic Wellbeing, Civic Engagement</td>
</tr>
<tr>
<td>NICHOLAS COUSINO</td>
<td>(2021) - Assistant Librarian, Library Services</td>
<td>BA - University of Idaho, MLS - University of Oklahoma</td>
<td>Assistant Librarian, Library Services</td>
</tr>
<tr>
<td>CASEY COWBURN</td>
<td>(2012) - Coordinator of Tutoring/ Academic Success Coach, Student Success Center</td>
<td>BA, MED - University of Massachusetts-Lowell</td>
<td>Coordinator of Tutoring/ Academic Success Coach, Student Success Center</td>
</tr>
<tr>
<td>MARK CRAGG</td>
<td>(2006) - Instructional Support Assistant, College Farm</td>
<td>AAS - SUNY College of Technology at Alfred</td>
<td>Instructional Support Assistant, College Farm</td>
</tr>
<tr>
<td>JILL CRANDALL</td>
<td>(2020) - Academic Advisor, Student Success Center</td>
<td>BS - SUNY College At Brockport Business, MS - SUNY College At Buffalo</td>
<td>Academic Advisor, Student Success Center</td>
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<tr>
<td>RAWLE CRAWFORD</td>
<td>(2014) - Senior Staff Assistant/Help Desk Coordinator, Technology Services</td>
<td>AAS, BT - SUNY College of Technology at Alfred</td>
<td>Senior Staff Assistant/Help Desk Coordinator, Technology Services</td>
</tr>
<tr>
<td>CHARLES CUTLER</td>
<td>(2014) - Telecom Technician, Technology Services</td>
<td>AAS - Rochester Institute of Technology, BBA - SUNY College Of Technology At Canton</td>
<td>Telecom Technician, Technology Services</td>
</tr>
<tr>
<td>VALERIE DACIW</td>
<td>(2022) - Senior Career Planning and Development Associate, Career Development</td>
<td>AS, BS - SUNY College Of Technology At Alfred</td>
<td>Senior Career Planning and Development Associate, Career Development</td>
</tr>
<tr>
<td>NATASHA DANIELS</td>
<td>(2016) - Academic Adviser, Student Success Center</td>
<td>BS - Ohio State University, MSED - Bloomsburg University Of Pennsylvania</td>
<td>Academic Adviser, Student Success Center</td>
</tr>
<tr>
<td>CONNIE D'ARCY</td>
<td>(2016) - Accounting and Controls Officer, Business Affairs</td>
<td>AA, AAS - SUNY College of Technology at Alfred</td>
<td>Accounting and Controls Officer, Business Affairs</td>
</tr>
<tr>
<td>MARK D'ARCY</td>
<td>(2004) - Assistant Professor, Mathematics and Physics</td>
<td>BA, MSED - Alfred University</td>
<td>Assistant Professor, Mathematics and Physics</td>
</tr>
<tr>
<td>ASHTON DAVIS</td>
<td>(2021) - Instructor, Automotive Trade</td>
<td>AOS - SUNY College of Technology at Alfred</td>
<td>Instructor, Automotive Trade</td>
</tr>
<tr>
<td>NICOLE DAVIS</td>
<td>(2017) - Assistant Professor, Math &amp; Physics</td>
<td>AS - Delaware County Community College, BS, MEd - SUNY Empire State College</td>
<td>Assistant Professor, Math &amp; Physics</td>
</tr>
<tr>
<td>SHANE DAVIS</td>
<td>(2020) - Computer Technician, Technology Services</td>
<td>BA, BTech - SUNY College of Technology at Alfred</td>
<td>Computer Technician, Technology Services</td>
</tr>
<tr>
<td>DANIEL DAVISON</td>
<td>(2006) - Instructional Support Associate, Automotive Trades</td>
<td>BS - SUNY College of Technology at Alfred</td>
<td>Instructional Support Associate, Automotive Trades</td>
</tr>
<tr>
<td>GREGORY DAY</td>
<td>(2020) - Instructor, Electrical, Machine Tool, and Welding Technology</td>
<td>AAS - ITT Technical Institute Electrician, BPS, MArch - University at Buffalo</td>
<td>Instructor, Electrical, Machine Tool, and Welding Technology</td>
</tr>
<tr>
<td>WILLIAM DEAN</td>
<td>(2000) - Professor, Architecture and Design</td>
<td>AAS - SUNY College of Technology at Alfred, Registered Architect - New York</td>
<td>Professor, Architecture and Design</td>
</tr>
<tr>
<td>PATRICK DEFOE</td>
<td>(2021) - Residence Hall Director, Residential Services</td>
<td>BBA - SUNY College of Technology at Alfred</td>
<td>Residence Hall Director, Residential Services</td>
</tr>
<tr>
<td>TIMOTHY DICKERSON</td>
<td>(2014) - Assistant Professor, Electrical, Machine Tool, and Welding Technology</td>
<td>AOS - SUNY College of Technology at Alfred</td>
<td>Assistant Professor, Electrical, Machine Tool, and Welding Technology</td>
</tr>
<tr>
<td>KRISTEN DICKSON</td>
<td>(2022) - Academic Advisor, Student Success Center</td>
<td>BA - Pennsylvania State University, MA - Indiana University Of Pennsylvania</td>
<td>Academic Advisor, Student Success Center</td>
</tr>
</tbody>
</table>

