

EET 138 Introduction to Electronics I 4 credits

Corequisite: MAT 141 or equivalent

Focuses on direct current (DC) devices and circuits. Progresses from the fundamentals of electricity, Ohm's Law, Kirchoff's Law, series and parallel circuits to the study of resistors, capacitors, inductors, batteries, transistors, and diodes as they pertain to DC circuits.

3 lecture/3 laboratory hours

EET 139 Introduction to Electronics II 4 credits

Prerequisite: EET 138 or equivalent

Continuation of EET 138. Covers the basics of AC circuits and devices including resistors, capacitors, inductors and semiconductors. Introduces fundamental waveforms such as sine waves and pulses and their behavior in solid state circuits.

3 lecture/3 laboratory hours

EET 140 Electronic Construction 2 credits

Teaches the use of hand tools, drilling and other metal-working methods as well as correct soldering and repair techniques. Students apply these skills to chassis construction and wiring, and also gain experience in working with printed circuit boards.

1 lecture/3 laboratory hours

EET 214 Communications Electronics 4 credits

Prerequisite: EET 139

Study of information transmission and reception involving both digital and analog systems. Topics include AM, FM, noise, spectra, receivers, transmitters, lines and cables, and antennas.

3 lecture/3 laboratory hours

EET 215 Fiber Optics 4 credits

Prerequisites: EET 130 or EET 138; MAT 141 or equivalent

A study of fiber optics as it pertains to the communications process. Topics include the physics and behavior of light in a fiber. Skills learned include connectorization of fiber and the use of the special tools and test equipment required. Successful completion of this course can lead to FOA certification.

3 lecture/2 laboratory hours

EET 219 Electronic Networks 4 credits

Prerequisite: EET 139

Analysis and design considerations for electronic circuits, including power supplies using semiconductor diodes and zener diodes, and Class A amplifiers using bipolar and FET transistors.

3 lecture/3 laboratory hours

EET 230 Linear Integrated Circuits 4 credits

Prerequisite: EET 219

Covers the basic building blocks of linear systems, such as inverting and non-inverting amplifiers, comparators, and filters.

3 lecture/3 laboratory hours

EET 251 Digital Circuit Fundamentals 4 credits

Prerequisite: EET 139

Introduces the hardware of digital circuits and the electrical characteristics and connections of digital integrated circuit packages. Gates, registers, flip-flops, counters, decoders and encoders, display drivers, half- and full-adders, and clocks and timing circuits are further investigated in the lab.

3 lecture/3 laboratory hours

EET 263 Digital Technology 4 credits

Prerequisite: EET 251

Introduces microprocessors, especially the 8080/8085/Z80 family. Uses minimization techniques to simplify functional expressions and implement digital solid-state logic circuits. Also introduces microcomputer system and Assembly language programming. Emphasizes the architecture and instruction set of microprocessors.

3 lecture/3 laboratory hours



Process for Admission

Whether you are planning to study full or part-time, you must submit an admission application (free of charge) to the Enrollment Services Office. An online application is available at www.mccc.edu. A print version may be requested by calling the Enrollment Services Office at 609-570-3795. Applications submitted by regular mail should be sent to: Enrollment Services Office, Mercer County Community College, P.O. Box B, Trenton, NJ 08690. Students must also contact their high school or previous/current college and request that official transcripts be sent to the same address.

Students may also be required to take an academic placement test (free of charge) in English and/or math. The two-hour test is self-administered and does not affect admission to the college. Certain scores on the SAT/ACT or your transcript from another college may exempt you from portions of the test.

After taking the placement test, students meet with an advisor to select their courses and then register for classes.

Approved for Veterans

MCCC is an approved institution for veteran's training under various GI bills. For more information, call 609-570-3240.

Contact Us

We encourage you to visit the college and meet with faculty and staff. To arrange a campus tour or request additional information, contact the Enrollment Services Office on either campus.

West Windsor Campus: 609-570-3795
James Kerney Campus: 609-570-3139
(Monday-Friday, 9 a.m. to 5 p.m.)

For more information, contact Electronics Engineering Technology Professor Dominick DeFino at 609-570-3456 or email definod@mccc.edu.

1200 Old Trenton Road
West Windsor, NJ 08550
www.mccc.edu
609-586-4800



OS • 200 • 2/12



Electronics Engineering Technology

Pursue a career in:

- Biomedical Electronics
- Telecommunications Electronics
- Fiber Optics
- Alternative Energy
- Power Electricity

Get Academic Solutions at Mercer



ELECTRONICS ENGINEERING TECHNOLOGY

The Electronics Engineering Technology (EET) program is primarily a transfer program. Successful graduates may transfer to a college or university which offers a four-year bachelor's degree in electronics engineering technology.

