

# ELECTRICAL ENGINEERING TECHNOLOGY

**Applied Science and Engineering Technology Division**

**2019-2020**

The associate of applied science degree with specialization in electrical engineering technology is designed to provide the theory and application of principles, procedures and components that technicians encounter in modern industrial environments. Graduates typically find employment as industrial electricians, engineering aides, laboratory technicians and field service representatives. Electrical apprentices will find this program to be an attractive way to utilize the credits they have earned while pursuing their journeyman status to complete an associate of applied science degree. Many graduates transfer to nearby universities that offer a bachelor of engineering technology degree or bachelor of applied science degree on a "2+2" basis - two years at the community college and two years at the university. These graduates generally obtain engineering positions and often advance into management.

### Career Opportunities

The program provides a solid foundation in general electricity/electronics. Throughout, the program maintains a commitment of "hands-on" laboratory applications to support and reinforce theoretical discussions of circuits. To this end, the Electrical-Electronics Troubleshooting course includes the construction of a finished electronic power supply that students may keep at their option.

Graduates of this program will be prepared for entry-level employment in the following areas:

- Automated systems technician
- Computer maintenance technician
- Electrical designer
- Electromechanical technician



- Electronic systems test technician
- Electronics technician
- Engineering aide
- Field service technician
- Industrial electrician
- Industrial sales technician

### Transfer Information

For information regarding transfer opportunities for this, or any program, please visit the Transfer section of the MCCC website.

**Note: The following codes identify courses that satisfy MCCC's General Education Requirements:**

- (C1) GE Natural Sciences Competency
- (C2) GE Mathematics Competency
- (C3) GE Writing Competency
- (C4) GE Computer Literacy Competency
- (C5) GE Human Experience Competency
- (C6) GE Social Systems Competency



### Credits

#### Required General Education Courses

**21**

C1	PHY 151 (General Physics) . . . . .	4
C2	MATH 151 (Intermediate Algebra) or higher . . . . .	4
C3	ENGL 151 (English Composition I) . . . . .	3
C4	MDTC 160 (Mechanical Drafting and CAD I) . . . . .	4
C5	Expressions of the Human Experience Competency . . . . .	3
C6	Social Systems Competency . . . . .	3

See the General Education Requirements on the MCCC website for a list of courses that satisfy the General Education Learning Competencies.

**Credits  
66**

**Required Core Courses**

**Fall Semester**

- ELEC 125 (Fundamentals of Electricity) . . . . . 3
- MDTC 160 (Mechanical Drafting and CAD I). . . . . 4 (C4)
- MECH 131 (Introduction to Automated Manufacturing). . . . . 3
- <sup>1</sup>MATH 151 (Intermediate Algebra) or higher . . . . . 4 (C2)

**Winter Semester**

- ELEC 132 (Electronics I) . . . . . 4
- ELEC 135 (Digital Electronics). . . . . 4
- ELEC 145 (Data Acquisition and Instrumentation). . . . . 4
- PHY 151 (General Physics I). . . . . 4 (C1)

**Spring/Summer Semester**

- ENGL 151 (English Composition I) . . . . . 3 (C3)
- <sup>2</sup>Expressions of the Human Experience  
or <sup>3</sup>Social Systems Competency . . . . . 3 (C5 or C6)

(See <sup>4</sup>Note below)

**Fall Semester**

- ELEC 129 (AC/DC Motors and Controls) . . . . . 4
- ELEC 130 (Programmable Logic Controllers-PLC's) . . . . . 3
- ELEC 133 (Circuit Analysis). . . . . 4
- ELEC 137 (Microprocessors) . . . . . 4

**Winter Semester**

- ELEC 141 (Industrial Automation and Process Control). . . . . 3
- ELEC 200 (Electronic and Electrical Troubleshooting) . . . . . 4
- ELEC 211 (Medium Voltage Power Distribution) . . . . . 3
- ELEC 214 (National Electric Code-NEC). . . . . 2
- <sup>2</sup>Expressions of the Human Experience  
or <sup>3</sup>Social Systems Competency . . . . . 3 (C5 or C6)