**Note:** The table above lists the names, degrees, positions, and institutions of various college faculty and staff members. Each entry provides a brief description of their role and educational background, highlighting their contributions to the college's academic and support services.
<table>
<thead>
<tr>
<th>Name</th>
<th>Title/Role</th>
<th>Education/Professional Background</th>
</tr>
</thead>
<tbody>
<tr>
<td>NICOLE DIGERLANDO</td>
<td>Assistant Professor, English and Humanities</td>
<td>BA, MA Lehigh University</td>
</tr>
<tr>
<td>JACK DIGNAN</td>
<td>Head Coach, Athletics</td>
<td>BS - SUNY College at Oneonta</td>
</tr>
<tr>
<td></td>
<td>MBA - Clarkson University Business</td>
<td></td>
</tr>
<tr>
<td>MATTHEW DIRADO</td>
<td>Assistant Professor, Architecture and Design</td>
<td>BS - SUNY College of Technology at Alfred</td>
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<tr>
<td></td>
<td>MA - Syracuse University</td>
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<tr>
<td>NICOLE DIRADO</td>
<td>Assistant Professor, Physical and Life Sciences</td>
<td>AS, BS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td></td>
<td>MS - Syracuse University</td>
<td></td>
</tr>
<tr>
<td>EUGENE DOORLEY</td>
<td>Staff Associate, Fitness Center Manager/Volleyball Coach, Athletics</td>
<td>AS - SUNY College of Technology at Alfred</td>
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<tr>
<td></td>
<td>BS - SUNY Cortland</td>
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<tr>
<td></td>
<td>NYS Teaching Certificate - St. Bonaventure University</td>
<td></td>
</tr>
<tr>
<td>JASON DOVIK</td>
<td>Director, Athletics</td>
<td>BS - SUNY Cortland</td>
</tr>
<tr>
<td></td>
<td>MBA - The College of St. Rose</td>
<td></td>
</tr>
<tr>
<td>NANCY DRISCOLL</td>
<td>Staff Assistant, School of Applied Technology</td>
<td>BA, MS - Buffalo State College</td>
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<tr>
<td></td>
<td>SUNY Chancellor's Award for Excellence in Professional Service, 2014-15</td>
<td></td>
</tr>
<tr>
<td>DENNIS DUENO</td>
<td>Director of Student Union, Student Engagement</td>
<td>AAS, BS - SUNY College of Technology at Alfred</td>
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<tr>
<td></td>
<td>MA - SUNY at Stony Brook</td>
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<tr>
<td>SCOTT DUMOND</td>
<td>Assistant Professor, Business</td>
<td>MS - American College</td>
</tr>
<tr>
<td></td>
<td>BA - SUNY College at Geneseo</td>
<td></td>
</tr>
<tr>
<td>JILL DUNN</td>
<td>Major Gifts Officer, Institutional Advancement</td>
<td>AS - Jamestown Community College</td>
</tr>
<tr>
<td></td>
<td>BA, MBA - Saint Bonaventure University</td>
<td></td>
</tr>
<tr>
<td>PHILIP EBERT</td>
<td>Instructor, Electrical, Machine Tool, and Welding Technology</td>
<td>AOS - Erie Community College</td>
</tr>
<tr>
<td>TAMMY EDWARDS</td>
<td>Senior Staff Assistant, Continuing Education, Recruitment and Training Coordinator</td>
<td>AA - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td></td>
<td>BA - Alfred University</td>
<td></td>
</tr>
<tr>
<td>MOHAMED ELESHAKY</td>
<td>Lecturer, Mechanical Engineering</td>
<td>BS, MS - Alexandria University</td>
</tr>
<tr>
<td></td>
<td>PhD - Old Dominion University</td>
<td></td>
</tr>
<tr>
<td>EVAN ENKE</td>
<td>Assistant Professor and Chair, Computer and Information Technology</td>
<td>BS, MPS - Alfred University</td>
</tr>
<tr>
<td></td>
<td>SUNY Chancellor's Award for Excellence in Teaching, 2002-03</td>
<td></td>
</tr>
<tr>
<td>JENNIFER ENKE</td>
<td>Associate Director of Athletics, Athletics</td>
<td>BS - Canisius College</td>
</tr>
<tr>
<td></td>
<td>MS - Alfred University</td>
<td></td>
</tr>
<tr>
<td>DR. DANIEL EVANS</td>
<td>Assistant Professor, Computer &amp; Information Technology</td>
<td>BS, MS - New Mexico State University</td>
</tr>
<tr>
<td></td>
<td>PhD - Pace University-New York</td>
<td></td>
</tr>
<tr>
<td>JANEL FARRELL</td>
<td>Residence Hall Director, Residential Services</td>
<td></td>
</tr>
<tr>
<td>ADAM FITZPATRICK</td>
<td>Instructor, Building Trades</td>
<td>AOS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td>TRACY FLETT</td>
<td>Academic Advisor, Student Success Center</td>
<td>BA, MS - Alfred University</td>
</tr>
<tr>
<td>NICHOLAS FORD</td>
<td>Instructor, Civil Engineering Technology</td>
<td>BS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td>RONALD FOSTER</td>
<td>Associate Librarian, Library Services</td>
<td>BA - Utica College</td>
</tr>
<tr>
<td></td>
<td>MLS - SUNY at Albany</td>
<td></td>
</tr>
<tr>
<td>RYAN FRANCE</td>
<td>Computer Technician, Technology Services</td>
<td>AAS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td>MICHELLE FRANCISCO</td>
<td>Controller, Business Affairs</td>
<td>AAS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td></td>
<td>BA - St. Bonaventure University</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Position</td>
<td>Department</td>
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<tr>
<td>-----------------------</td>
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</tr>
<tr>
<td>JOHN M. GARIPPA</td>
<td>Associate Professor, Automotive Trades</td>
<td>AOS - SUNY College of Technology at Alfred</td>
</tr>
<tr>
<td>BRIAN GAVIN</td>
<td>Instructor, Electrical, Machine Tool, and Welding Technology</td>
<td></td>
</tr>
<tr>
<td>KANDI GEIBEL</td>
<td>Director of Admissions and Enrollment, Admissions</td>
<td></td>
</tr>
<tr>
<td>LAURA GEORGE</td>
<td>Financial Aid Advisor, Student Records and Financial Services</td>
<td></td>
</tr>
<tr>
<td>TIMOTHY GIAGIOS</td>
<td>Head Cross Country and Track &amp; Field Coach, Athletics</td>
<td></td>
</tr>
<tr>
<td>DILAN GILLULY</td>
<td>Senior Staff Assistant, Help Desk/Client Services, Technology Services</td>
<td></td>
</tr>
<tr>
<td>BENJAMIN GLASS</td>
<td>Programmer, Technology Services</td>
<td></td>
</tr>
<tr>
<td>DENNY GLASS</td>
<td>Fire and Life Safety Coordinator, Facilities Services</td>