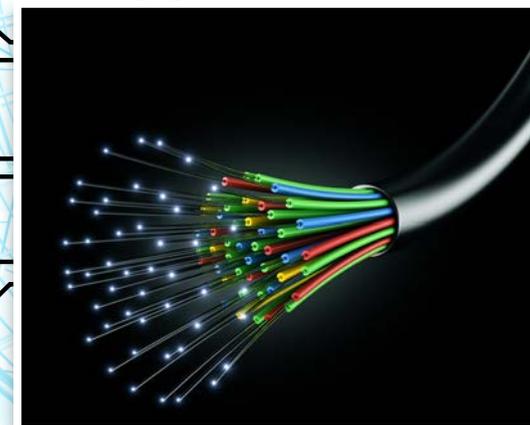
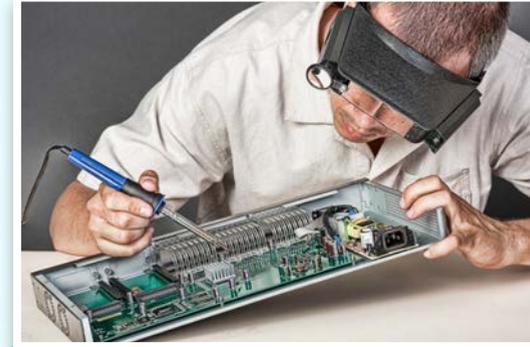
Mercer County Community College's EET program maintains a transfer agreement with NJIT and Drexel University. EET graduates have also transferred to Rutgers, Rowan, Fairleigh Dickinson and Indiana Universities as well as Rochester Institute of Technology. Several of these institutions have programs which allow EET graduates to complete the requirements for a BSET degree in two years or a Master of Science (MSEE) in three years.



Options among four-year transfer programs include Biomedical Engineering, for job opportunities at the various New Jersey pharmaceutical companies; Computer Engineering, for positions ranging from programmers to systems administrators; General Electrical Engineering, for opportunities at the various electronics companies in New Jersey and the surrounding states; and Telecommunications Engineering, for positions with companies employing fiber optics or networking systems.

Successful graduates of Mercer's EET program, earning an A.A.S. degree, will be able to:

- communicate effectively in English, both orally and in written form;
- demonstrate an understanding of the fundamentals of AC and DC electricity;
- work as a team with fellow workers;
- use a computer to access information from the Internet;
- demonstrate mastery of college algebra and trigonometry;
- demonstrate mastery of job skills such as soldering, metalworking, and PC board repair;
- demonstrate an understanding of fundamental digital circuits;
- demonstrate an understanding of analog circuits, including linear integrated circuits;
- set up and operate modern electronic equipment such as DMM, oscilloscope, and signal generators.



CURRICULUM

Code	Course (Lecture/Lab Hours)	Credits
EET 138	Introduction to Electronics I (3/3)	4
EET 140	Electronic Construction (1/3)	2
ENG 101	English Composition I (3/0)	3
MAT —	Mathematics elective ¹	4
— —	Science OR Technology elective ²	3
<hr/>		
EET 139	Introduction to Electronics II (3/3)	4
EET 215	Fiber Optics (3/2)	4
ENG 102	English Composition II (3/0)	3
— —	Science OR Technology elective ²	3
— —	General Education elective ³	3
<hr/>		
EET 219	Electronic Networks (3/3)	4
EET 251	Digital Circuit Fundamentals (3/3)	4
HPE 110	Concepts of Health & Fitness (1/2)†	2
— —	General Education elective ⁴	3
<hr/>		
EET 214	Communications Electronics (3/3)	4
EET 230	Linear Integrated Circuits (3/3)	4
EET 263	Digital Technology (3/3)	4
— —	General Education Elective	3
		61

NOTE: Electives should be selected in consultation with an academic advisor in order to assure maximum transfer of credits.

¹ Minimum mathematics requirement for students who do not plan to transfer to a bachelor degree program is MAT 146. Students who plan to transfer, working in consultation with an EET program advisor, should achieve MAT 151 level of proficiency or higher.

² Minimum requirement for students who do not plan to transfer is 6 credits selected from the approved list of general education science/technology electives. Students who plan to transfer to bachelor degree programs should complete PHY 101-102. Selection of courses should be made in consultation with an EET program advisor.

³ Select course from either Social Science or Humanities general education categories.

⁴ Select course from the following general education categories: Social Science, Humanities, Historical Perspective, Diversity and Global Perspective.

†HPE 111 is an acceptable alternative.