**Total Degree Requirements 66 credits**

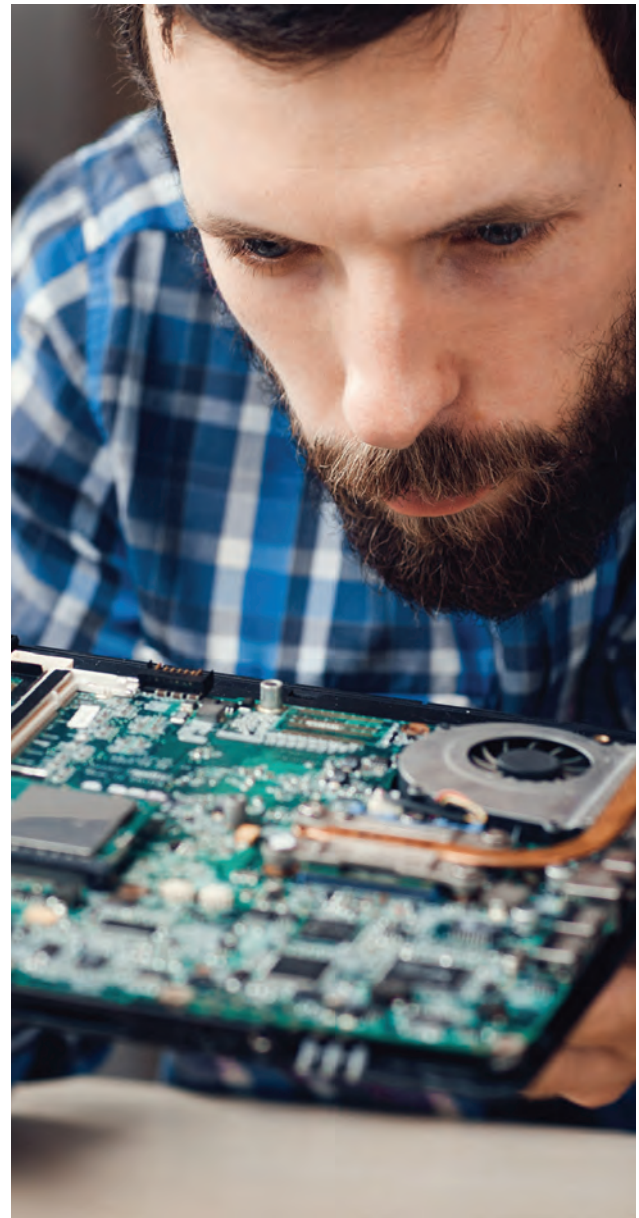
**Total Degree Cost 88 minimum billable contact hours**

<sup>1</sup>Students planning on transferring to an engineering technology program at a four-year institution should refer to the receiving institution's requirements for math.

<sup>2</sup>HUMAN 151 (Introduction to Humanities) (recommended) or any (C5) GE Human Experience Competency (Note: See General Education Requirements on page 31 or the college website for a list of courses that satisfy the GE Learning Competencies).

<sup>3</sup>ANTHR 152 (Introduction to Cultural Anthropology) (recommended) or any (C6) GE Social Systems Competency (Note: See General Education Requirements on page 31 or the college website for a list of courses that satisfy the GE Learning Competencies).

<sup>4</sup>SPCH 151 (Communication Fundamentals), 3 credit hours, although not required, is highly recommended.



Monroe County Community College is an equal opportunity institution and adheres to a policy that no qualified person shall be discriminated against because of race, color, religion, national origin or ancestry, age, gender, marital status, disability, genetic information, sexual orientation, gender identity/expression, height, weight or veteran's status in any program or activity for which it is responsible. If you have a disability and need special accommodations, please contact the Learning Assistance Laboratory at least 10 business days prior to the first class session to schedule an appointment to begin the accommodation process. The LAL phone number is 734.384.4167.

Monroe County Community College is accredited by the Higher Learning Commission.  
www.hlcommission.org / (800) 621-7440

Information contained within this document is subject to change. Every effort has been made to insure the information in this program sheet is accurate at the time of publication. This program sheet may not be considered as an agreement or contract.

**Main Campus**

1555 South Raisinville Road  
Monroe, Michigan 48161  
734-242-7300 / 1-877-YES-MCCC

**Whitman Center**

7777 Lewis Avenue  
Temperance, Michigan 48182  
734-847-0559