<td></td>
</tr>
<tr>
<td>KEITH GLOVER</td>
<td>Associate Professor, Culinary Arts</td>
<td></td>
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<tr>
<td>RONALD GOOD</td>
<td>Software Trainer, Center for Online Learning</td>
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<tr>
<td>DR. JAMES GOODWIN</td>
<td>Assistant Professor, Physical &amp; Life Sciences</td>
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<td>SUSAN GORMAN</td>
<td>Assistant Professor, Business</td>
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<td>SUSAN GORMAN</td>
<td>Assistant Professor, Business</td>
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<tr>
<td>DR. ANGELA GRAVES</td>
<td>Assistant Professor, Social &amp; Behavioral</td>
<td></td>
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<tr>
<td>CLINTON J. GRAY</td>
<td>Instructor and Department Chair, Building Trades</td>
<td></td>
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<tr>
<td>DANIELLE GREEN</td>
<td>Associate Professor, Business</td>
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<tr>
<td>MELISSA GREENTHAL</td>
<td>Senior Staff Assistant, Business Affairs</td>
<td></td>
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<tr>
<td>ERIN GRESS</td>
<td>Area Coordinator, Residence Hall Director</td>
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<tr>
<td>CASEY GROSS</td>
<td>Associate Dean, Judicial Affairs</td>
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<tr>
<td>JENNIFER GUTHRIE</td>
<td>Instructional Support Technician, Nursing</td>
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<td>ABIGAIL GWISE</td>
<td>Assistant Professor, Nursing</td>
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<td>CHAD HAFFER</td>
<td>Senior Staff Assistant, Business Affairs</td>
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<td>ROBERT HALEY</td>
<td>Staff Associate, Facilities Services</td>
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<tr>
<td>ROBERT HARMS</td>
<td>Instructor, Building Trades</td>
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<tr>
<td>ROBIN HARRINGTON</td>
<td>Senior Financial Aid Adviser, Student Records and Financial Services</td>
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<td>BRANDON G. HARRISON</td>
<td>Assistant Professor, Business</td>
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<tr>
<td>Name</td>
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<td>Years</td>
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<tr>
<td>Sarah Haskins</td>
<td>Coordinator of Opportunity Programs, Student Success Center</td>
<td>(2013)</td>
</tr>
<tr>
<td>Timothy Hauber</td>
<td>Network Technician, Technology Services</td>
<td>(2011)</td>
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<tr>
<td>Lynn Hayes</td>
<td>Mathematics Support Specialist, Student Success Center</td>
<td>(2021)</td>
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<tr>
<td>Daniel Helveston</td>
<td>Instructor, Building Trades</td>
<td>(2002)</td>
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<tr>
<td>Jonathan Hillsner</td>
<td>Assistant VP for Health &amp; Wellness, Office of Civic Engagement</td>
<td>(2012)</td>
</tr>
<tr>
<td>Joseph R. Histed</td>
<td>University Police Officer I</td>
<td>(2017)</td>
</tr>
<tr>
<td>Tara Histed, RN, MSN</td>
<td>Assistant Professor, Nursing</td>
<td>(2017)</td>
</tr>
<tr>
<td>Alexandra C. Hoffman</td>
<td>Senior Assistant Librarian, Hinkle Library</td>
<td>(2017)</td>
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<tr>
<td>Kevin Hoffman</td>
<td>Assistant Professor, Architecture and Design</td>
<td>(2022)</td>
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<tr>
<td>Matthew Hollis</td>
<td>Senior Academic Advisor, Student Success Center</td>
<td>(2022)</td>
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<tr>
<td>C. David Holmes</td>
<td>Senior Staff Assistant, Technology Services</td>
<td>(2005)</td>
</tr>
<tr>
<td>Anne Holmok</td>
<td>Head Coach, Athletics</td>
<td>(2007)</td>
</tr>
<tr>
<td>Kimberly Howard</td>
<td>Assistant Professor, Nursing</td>
<td>(2020)</td>
</tr>
<tr>
<td>Guy Hughson</td>
<td>Assistant Professor, Electrical, Machine Tool, and Welding Technology</td>
<td>(2016)</td>
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<tr>
<td>David Hunt</td>
<td>Associate Professor, Mechanical and Electrical Engineering Technology</td>
<td>(1997)</td>
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<tr>
<td>Jessica Hutchison</td>
<td>Assistant Professor, Agriculture and Veterinary Technology</td>
<td>(2010)</td>
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<tr>
<td>Mary Hyatt</td>
<td>Assistant Registrar, Student Records &amp; Financial Service</td>
<td>(2021)</td>
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<td>Dr. Gerald Ianovici</td>
<td>Assistant Professor, English and Humanities</td>
<td>(2014)</td>
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<tr>
<td>Dr. Bridget Jacobs</td>
<td>Coordinator of Assessment, Accreditation and Program Planning, Institutional Research</td>
<td>(2019)</td>
</tr>
<tr>
<td>Daniel Jardine</td>
<td>Director of Institutional Research, Planning and Effectiveness, Institutional Research</td>
<td>(2015)</td>
</tr>
<tr>
<td>Nichole Johnson</td>
<td>Mental Health Counselor, Health and Wellness</td>
<td>(2022)</td>
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<td>Megan Jones</td>
<td>Residence Hall Director, Residential Services</td>
<td>(2022)</td>
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<tr>
<td>Jeremy Joseph</td>
<td>Assistant Professor, Electrical, Machine Tool, and Welding Technology</td>
<td>(2014)</td>
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<tr>
<td>Ronald Keeney</td>
<td>Assistant Professor, Computer and Information Technology</td>
<td>(2016)</td>
</tr>
</tbody>
</table>
SEAN KELLEY (2015) - Assistant Professor, Electrical, Machine Tool, and Welding Technology
AOS - SUNY College of Technology at Alfred

