

# ELECTRONICS - MINOR

College of Aeronautics and Engineering  
 School of Engineering  
[www.kent.edu/engineering](http://www.kent.edu/engineering)

## About This Program

The Electronics minor gives students a basic knowledge in programming, circuits, digital design, electronic devices and control of systems. It also illustrates how digital combinational and sequential circuits work and provides students with some applications of these types of circuits. The minor complements studies in computer science, physics and instrumentation, as well as student interest in a general background on how computers work.

## Contact Information

- [cae@kent.edu](mailto:cae@kent.edu) | 330-672-2892
- Speak with an Advisor

## Program Delivery

- **Delivery:**
  - In person
- **Location:**
  - Kent Campus

## Admission Requirements

Admission to a minor is open to students declared in a bachelor's degree, the A.A.B. or A.A.S. degree or the A.T.S. degree (not Individualized Program major). Students declared only in the A.A. or A.S. degree or the A.T.S. degree in Individualized Program may not declare a minor. Students may not pursue a minor and a major in the same discipline.

## Program Requirements

### Minor Requirements

Code	Title	Credit Hours
<b>Minor Requirements</b>		
ENGR 33222	APPLIED DIGITAL DESIGN	3
ENGR 33440	ELECTRONIC DEVICES	3
ENGR 33442	ELECTRONIC DEVICES LABORATORY	1
Electrical Circuits Electives, choose from the following:		4-7
EERT 12000 & EERT 12001	ELECTRIC CIRCUITS I and ELECTRIC CIRCUITS II	
ENGR 21020 & ENGR 21022	SURVEY OF ELECTRICITY AND ELECTRONICS and SURVEY OF ELECTRICITY AND ELECTRONICS LABORATORY	
ENGR 35500 & ENGR 35501	SIGNALS AND CIRCUITS and SIGNALS AND CIRCUITS LABORATORY	
Minor Electives, choose from the following:		6-7
CAE 22095	SPECIAL TOPICS IN AERONAUTICS AND ENGINEERING <sup>1</sup>	
CAE 35095	SPECIAL TOPICS IN AERONAUTICS AND ENGINEERING <sup>1</sup>	
CS 13001	COMPUTER SCIENCE I: PROGRAMMING AND PROBLEM SOLVING <sup>2</sup>	

CS 13011 & CS 13012	COMPUTER SCIENCE IA: PROCEDURAL PROGRAMMING and COMPUTER SCIENCE IB: OBJECT ORIENTED PROGRAMMING <sup>2</sup>
EERT 22095	SPECIAL TOPICS IN ELECTRICAL/ELECTRONIC AND RELATED ENGINEERING TECHNOLOGIES <sup>1</sup>
EMAT 25310	CREATIVE CODING <sup>2</sup>
EMAT 32210	DATA IN EMERGING MEDIA AND TECHNOLOGY
ENGR 26220 & ENGR 26222	PROGRAMMING FOR ENGINEERS and PROGRAMMING FOR ENGINEERS LABORATORY <sup>2</sup>
ENGR 33031	PROGRAMMABLE LOGIC CONTROLLERS
ENGR 33041	CONTROL SYSTEMS
ENGR 43220	ELECTRICAL MACHINERY
ENGR 46330	VISUAL BASIC PROGRAMMING IN ENGINEERING TECHNOLOGY <sup>2</sup>
ENGT 33095	SPECIAL TOPICS IN ENGINEERING TECHNOLOGY <sup>1</sup>
ENGT 33223	ELECTRONIC COMMUNICATION

**Minimum Total Credit Hours:** 17

<sup>1</sup> The following courses may be applied toward minor electives with college approval: CAE 22095, CAE 35095, EERT 22095, ENGT 33095.

<sup>2</sup> Students may apply a maximum of one of the following courses or course sequences toward minor electives: CS 13001, CS 13011 and CS 13012, EMAT 25310, ENGR 26220 and ENGR 26222, ENGR 46330.

## Graduation Requirements

Minimum Minor GPA	Minimum Overall GPA
2.000	2.000

- Minimum 6 credit hours in the minor must be upper-division coursework (30000 and 40000 level).
- Minimum 6 credit hours in the minor must be outside of the course requirements for any major or other minor the student is pursuing.
- Minimum 50 percent of the total credit hours for the minor must be taken at Kent State (in residence).

## Program Learning Outcomes

Graduates of this program will be able to:

1. Gain a basic knowledge of electronic components and their applications.
2. Gain a basic understanding of how to use components to control processes.