



### BS DEGREE - CODE #2023

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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 classwork 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.

### 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/>.

### EMPLOYMENT STATISTICS

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

### STUDENT ACHIEVEMENT DATA

#### Employment and Continuing Education Report

Graduation Year	2019	2020	2021	2022	2023	2024
Receiving Degrees	10	9	4	15	17	11
Responding to Survey	9	5	2	13	12	5
Employed in Field	6	2	2	12	9	5
Continued Education	5	2	2	12	8	4
	3	3	0	1	3	0

#### Program and College Graduation Rates

Major	2019-20	2020-21	2021-22	2022-23	2023-24
<b>Major 500</b>					
Freshmen Enrollment	20	22	20	22	29
# Grad w/in 6 yrs.	9	10	4	7	17
6-yr Grad Rate %	45.0%	45.5%	20.0%	31.8%	58.6%
<b>College (Bachelor's)</b>					
Freshmen Enrollment	152	231	313	293	345
# Grad w/in 6 yrs.	100	93	131	133	187
6-yr Grad Rate %	65.8%	42.9%	41.9%	45.4%	54.2%

#### RELATED PROGRAMS

[Biological Science](#)  
[Criminal Justice](#)  
[Health Sciences](#)

#### INTERNSHIP OPPORTUNITIES

Students have completed internship experiences at various locations, including the FBI, ATF, New York State Police Crime Laboratories, multiple county and municipal crime laboratories both inside and outside of New York State, private testing and industrial laboratories, and hospital clinical laboratories.

#### ENTRANCE REQUIREMENTS/RECOMMENDATIONS

Required: Algebra, Geometry, Algebra 2, Biology, Chemistry

Recommended: Physics

#### REQUIRED COURSE PREREQUISITES

If students do not place into MATH 1033 College Algebra, MATH 1084 Calculus I, MATH 1323 Quantitative Reasoning, MATH 1034 College Algebra of Functions, MATH 1054 Precalculus, or MATH 2124 Statistical Methods & Analysis, then MATH 1014 Algebra Concepts is a required prerequisite for completion of the major.

If students do not place into PHYS 1024 General Physics I or PHYS 1044 College Physics I, then PHYS 1014 Introductory Physics is a required prerequisite for completion of this major.

#### 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](mailto: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.

**FORENSIC SCIENCE TECHNOLOGY - BS DEGREE**

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TYPICAL EIGHT-SEMESTER PROGRAM

<b>First</b>			
FRSC	1001	Intro to Fornsc Science Tech I	1
CHEM	1984	Chemical Principles I	4
BIOL	1104	General Biology I	4
COMP	1503	Writing Studies	3
MATH	1084	Calculus I	4
			16

<b>Second</b>			
FRSC	2001	Intro to Frnsc Science Tech II	1
CHEM	2984	Chemical Principles II	4
BIOL	2204	General Biology II	4
SPCH	1083	Public Speaking	3
GLST	2113	Global & Diverse Perspectives	3
			15

<b>Third</b>			
FRSC	3001	Topics in Forensic Science I	1
CHEM	3514	Organic Chemistry I	4
PHYS	1044	College Physics I	4
LITR	xxx3	Literature Elective	3
XXXX	xxx3	General Education Elective	3
			15

<b>Fourth</b>			
FRSC	4001	Topics in Forensic Science II	1
CHEM	4524	Organic Chemistry II	4
PHYS	2044	College Physics II	4
MATH	2124	Statistical Methods & Analysis	4
XXXX	xxx3	General Education Elective	3
			16

<b>Fifth</b>			
CJUS	1003	Intro to Criminal Justice	3
CHEM	5414	Analytical Principles	4
BIOL	5254	Principles of Microbiology	4
COMP	5703	Technical Writing	3
XXXX	xxx3	Technical Elective	3
			17

<b>Sixth</b>			
BIOL	6534	Genetics	4
CHEM	6614	Instrumental Analysis	4
CJUS	6003	Law & Criminal Evidence	3
FRSC	6214	Microscopy and Criminalistics	4
			15

<b>Seventh</b>			
FRSC	7214	Forensic Chemistry	4
CHEM	7784	Biochemistry	4
XXXX	xxx3	Technical Elective	3
XXXX	xxx3	Technical Elective	3
			14

<b>Eighth</b>			
FRSC	8214	Forensic Biology	4
FRSC	8111	Forensic Science Tech Capstone	1
FRSC	8113	Forensic Scie Tech Prof Prepar	3
FRSC	8703	Senior Research Project	3
			OR
FRSC	8713	Forensic Sci Tech Internship	3
BIOL	5013	Biotechniques	3

**Approved Technical Electives:**

- ANTH 5333 Medical Anthropology
- 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.