JASON S. KELLOGG (2017) - Assistant Professor, Automotive Trades
AAS - Monroe Community College

KAREN KELLY (2008) - Assistant Professor, Mathematics and Physics
MA - Cornell University

DR. DAVID KENDALL (2004) - Associate Professor, Mathematics and Physics
BS - Lamar University
MS - Rice University
PhD - University of Massachusetts

LAURA KERNAN (2009) - Associate Registrar, Student Records and Financial Services
BS - SUNY College at Oswego

STEPHEN KIELAR (2007) - Instructor, Electrical, Machine Tool, and Welding Technology
AOS - SUNY College of Technology at Alfred

DR. ISAAC S. KLINGENSMITH (2019) - Assistant Professor, Physical and Life Sciences
BA - Alfred University
PhD - SUNY at Stony Brook

DAVID KOSTICK (2018) - Program Coordinator for Extended Learning, School of Applied Technology
BS - Rochester Institute of Technology

CAROLINE KUHN (2022) - Head Coach, Women's Lacrosse Coach, Athletics
BA - Johns Hopkins University

GABRIEL P. KUHN (2019) - Head Coach, Men's Soccer, Athletics
BS - Columbia Southern University

DEREK LABARRON (2023) - Academic Advisement Assistant, Student Success Center
BA - Elmina College
MS - University Of Maine

STEPHANIE LAFEVER (2006) - Associate Director Marketing, Marketing Communications
AA - SUNY College of Technology at Alfred
BA - Alfred University

TINA LEMAIRE (2003) - Assistant Professor, Nursing
ASN - College Of San Mateo
BSN - SUNY College Of Technology At Delhi

WILLIAM A. LAUBERT (1990) - Professor, English and Humanities
AA - East Central College
BS - Southwest Baptist University
MA - Central Missouri State University

DR. MATTHEW LAWRENCE (2007) - Professor, Mechanical and Electrical Engineering Technology
BS, MS, PhD - Penn State University
SUNY Chancellor's Award for Excellence in Teaching, 2018-19

TIMOTHY LEBAR (2019) - Lecturer, Electrical, Machine Tool & Welding Technology
AOS - SUNY College of Technology at Alfred

JOHN LEWIS (2022) - Associate Director, Admissions
MSED - Alfred University

DR. KATHRYN LINK (2008) - Associate Professor and Department Chair, Physical and Life Sciences
PhD - University of Manitoba

SCOTT LINS (2018) - Executive Head Football Coach, Athletics
BA - Albion College
MSE - Alfred University

JESSICA LIPPA (2015) - Associate Professor and Department Co-Chair, Nursing
BS - SUNY College at Brockport
BS - University of Rochester
MS - St. John Fisher College
SUNY Chancellor's Award for Excellence in Teaching, 2019-20

CHRISTINA LOPER (1991) - Manager, Cash Operations, Auxiliary Campus Enterprises and Services
AOS - SUNY College of Technology at Alfred

GREGORY MARK (2018) - University Police Officer 1, University Police

KRISTI MARLATT (2007) - Senior Staff Assistant, Institutional Assistant
MA - Alfred University

JOSEPH MARTIN (2021) - Academic Advisement Assistant, Student Success Center
BS - SUNY College Of Technology At Alfred
BA - SUNY At Buffalo

PATRICIA MARTIRE (2013) - Instructional Support Assistant, Library Services
MS, MSL - Alfred University
ERICA S. MATTESON (2009) - Assistant Professor, Allied Health  
BPS - SUNY Polytechnic Institute  
MS - SUNY College at Oswego  

DR. TRAVIS W. MATTESON (2018) - Assistant Professor and Department Chair, English and Humanities  
BA - Indiana Wesleyan University  
MA - St. Bonaventure University  
PhD - SUNY University at Buffalo  

CALISTA A. MCBRIDE (2002) - Professor and Department Chair, English and Humanities  
BA, MA - Kansas State University  
SUNY Chancellor’s Award for Excellence in Teaching, 2006-07  

ANNA MCCARTHY (2018) - Assistant Professor, Business  
BS - SUNY at Binghamton  
MS - University of Denver  

