

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

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

Examples of Possible Careers*

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

Contact Information

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- Speak with an Advisor
 - Trumbull Campus
 - Tuscarawas Campus

Fully Offered

- **Delivery:**
 - In person
- **Location:**
 - Trumbull campus
 - Tuscarawas campus

*Note

Source of occupation titles and labor data is 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.

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.

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>.

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.

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

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. Ability to 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

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.

Code	Title	Credit Hours
Destination Kent State: First Year Experience		1
Course is not required for students with 25 transfer credits, excluding College Credit Plus, or age 21+ at time of admission.		
Kent Core (see table below)		15
Total Credit Hour Requirement		60
Some associate degrees require students to complete more than 60 credit hours.		

Kent Core Requirements

Kent Core Composition (KCOMP)	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

Program Requirements

Major Requirements

Code	Title	Credit Hours
Major Requirements (courses count in major GPA)		
EERT 12000	ELECTRIC CIRCUITS I	4
EERT 12001	ELECTRIC CIRCUITS II	3
EERT 12005	ELECTRICAL/ELECTRONIC DRAWING	2
EERT 12010	INTRODUCTION TO ELECTRONICS	4
EERT 22004	DIGITAL SYSTEMS	4
EERT 22006	ELECTRICAL MACHINES	3
or ENGR 43220	ELECTRICAL MACHINERY	
EERT 22011	ELECTRONIC SYSTEMS	2
EERT 22014	MICROPROCESSORS AND ROBOTICS	3
MERT 12000	ENGINEERING DRAWING	3
ENGT 23099	ENGINEERING TECHNOLOGY DESIGN PROJECT (ELR)	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	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 & PHY 13021	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 & PHY 13022	GENERAL COLLEGE PHYSICS II (KBS) and GENERAL COLLEGE PHYSICS LABORATORY II (KBS) (KLAB)	
PHY 13012 & PHY 13022	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
Minimum Total Credit Hours:		64

Graduation Requirements

Minimum Major GPA	Minimum Overall GPA
2.000	2.000

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.

Semester One			Credits
!	EERT 12000	ELECTRIC CIRCUITS I	4
	MATH 11010	ALGEBRA FOR CALCULUS (KMCR)	3
!	MERT 12000	ENGINEERING DRAWING	3
	UC 10097	DESTINATION KENT STATE: FIRST YEAR EXPERIENCE	1
Kent Core Requirement			3
Kent Core Requirement			3
Credit Hours			17
Semester Two			
!	EERT 12001	ELECTRIC CIRCUITS II	3
!	EERT 12010	INTRODUCTION TO ELECTRONICS	4
	EERT 22004	DIGITAL SYSTEMS	4
	ENG 20002	INTRODUCTION TO TECHNICAL WRITING	3
	or OTEC 26638	or BUSINESS COMMUNICATIONS	
	MATH 11022	TRIGONOMETRY (KMCR)	3
Credit Hours			17
Semester Three			
	COMM 15000	INTRODUCTION TO HUMAN COMMUNICATION (KADL)	3
	EERT 12005	ELECTRICAL/ELECTRONIC DRAWING	2
!	EERT 22011	ELECTRONIC SYSTEMS	2
!	EERT 22014	MICROPROCESSORS AND ROBOTICS	3
	MATH 11012	INTUITIVE CALCULUS (KMCR)	3
Physics Elective A			3-5
Credit Hours			16
Semester Four			
	EERT 22006	ELECTRICAL MACHINES	3
	or ENGR 43220	or ELECTRICAL MACHINERY	
	ENGT 23099	ENGINEERING TECHNOLOGY DESIGN PROJECT (ELR)	3

OTEC 26636	PROJECT MANAGEMENT FOR ADMINISTRATIVE PROFESSIONALS	1
Physic Elective B		3-5
Kent Core Requirement		3
Credit Hours		14
Minimum Total Credit Hours:		64