ELECTRICAL/ELECTRONIC ENGINEERING TECHNOLOGY - A.A.S.

College of Applied and Technical Studies
www.kent.edu/cats

About This Program
The Associate of Applied Science in Electrical/Electronic Engineering Technology program provides you with the practical skills and knowledge needed to succeed in the fast-paced field of electrical engineering. With experienced faculty, state-of-the-art labs and real-world opportunities, you'll gain the confidence needed to launch your career. Enroll now and take the first step toward a fulfilling career in electrical engineering. Read more...

Contact Information
• Program Coordinator: Chitra Rajagopal | crajagop@kent.edu
  Paul Dykshoorn | pdykshoo@kent.edu | 330-308-7475
• Speak with an Advisor
  • Trumbull Campus
  • Tuscarawas Campus
• Chat with an Admissions Counselor

Program Delivery
Leavittsburg, Ohio location pending ODHE approval.
• Delivery:
  • In person
• Location:
  • Trumbull Campus
  • Tuscarawas Campus
  • Leavittsburg, Ohio

Examples of Possible Careers and Salaries*
Calibration technologists and technicians and engineering technologists and technicians, except drafters, all other
• 2.1% slower than the average
• 91,600 number of jobs
• $64,190 potential earnings

Electrical and electronic engineering technologists and technicians
• 1.5% slower than the average
• 125,800 number of jobs
• $67,550 potential earnings

Electrical, electronic, and electromechanical assemblers, except coil winders, tapers, and finishers
• 1.4% slower than the average
• 291,700 number of jobs
• $36,390 potential earnings

Electrical and electronics drafters
• 0.5% little or no change
• 25,300 number of jobs
• $62,100 potential earnings

Accreditation
The A.A.S. degree in Electrical/Electronic Engineering Technology (Tuscarawas Campus only) is accredited by the Engineering Technology Accreditation Commission of ABET, http://www.abet.org.
* Source of occupation titles and labor data comes from the U.S. Bureau of Labor Statistics' Occupational Outlook Handbook. Data comprises projected percent change in employment over the next 10 years; nation-wide employment numbers; and the yearly median wage at which half of the workers in the occupation earned more than that amount and half earned less.

Admission Requirements
The university affirmatively strives to provide educational opportunities and access to students with varied backgrounds, those with special talents and adult students who graduated from high school three or more years ago.

Kent State campuses at Ashtabula, East Liverpool, Geauga, Salem, Stark, Trumbull and Tuscarawas, and the Twinsburg Academic Center, have open enrollment admission for students who hold a high school diploma, GED or equivalent.

Some programs may require that students meet certain requirements before progressing through the program. For programs with progression requirements, the information is shown on the Coursework tab.

For more information on admissions, contact the Regional Campuses admissions offices.

Program Requirements

<table>
<thead>
<tr>
<th>Major Requirements</th>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Requirements (courses count in major GPA)</td>
<td>EERT 11000</td>
<td>INTRODUCTION TO SEMICONDUCTOR AND CLEANROOM</td>
<td>2-4</td>
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<tr>
<td>or EERT 12005</td>
<td>ELECTRICAL/ELECTRONIC DRAWING</td>
<td>4</td>
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<tr>
<td>EERT 12000</td>
<td>ELECTRIC CIRCUITS I</td>
<td>4</td>
<td></td>
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<tr>
<td>EERT 12001</td>
<td>ELECTRIC CIRCUITS II</td>
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<td></td>
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<td>EERT 12010</td>
<td>INTRODUCTION TO ELECTRONICS</td>
<td>4</td>
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<tr>
<td>EERT 22004</td>
<td>DIGITAL SYSTEMS</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>EERT 22006</td>
<td>ELECTRICAL MACHINES</td>
<td>3</td>
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<tr>
<td>or ENGR 43220</td>
<td>ELECTRICAL MACHINERY</td>
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<tr>
<td>EERT 22011</td>
<td>ELECTRONIC SYSTEMS</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>EERT 22014</td>
<td>MICROPROCESSORS AND ROBOTICS</td>
<td>3</td>
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<tr>
<td>ENGT 23099</td>
<td>ENGINEERING TECHNOLOGY DESIGN PROJECT (ELR)</td>
<td>3</td>
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</table>
MERT 12000 ENGINEERING DRAWING 3

**Additional Requirements (courses do not count in major GPA)**

OTEC 26636 PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS 1

COMM 15000 INTRODUCTION TO HUMAN COMMUNICATION (KADL) 3

ENG 20002 INTRODUCTION TO TECHNICAL WRITING or OTEC 26638 BUSINESS COMMUNICATIONS 3

MATH 11010 ALGEBRA FOR CALCULUS (KMCR) 3

MATH 11012 INTUITIVE CALCULUS (KMCR) 3

MATH 11022 TRIGONOMETRY (KMCR) 3

OTEC 26636 PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS 1

COMM 15000 INTRODUCTION TO HUMAN COMMUNICATION (KADL) 3

ENG 20002 INTRODUCTION TO TECHNICAL WRITING or OTEC 26638 BUSINESS COMMUNICATIONS 3

MATH 11010 ALGEBRA FOR CALCULUS (KMCR) 3

MATH 11012 INTUITIVE CALCULUS (KMCR) 3

MATH 11022 TRIGONOMETRY (KMCR) 3

UC 10001 FLASHES 101 1

Physics Elective A, choose from the following: 3-5

PHY 12201 TECHNICAL PHYSICS I (KBS) (KLAB)
& PHY 13001 GENERAL COLLEGE PHYSICS I (KBS) and GENERAL COLLEGE PHYSICS LABORATORY I (KBS) (KLAB)