MICHICLE MCCARTHY (2015) - Director, Procurement and Payment Services, Business Affairs  
AAS - SUNY College of Technology at Alfred  
BBA - St. Bonaventure University  

PETER MCCLAIN (2005) - Director of Sponsored Programs, Business Affairs  
BA - Alfred University  
MBA - SUNY Empire State College  

WILLIAM MCCLINTICK (2022) - Instructional Support Assistant, Mechanical & Electrical Engineering Technology  
AS - SUNY College Of Technology At Alfred  

ANNE MCCORMICK (2015) - Assistant Professor, Nursing  
BSN - Nevada State College at Henderson  
MHA - University of Phoenix  

TODD MCDOWELL (2019) - Assistant Professor, Electrical, Machine Tool, and Welding Technology  
AOS - SUNY College of Technology at Alfred  

JAMES MCGEE (2021) - Assistant Professor, Business  
BA - Saint Bonaventure University  
MS - Iona College  
JD - Western New England College  
MA - Teachers College, Columbia University  

LUKE MCINTOSH (2011) - Assistant Professor, Automotive Trades  
AOS - SUNY College of Technology at Alfred  

KATLIN MEEHAN (2018) - Student Records & Financial Services Specialist, Student Records & Financial Service  
BS - SUNY College of Technology at Alfred  

LYNDA MERRING (2014) - Nurse 2, Health & Wellness Services  
AS - SUNY College of Technology at Alfred  

GEORGE J. MERRY (2009) - Assistant Professor, Electrical, Machine Tool, and Welding Technology  

JESSICA MIDDAGH (2022) - University Police Officer 1, University Police  
AS - Jamestown Community College  

REBECCA MILLER (2018) - Assistant Professor, Culinary Arts  
AOS - SUNY College of Technology at Alfred  

ATOSA MOAYEDI (2018) - Institutional Research and Planning Assistant, Institutional Research  
BA - Tehran Polytechnic  
MEd - Universiti Teknologi Malaysia  

CHARLES V. NEAL (1977) - Professor, Business  
AAS - SUNY College of Technology at Alfred  
BS - University at Buffalo  
MBA - St. Bonaventure University  
SUNY Chancellor’s Award for Excellence in Teaching, 2001-02  

ANDREW NELSON (2000) - Staff Assistant, Marketing Communications  
AS - Massachusetts Communications College  
BS - SUNY College of Technology at Alfred  

LAWRENCE NEUBERGER (2002) - Associate Professor and Department Chair, Digital Media and Animation  
BFA - Kutztown University  
MFA - Rochester Institute of Technology  

BRON NORESTHEPORN (2000) - Manager, Special Events Operation, Auxiliary Campus Enterprises and Services  
BS - Alfred University  

DANIEL B. NOYES (1987) - Associate Professor, Electrical, Machine Tool, and Welding Technology  
AAS - Jamestown Community College  
AS - Community College of Air Force  
Certified National VUE Test Administrator; International Certified Electronic Technician  
SUNY Chancellor’s Award for Excellence in Teaching, 1998-99  

ASHLEY O’BRIEN (2017) - Senior Counselor, Health and Wellness Services  
BS - Nazareth College  
ME - Alfred University
DANYELLE O’BRIEN (2015) - Director of Online Learning, Center for Online Learning
BS, MS - Niagara University

SCOTT O’CONNOR (2011) - Associate Professor, Computer and Information Technology
BS, MS - Clarkson University

KELLIE O’DELL (2019) - Instructional Support Assistant, Allied Health
AAS - SUNY College of Technology at Alfred

DR. REX OLSON (2001) - Associate Professor, Social and Behavioral Sciences
BA - University of California
MA, MPhil, PhD - Syracuse University
MA, PhD - Duquesne University

BRIAN ORBAKER (2020) - Lecturer, Electrical, Machine Tool & Welding Technology
BS - SUNY College at Buffalo

JAIME L. PALMATIER (2007) - Staff Assistant, Health and Wellness Services
AAS - SUNY College of Technology at Alfred

HARALAMBOS PAPALOUZOS (2020) - Senior Staff assistant, Athletics
BBA - SUNY College Of Technology At Alfred

ALEXE PASK (2012) - Senior Staff Assistant/Head Athletic Trainer, Athletics
BS, MS - Daemen College

JEREMY PELT (2021) - Assistant Professor, Digital Media & Animation
BS - University of North Carolina at Asheville
MFA - University of Chicago

MARY PERKINS (2021) - Assistant to Director 13, Institutional Advancement
BA - Arizona State University

JAMES PIAZZA (2019) - Lecturer, Electrical, Machine Tool & Welding Technology
AA - Erie Community College

MICHAEL PIERCE (2018) - Instructor, Electrical, Machine Tool and Welding Technology

AARON POTTER (2022) - Instructor, Building Trades
AOS - SUNY College Of Technology At Alfred

NICOLE PRESTON (2006) - Instructional Support Associate, Physical and Life Sciences
AAS - SUNY College of Technology at Alfred

KYLE PUTNAM (2018) - Coordinator of Campus Recreation, Student Engagement
BA - Merrit College
MS - SUNY College at Cortland

MICHAEL J. PUTNAM (1998) - Professor, Physical and Life Sciences
AAS - SUNY College of Technology at Alfred
BS, MS - University at Buffalo
SUNY Chancellor’s Award for Excellence in Teaching, 2003-04

STEVEN J. QUAGLIATO (1993) - Associate Professor, Mathematics and Physics
BS - University of Massachusetts
MS - University of Rhode Island

