AAS DEGREE – CODE #0699

BS DEGREE – CODE #0216

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The electrical engineering technology AAS and BS programs 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.
- Both electrical engineering technology programs are accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org
- 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.

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 (two-year)
- Electrical or electronics technologist (four-year)
- 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 – 25 percent are employed; 75 percent continued their education.
- Electrical Engineering Technology (BS degree): 100 percent – 100 percent are employed.

ENROLLMENT AND GRADUATION DATA

AAS Degree	Enrollment (based on Fall census)
2020	17
2019	11
2018	21
	Degrees Awarded
2019-2020	7
2018-2019	4
2017-2018	10

BS Degree	Enrollment (based on Fall census)
2020	37
2019	38
2018	48
	Degrees Awarded
2019-2020	7
2018-2019	10
2017-2018	10

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.

ENTRANCE REQUIREMENTS/RECOMMENDATIONS (AAS)

Required: Algebra, Geometry, Algebra 2
Recommended: Physics

ENTRANCE REQUIREMENT/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.

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 programs. Laptop specifications are available at www.alfredstate.edu/required-laptops. Some courses require specialized tools and/or electronic components.

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	Freshman Composition	3
MATH	1033	College Algebra	3
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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 Perspectives:Spcl Topic	3
LITR	xxx3	Literature Elective (for BS Degree)	3
			16 - 19

Third

ELET	2103	Electronics Theory I	3
ELET	2151	Electronics Laboratory I	1
ELET	2124	Electrical Power Circuits	4
ELET	2143	Embedded Controller Fundmtls	3
MATH	1063	Technical Calculus I	3
PHYS	2023	General Physics II	3
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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	Effective Speaking (for AAS Degree) OR	3
SPCH	xxx3	Effective Speaking Equivalent (for AAS Degree)	3
LITR	xxx3	Literature Elective (for AAS Degree)	3
XXXX	xxx3	Gen. Ed./LAS Elective (for BS Degree)	3
XXXX	xxx3	Gen. Ed./LAS Elective (for BS Degree)	3
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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
- 28 semester credit hours of liberal arts and sciences from at least five of the General Education content groups: mathematics, natural sciences, social sciences, humanities, western civilization, American history, other world civilization, arts, foreign language, and basic communications (must include COMP 1503)
- 2.0 grade point average in major courses
- 2.0 cumulative grade point average, and
- Approval of department faculty

ELECTRICAL ENGINEERING TECHNOLOGY – BS DEGREE

TYPICAL FIVE- THROUGH EIGHT-SEMESTER PROGRAM

Fifth

ELET	5113	Electronic Communications	3
EMET	5004	Instrumentation	4
CHEM	5013	Applied Chemical Principles	3
COMP	5703	Technical Writing II	3
MATH	2074	Technical Calculus II	4
			17

Sixth

MATH	6114	Differential Equations	4
SPCH	1083	Effective Speaking OR	3
SPCH	xxx3	Effective Speaking Equivalent	3
ELET	xxx4	Tech. Elective - Upper	4
MATH	7123	Statistics for Engr Tech & Sci	3
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Seventh

BSET	7001	Senior Seminar & Project Des	1
MATH	7113	Economic Analy for Engr Tech	3
PHYS	8013	Modern Physics	3
ELET	xxx4	Tech. Elective - Upper	4
EMET	6004	Feedback Control Systems	4
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Eighth

BSET	8003	Senior Technical Project	3
XXXX	xxx4	Tech. Elective - Upper	4
XXXX	xxx3	Tech. Elective - Upper	3
XXXX	xxx3	Gen. Ed./LAS Elective	3
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GRADUATION REQUIREMENTS - BS DEGREE

- 126 semester credit hours
- 60 semester credit hours of liberal arts and sciences from at least seven of the General Education content groups: mathematics, natural sciences, social sciences, humanities, western civilization, American history, other world civilization, arts, foreign language, and basic communications (must include COMP 1503)
- 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