Physics Elective B, choose from the following: 3-5

PHY 12202 TECHNICAL PHYSICS II (KBS) (KLAB)
& PHY 13012 GENERAL COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)

Physics Elective A

Physics Elective B

Physics Elective A

Physics Elective B

Kent Core Composition 3

Kent Core Humanities and Fine Arts 3

Kent Core Social Sciences 3

Minimum Total Credit Hours: 64

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**Graduation Requirements**

Minimum Major GPA: 2.000

Minimum Overall GPA: 2.000

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**Roadmap**

This roadmap is a recommended semester-by-semester plan of study for this major. However, courses designated as critical (!) must be completed in the semester listed to ensure a timely graduation.

<table>
<thead>
<tr>
<th>Semester One</th>
<th>Credits</th>
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<tbody>
<tr>
<td>! EERT 12000 ELECTRIC CIRCUITS I</td>
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<tr>
<td>! MATH 11010 ALGEBRA FOR CALCULUS (KMCR)</td>
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<tr>
<td>! MERT 12000 ENGINEERING DRAWING</td>
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<td>UC 10001 FLASHES 101</td>
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<tr>
<td>Kent Core Requirement</td>
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</tr>
<tr>
<td>Kent Core Requirement</td>
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<td><strong>Credit Hours</strong></td>
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<table>
<thead>
<tr>
<th>Semester Two</th>
<th>Credits</th>
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<tbody>
<tr>
<td>! EERT 12001 ELECTRIC CIRCUITS II</td>
<td>3</td>
</tr>
<tr>
<td>! EERT 12010 INTRODUCTION TO ELECTRONICS</td>
<td>4</td>
</tr>
<tr>
<td>! EERT 22004 DIGITAL SYSTEMS</td>
<td>4</td>
</tr>
<tr>
<td>ENG 20002 INTRODUCTION TO TECHNICAL WRITING or OTEC 26638 BUSINESS COMMUNICATIONS</td>
<td>3</td>
</tr>
<tr>
<td>MATH 11022 TRIGONOMETRY (KMCR)</td>
<td>3</td>
</tr>
<tr>
<td><strong>Credit Hours</strong></td>
<td><strong>17</strong></td>
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</tbody>
</table>

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**University Requirements**

All students in an applied or technical associate degree program at Kent State University must complete the following university requirements for graduation.

NOTE: University requirements may be fulfilled in this program by specific course requirements, please see Program Requirements for details.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flashes 101 (UC 10001)</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>! Course is not required for students with 30+ transfer credits (excluding College Credit Plus) or age 21+ at time of admission.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kent Core (see table below)</td>
<td>15</td>
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<tr>
<td><strong>Total Credit Hour Requirement</strong></td>
<td><strong>60</strong></td>
<td></td>
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</tbody>
</table>

Minimum Total Credit Hours: 64

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**Kent Core Requirements**

Kent Core Composition (KCMP) 3

Kent Core Mathematics and Critical Reasoning (KMCR) 3

Kent Core Humanities and Fine Arts (KHUM/KFA) 3

Kent Core Social Sciences (KSS) 3

Kent Core Basic Sciences (KBS/KLAB) 3

**Total Credit Hours:** 15

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**Program Learning Outcomes**

Graduates of this program will be able to:

1. Apply knowledge, techniques and skills of mathematics, science and modern engineering tools to solve electrical and electronic engineering technology problems that require limited application of principles but extensive practical knowledge.
2. Use modern engineering tools and techniques to design solutions for well-defined electrical electronic engineering technology problems and assist with the design of systems, components or processes.

3. Demonstrate effective oral, graphic and written communication in both technical and non-technical environments, and proficiently use technical reference material.

4. Conduct standard tests and measurements, and critically analyze and interpret data particularly in the electrical and electronic engineering technology field.

5. Function effectively as a member of a technical team.

6. Understand and commit to address professional engineering and ethical responsibilities, including respect for diversity.

**Full Description**

The Associate of Applied Science degree in Electrical/Electronic Engineering Technology provides students with a core of engineering-related courses and a focus on digital and electronic systems, robotics, microsystems and the design/development of electrical and electronic circuits.

Electrical and electronics engineering technicians help engineers design and develop computers, communications equipment, medical monitoring devices, navigational equipment and other electrical and electronic equipment. They often work in product evaluation and testing, using measuring and diagnostic devices to adjust, test and repair equipment.

The degree program articulates with Kent State’s Bachelor of Science degree in Engineering Technology.