CARL H. RAHR, JR. (1998) - Associate Director of Computing Services, Technology Services
AAS - SUNY College of Technology at Alfred
BA - SUNY Geneseo
SUNY Chancellor’s Award for Excellence in Professional Service, 2004-05

ALLEN RAISH (2004) - Associate Professor, Mathematics and Physics
BA - Alfred University
MAT - Binghamton University

TODD RANDALL (2021) - Head Softball Coach, Athletics
BA - Saint Bonaventure University

DR. DAVID RAY (2019) - Assistant Professor, Social & Behavioral Sciences
BS - SUNY College at Buffalo
MS - University of Cincinnati
PhD - University of North Carolina

JORDAN REED (2018) - System Administrator, Technology Services
BS - University of Pittsburgh-Bradford

STEPHEN B. RICHARD (2004) - Associate Professor, Building Trades
BS - Cheyney University

RICK R. RICHARDS (1994) - Instructional Support Technician, Instructional Technologies

BRUCE RILEY (2016) - Staff Assistant, School of Architecture, Management and Engineering Technology
AA, BS - Cazenovia College
MS - College Misericordia
RUSSELL RITTENHOUSE (2011) - Instructional Support Associate, Computer and Information Technology
BT - SUNY College of Technology at Alfred
MED - SUNY at Buffalo

Marilyn Robin (2012) - Employee Benefits and Payroll Manager, Human Resources
BA - SUNY Oswego

TIMOTHY ROHRER (2014) - Instructor, Building Trades

MICHAEL E. RONAN (1985) - Professor, Automotive Trades
BA - SUNY Fredonia
ASE Auto Certification
ATRA Testing Proctor
SUNY Chancellor’s Award for Excellence in Teaching, 1995-96
SUNY Chancellor’s Award for Excellence in Faculty Service, 2003-04

JULIE A. ROSE (2018) - Senior Director, Student Records and Financial Services
BA - SUNY Geneseo
MBA - SUNY Polytechnic Institute

Melinda Rounds (2003) - University Police Officer I
AAS - Jamestown Community College

Shane Roush (2021) - Network/ Telecom Technician, Technology Services
BS - University of Pittsburgh-Bradford

Anthony Rudolph (2017) - State Coordinator, Admissions
BS - Medaille College

Matthew Ryan (2002) - Senior Director, Residential Services
BA - SUNY College At Cortland Anthropology
MPA - SUNY College At Brockport

Dr. Melanie Ryan (2002) - Coordinator of Student Disability Services, Student Success Center
BS, MS - SUNY Cortland
EdD - Capella University

Kylan Sattler (2021) - Assistant Professor, Graphic Media & Design
AAS - Fashion Institute of Technology
BS - Mansfield University
MFA - Vermont College of Fine Arts

Donald Schrader (2018) - Assistant Director of College Housing, Residential Services
AA, BS - SUNY College of Technology at Alfred

Paul Schroeder (2023) - Director of Construction, Business Affairs
BARCH - SUNY College of Technology at Alfred

Dr. Philip Schroeder (2010) - Professor and Department Chair, Agriculture and Veterinary Technology
PhD - University of Georgia

William H. Schultze (1997) - Senior Staff Assistant, Instructional Technologies
BS - Alfred University

Brooke Scianna (2021) - Coordinator of Campus Recreation, Student Engagement
AAS, BBA - SUNY College of Technology at Alfred

Kevin E. Scott (2018) - Assistant Professor, Culinary Arts
AOS - SUNY College of Technology at Alfred

Dr. Ashley Shaloo (2016) - Assistant Professor, Physical and Life Sciences
BS - Georgian Court University
PhD - Uniformed Services University of Health Science

Stephen Shaw (2022) - Senior Staff Assistant, Marketing Communications
BA - SUNY College At Brockport

Maureen Sibble (2002) - Director of Career Planning & Development, Career Development
BS - The College at Brockport
MSEd - Alfred University

Justin M. Signorelli (2019) - Head Wrestling Coach, Athletics
BA - SUNY College at Cortland
MS - Western New England College

Amanda Silva (2019) - Assistant Professor, Social and Behavioral Sciences
BS, PhD - Marywood University
MA - University of New Haven
MLitt - Drew University

Tara Sleeman (2022) - Instructional Support Assistant, College Farm

Andrew B. Smith (2017) - Instructor, Automotive Trades
AAS - Farmingdale State University of New York

Bradley Smith (2017) - Assistant Professor, Automotive Trades
AOS - SUNY College of Technology at Alfred
BROOK SMITH (2017) - Assistant Director, Admissions
BBA - SUNY College of Technology at Alfred
MA - SUNY at Stony Brook

JILL SMITH (2022) - Assistant Professor, Business
BA - University Of Pittsburgh
MBA, MA - Saint Bonaventure University

MEGHAN SMITH (2021) - Assistant Professor, Agriculture & Veterinary Technology
BA - Alfred University
AAS - Alfred State College

PATRICK SMITH (2011) - Interim Director, Residential Services
BA - SUNY College of Technology at Alfred
MPA - SUNY College at Brockport

RACHEL SMITH (2011) - Instructional Support Assistant-Herdsperson, College Farm
AAS - SUNY College of Technology at Alfred

DR. LORI SMITHEY (2022) - Assistant Professor, Architecture and Design
BArch - Cooper Union For The Advancement
MS - University Of Washington-Seattle Campus
PhD - University Of Michigan-Ann Arbor

FRANCINE D. STABA (1994) - Associate Professor, Business
BS - Bloomsburg University
MBA - Alfred University

