



AAS DEGREE – CODE #0699

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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.

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

AAS Degree	Enrollment (based on Fall census)
2022	16
2021	10
2020	17
	Degrees Awarded
2021-2022	7
2020-2021	4
2019-2020	7

RELATED PROGRAMS

- [Computer Engineering Technology](#)
- [Electrical Construction and Maintenance Electrician](#)

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

REQUIRED COURSE PREREQUISITES

If students do not place into MATH 1033 College Algebra, MATH 1084 Calculus I, MATH 1323 Quantitative Reasoning, 1034 College Algebra of Functions, 1054 Precalculus, or 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.

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

First			
ELET	1001	Seminar	1
ELET	1202	Intro to Electrical Eng Tech	2
ELET	1111	Digital Logic Laboratory	1
ELET	1133	Digital Logic	3
COMP	1503	Writing Studies	3
MATH	1033	College Algebra	3
			13
Second			
ELET	1103	Circuit Theory I	3
ELET	1151	Circuit Theory Laboratory	1
ELET	1142	Electronic Fabrication	2
MATH	2043	College Trigonometry	3
PHYS	1024	General Physics I	4
GLST	2113	Global & Diverse Perspectives	3
			16
Third			
ELET	2103	Electronics Theory I	3
ELET	2151	Electronics Laboratory I	1
ELET	2124	Electrical Power Circuits	4
ELET	2143	Embedded Controller Fundmntls	3
MATH	1063	Technical Calculus I	3
PHYS	2023	General Physics II	3
			17
Fourth			
ELET	3103	Electronics Theory II	3
ELET	3151	Electronics Laboratory II	1
ELET	xxx4	Tech. Elective	4
ELET	xxx4	Tech. Elective	4
SPCH	1083	Public Speaking	3
			OR
SPCH	xxx3	Effective Speaking Equivalent	3
LITR	xxx3	Literature Elective	3
			18

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