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

Regional College
Dean's Office
384 Library
Kent Campus
330-672-2279
rcdean@kent.edu
www.kent.edu/regional-college

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 articulate with Kent State’s Bachelor of Science degree in Engineering Technology.

The Electrical/Electronic Engineering Technology major comprises the following concentrations:
• Computer
• Electrical Engineering Technology (General)

FULLY OFFERED AT:
• Trumbull Campus
• Tuscarawas Campus

Accreditation
Technology Accreditation Commission of the Accreditation Board of Engineering and Technology, Inc. (ABET) (Tuscarawas Campus only)

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 Regional Academic Center in Twinsburg, have open enrollment admission for students who hold a high school diploma, GED or equivalent.

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

Program Learning Outcomes
Graduates of this program will be able to:
1. Demonstrate the ability to apply knowledge of mathematics, science and engineering to various areas of electrical and electronic engineering technology.
2. Demonstrate the ability to design and conduct experiments and to critically analyze and interpret data.
3. Demonstrate the ability to use modern engineering tools and techniques to design and test systems in response to user requirements, particularly in the electrical and electronic engineering technology field.
4. Demonstrate the ability to identify, formulate and solve problems.
5. Demonstrate the ability to function in a multidisciplinary team.
6. Demonstrate an understanding of professional engineering and ethical responsibilities.
7. Demonstrate effective oral, graphic and written communication.
8. Recognize the need to engage in lifelong learning.
9. Demonstrate commitment to quality, timeliness and continuous improvement.
10. Demonstrate the ability to utilize computer software applications, such as spreadsheets, word processing, basic programming and Computer-Aided Design (CAD).

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>Destination Kent State: First Year Experience</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Course is not required for students with 25 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>
<td></td>
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<tr>
<td>Total Credit Hour Requirement</td>
<td>60</td>
<td></td>
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<tr>
<td>Some associate degrees require students to complete more than 60 credit hours.</td>
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</table>

Kent Core Requirements

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Credits/Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kent Core Composition (KCMP)</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Mathematics and Critical Reasoning (KMCR)</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Humanities and Fine Arts (KHUM/KFA)</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Social Sciences (KSS)</td>
<td>3</td>
</tr>
<tr>
<td>Kent Core Basic Sciences (KBS/KLAB)</td>
<td>3</td>
</tr>
<tr>
<td>Total Credit Hours:</td>
<td>15</td>
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</table>
**Program Requirements**

**Major Requirements**

**Major Requirements (courses count in major GPA)**

- EERT 12000 ELECTRIC CIRCUITS I 4
- EERT 12001 ELECTRIC CIRCUITS II 3
- EERT 12010 INTRODUCTION TO ELECTRONICS 4
- EERT 21010 ENGINEERING AND PROFESSIONAL ETHICS 3
  - or TECH 31010 ENGINEERING AND PROFESSIONAL ETHICS
  - or Kent Core Humanities and Fine Arts
- EERT 22004 DIGITAL SYSTEMS 4
- EERT 22011 ELECTRONIC SYSTEMS 2
- EERT 22014 MICROPROCESSORS AND ROBOTICS 3
- MERT 12000 ENGINEERING DRAWING 3
- MERT 22009 ENGINEERING TECHNOLOGY PROJECT 2

**Major Elective, choose from the following:** 3
- EERT 22002 INDUSTRIAL CONTROLS
- EERT 22005 ELECTRONIC INSTRUMENTATION
- EERT 22018 PC/NETWORK ENGINEERING AND TROUBLESHOOTING
- EERT 32005 INSTRUMENTATION
- TECH 33016 PC/NETWORK ENGINEERING AND TROUBLESHOOTING

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

- COMM 15000 INTRODUCTION TO HUMAN COMMUNICATION (KADL) 3
- ENG 20002 INTRODUCTION TO TECHNICAL WRITING 3
  - or OTEC 26638 BUSINESS COMMUNICATIONS
- MATH 11010 ALGEBRA FOR CALCULUS (KMCR) 3
- MATH 11012 INTUITIVE CALCULUS (KMCR) 3
- MATH 11022 TRIGONOMETRY (KMCR) 3
- UC 10097 DESTINATION KENT STATE: FIRST YEAR EXPERIENCE 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 13002 GENERAL COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)
- PHY 13012 COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)

**Kent Core Composition** 3
**Kent Core Humanities and Fine Arts** 3
**Kent Core Social Sciences** 3

**Concentrations**

Choose from the following: 3
- Computer

**Electrical Engineering Technology (General)**

**Concentration Requirements (courses count in major GPA)**

- EERT 22015 ROBOTICS AND ADVANCED MICROSYSTEMS 3

**Electrical Engineering Technology (General) Concentration Requirements**

- EERT 22006 ELECTRICAL MACHINES 3
  - or TECH 43220 ELECTRICAL MACHINERY 3

**Minimum Total Credit Hours:** 65-69

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1 Students admitted to the program on the Tuscarawas Campus must take EERT 21010 or TECH 31010 to fulfill ABET accreditation requirements.
<table>
<thead>
<tr>
<th>Course ID</th>
<th>Course Title</th>
<th>Credit Hours</th>
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<tbody>
<tr>
<td>MERT 2209</td>
<td>ENGINEERING TECHNOLOGY PROJECT</td>
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<tr>
<td></td>
<td>Concentration Requirement</td>
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<tr>
<td></td>
<td>Physic Elective B</td>
<td>3-5</td>
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<td></td>
<td>Kent Core Requirement</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Credit Hours</strong></td>
<td><strong>19</strong></td>
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Minimum Total Credit Hours: 66