DR. CHRISTOPHER STAMPONE (2022) - Assistant Professor, English & Humanities
BA - SUNY College at Buffalo
MA - Brock University
PhD - Southern Methodist University

CHRISTINA STANKEWICZ (2017) - Assistant Librarian, Hinkle Library
BA - St. Bonaventure University
MS - St. John's University

CRISTIN STEWART (2017) - Assistant Director of Procurement and Payment Services, Business Affairs
BS - Houghton College

PAUL STEWART (2018) - Instructional Support Assistant, Electrical, Machine Tool, and Welding Technology
BS - University of Phoenix

REBECCA M. STRAUB (2017) - Assistant Athletic Trainer, Athletics
BS, MA - Gannon University

CRAIG STURDEVANT (2000) - Telecommunications Manager, Auxiliary Campus Enterprises and Services
AOS - SUNY College of Technology at Alfred

DR. MARYAM TABATABAEI (2023) - Assistant Professor, Civil Engineering Technology
PhD - Shiraf University of Technology

BRETT H. TALBOT (2015) - Associate Director of Admissions, Admissions
AAS - SUNY College of Technology at Alfred
BSEd - Mansfield University
MSEd - Alfred University

CORY THOMAS (2021) - University Police Officer 1, University Police
BA - SUNY College at Geneseo

ZEDA THOMAS (2020) - Lead Programmer, Technology Services
BA - Alfred University

BRADLEY J. THOMPSON (1997) - Assistant Professor and Department Chair, Electrical, Machine Tool, and Welding Technology
AOS - SUNY College of Technology at Alfred

ETHAN THOMSON (2022) - Head Coach, Lacrosse Coach, Athletics
AS - Mohawk Valley Community College
BA - Lees-Mcrae College
MS - Southern New Hampshire University

JENNIE THWING (2021) - Associate Professor, Digital Media & Animation
BFA - Tyler School of Art
MFA - University of Maryland

W. SCOTT TILLEY (2017) - Technology Support Manager, Technology Services
BS - SUNY College of Technology at Alfred

DONALD TINDER (2022) - Instructor, Building Trades
BRYAN TOEPFER (2020) - Assistant Professor, Architecture and Design
BS - SUNY College of Technology at Alfred
MArch - University Of Massachusetts-Amherst

ROBIN L. TORPEY (1991) - Associate Professor, Computer and Information Technology
AAS - Community College of the Air Force
AS - Park College
BS - SUNY Empire State College
MLS - University at Buffalo
A+, Network+, CCNA, CCAI

THERESA TOTH-FLEISCHMAN (2018) - Nurse 1, Health and Wellness Services
AAS - SUNY College of Technology at Alfred

ERIKA TRACY (2019) - Senior Staff Assistant, Health and Wellness Services
BS - Cazenovia College

CHRISTOPHER TREMPER (2017) - Instructor, Automotive Trades
AAS - SUNY College of Technology at Alfred

JENNIFER TRICE (2022) - Staff Assistant, School of Arts & Sciences
AA - SUNY College Of Technology At Alfred
BA - Syracuse University
MS - SUNY College At Buffalo

ROBERT TRIMBLE (2021) - Instructional Support Assistant, Building Trades

LIBBY TSIBULSKY (2013) - Counselor, Health and Wellness Services
BA, MS - Alfred University

KEVIN TUCKER (2014) - Instructional Support Associate, Architecture and Design
BA - University at Buffalo

JENNIFER UPDYKE (2022) - Assistant Professor & DMS Program Director, Allied Health
BS - Rochester Institute of Technology

PETER VAN TYNE (2016) - Staff Assistant/Print Systems Technician, Print and Mail Services
BA - Alfred University

JANE A. VAVALA (2004) - Associate Librarian, Hinkle Memorial Library
BS - University of Pittsburgh/Bradford
MLS - Clarion University
SUNY Chancellor’s Award for Excellence in Librarianship, 2012-13

CHRISTOPHER VAVREK (2016) - Instructional Support Technician, Digital Media and Animation
BFA - Arizona State University
MFA - California State University at Long Beach

CHRISTIAN A. VERNAM (2008) - Associate Director of Financial Aid, Student Records and Financial Services
BS - The College at Brockport

ERIN VITALE (2001) - Professor and Department Chair, Civil Engineering Technology
BS - University of California, Riverside
MSCE - Stanford University

ALAN H. VLAKANCIC (2019) - Assistant Professor and Co-Chair, Architecture and Design
BA - SUNY Buffalo
MS - Pratt Institute

DR. NICHOLAS WADDY (2002) - Associate Professor, Social and Behavioral Sciences
BA - Washington and Lee University
PhD - University of Rochester

SCOTT WALDEIS (2003) - Lecturer, Physical and Life Sciences
AS - Finger Lakes Community College
BS - SUNY Empire State College
MS - University of Bridgeport
DC - New York Chiropractic College

KEVIN WALSH (2018) - Computer Technician, Technology Services
AAS - SUNY College of Technology at Alfred
AOS - SUNY College of Technology at Alfred
BT - SUNY College of Technology at Alfred

TERRENCE WARD (2018) - Assistant Professor, Mathematics and Physics
BS, MS - Southern Illinois University Edwardsville

LEE WASCHER (2020) - Area Coordinator for Residential Services, Residential Services
BA, MSED - Alfred University

PAUL WELKER (2001) - Community Relations Associate, Marketing Communications
AS - Finger Lakes Community College
BA - Mercyhurst College

