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](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. 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.

A laptop computer is required for students entering the electrical engineering technology programs. Laptop specifications are available at [www.alfredstate.edu/required-laptops](http://www.alfredstate.edu/required-laptops). Some courses require specialized tools and/or electronic components.

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 – 100 percent continued their education.
- Electrical Engineering Technology (BS degree): 100 percent – 100 percent are employed.

ENROLLMENT AND GRADUATION DATA

<table>
<thead>
<tr>
<th>Program</th>
<th>Enrollment (based on Fall census)</th>
<th>Degrees Awarded</th>
</tr>
</thead>
<tbody>
<tr>
<td>AAS Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>BS Degree</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>56</td>
<td></td>
</tr>
</tbody>
</table>

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, SAT and/or ACT scores with a recommended combined reading/writing and Math SAT score of 1080 or a composite ACT score of 21.
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.
**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
- **COMP 1503** Freshman Composition 3
- **MATH 1033** College Algebra 3
- **GLST 2133** Global Perspectives: Special Topics (for BS Degree) 3

**Second**
- **ELET 1103** Circuit Theory I 3
- **ELET 1151** Circuit Theory Laboratory 1
- **ELET 1142** Electronic Fabrication 2
- **MATH 2043** General Physics I 3
- **PHYS 1024** General Physics II 4
- **GLST 2113** Global Perspectives: Special Topics 3
- **LITR xxx3** Literature Elective (for BS Degree) 3

**Third**
- **ELET 2103** Electronics Theory I 3
- **ELET 2151** Electronics Laboratory I 1
- **ELET 2124** Electrical Power Circuits 4
- **ELET 2143** Embedded Controller Fundamentals 3
- **MATH 1063** Technical Calculus I 4
- **PHYS 2023** General Physics II 3

**Fourth**
- **ELET 3103** Electronics Theory II 3
- **ELET 3151** Electronics Laboratory II 1
- **ELET xxx4** Tech. Elective 4
- **ELET xxx4** Tech. Elective 4
- **SPCH XXXX 1083 xxx3** Effective Speaking (for AAS Degree) Gen. Ed./LAS Elective (for BS Degree) 3
- **SPCH xxx3** Effective Speaking Equivalent (for AAS Degree) 3
- **LITR XXXX xxx3 xxx3** Literature Elective (for AAS Degree) Gen. Ed./LAS Elective (for BS Degree) 3

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
- 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

**Sixth**
- **ELET xxx4** Differential Equations 4
- **SPCH 1083** Effective Speaking 3
- **ELET xxx4** Tech. Elective - Upper 4
- **MATH 7123** Statistics for Engr Tech & Sci 3

**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

**Eighth**
- **BSET 8003** Senior Technical Project 3
- **XXX xxx3** Tech. Elective - Upper 4
- **XXX xxx3** Tech. Elective - Upper 3
- **XXX xxx3** Gen. Ed./LAS Elective 3

**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