AMY L. WERNER (2006) - Instructional Support Technician, Physical and Life Sciences
AAS - SUNY College of Technology at Alfred
JASON WHITE (1998) - Transfer Adviser, Student Records and Financial Services
BS - LeMoyne College

SIMON WHITEHOUSE (2008) - Assistant Professor and Department Chair, Mathematics and Physics
MA - University at Buffalo

DR. MARK WHITMAN (2013) - Associate Professor, Social and Behavioral Sciences
BAS - Florida Atlantic University
MPS - Alfred University
PhD - Capella University

MATTHEW B. WHITNEY (2017) - University Police Officer I, University Police
AAS - Genesee Community College

RICHARD WHITNEY (2022) - Nurse 1, Health and Wellness
BSN - Daemen College

JEFFREY WILCOX (2011) - Chief of Police, University Police
BS - SUNY Brockport

MATTHEW WILKINSON (2023) - Programmer- Analyst, Technology Services
AS - Genesee Community College

JOY WILLIAMS (2020) - Grants Coordinator, Institutional Research
BA - Amherst College
MA - Columbia University

ANDREA WILLIAMSON (2018) - Assistant Professor, Agriculture and Veterinary Technology
BA - Alfred University
DVM - Cornell University

BREANNA WILLSON (2021) - Assistant Professor, Nursing
AAS - SUNY College of Technology at Alfred
RN to BS - Roberts Wesleyan College
MS - Roberts Wesleyan College

BREANNA WILLSON (2018) - Assistant Professor, Nursing
ADN - SUNY College Of Technology At Alfred
BS, MS - Roberts Wesleyan College

ERIC WILMOT (2005) - Assistant Professor and Department Chair, Automotive Trades
AOS - SUNY College of Technology at Alfred

EMMA WOLF (2019) - Counselor, Health & Wellness Services
BFA - Keuka College
MED - Alfred University

PATRICK WOODWORTH (2004) - Computer Specialist, Technology Services
BS - SUNY College of Technology at Alfred

DANIEL WOOLSTON (2014) - Staff Associate/Assistant Director, Health and Wellness Services
AAS - SUNY College of Technology at Alfred

DR. M. REZA YADOLLAHI (2018) - Assistant Professor, Civil Engineering Technology
PhD - University of Technology Malaysia

MANDY YORK (2017) - Financial Analyst, Business Affairs
BA - University of Kentucky

BRITTANY J. YOUNG (2017) - Certification Officer, Student Records and Financial Services
BS - SUNY College of Technology at Alfred

DR. HOLLY YOUNG (2021) - Associate Professor, Physical & Life Sciences
BS - University of North Carolina
MS, PhD - Pennsylvania State University

KATHY YOUNG (2018) - Associate Professor and Department Chair, Allied Health
BS - Upstate Medical University
MHA - Ohio University

JENNA K. ZETWICK (2019) - Assistant Professor, Allied Health
BS - University of Pittsburgh
MHA - Ulica College
President’s Council

DR. STEVEN MAURO (2022) - President
BS - SUNY at Buffalo
PhD - SUNY at Buffalo

MARIA BORDEAUX (2005) – Director, Office of Human Resources
AAS - SUNY College of Technology at Alfred

MIKE CASE (2002) - Director, Technology Services
BEng - Rochester Institute Of Technology Mechanical Engineering

DR. KATHLEEN CASEY (1993) - Associate Vice President, Academic Services and Interim Dean
PhD - SUNY at Buffalo

DR. CRAIG R. CLARK (1989) - Vice President for Economic Development
AS - Jamestown Community College
BS - University of Colorado
MS, PhD - North Carolina State University

DR. CARRIE COKELY (2023) - Vice President for Academic Affairs
BA - Sage Colleges System Office
CAS, MA, PhD - Syracuse University

TRISH HAGGERTY (2015) - Executive Assistant to the President, Office of the President
BA - SUNY College At Geneseo

ANGELA KOSKOFF (2021) - Interim Chief Diversity Officer/Title IX
BBA - Bryant University
MEd - University Of Maine

JON NICKERSON (2016) - Director, Facilities Services
AAS, BS - SUNY College of Technology at Alfred

RUSSELL NUNLEY (2016) - Chief Marketing Officer, Marketing Communications
BS - The University Of Tennessee
MS - Southeastern Oklahoma State University

SPENCER PEAVEY (2006) - Assistant Vice President for Student Affairs, Student Engagement
BA - University of Massachusetts at Lowell
MSEd - St. Bonaventure University

DR. JOSEPH PETRICK (2000) - Director, Library Services & Faculty Senate Representative
MLS - Clarion University of Pennsylvania
PhD - SUNY at Buffalo

DR. GREG SAMMONS (1996) - Vice President for Student Affairs
AAS - Finger Lakes Community College
BS - Houghton College
MSC - Norwich University
DEd - Northeastern University
SUNY Chancellor’s Award for Excellence in Professional Service, 2011-12

TIMOTHY SORTORE (2019) - Vice President for Finance and Administration
BA - SUNY at Buffalo
MBA - University of Rochester

JEFFREY S. STEVENS (2002) - Dean, School of Applied Technology
AOS, AOS - SUNY College of Technology at Alfred
BS - SUNY Empire State College
SUNY Chancellor’s Award for Excellence in Faculty Service, 2011-12

DANIELLE M. WHITE (2009) - Vice President of Institutional Advancement
MBA - University of Phoenix

DR. JOHN C. WILLIAMS (2002) - Dean, School of Architecture, Management and Engineering Technology
BS, MS, PhD - Clarkson University

KISHAN ZUBER (2023) - Vice President of Enrollment Management
BA, MA - Binghamton University