

# Electrical Engineering Technology

Electrical Engineering Technology is a professional career field involving the design, testing, installation and maintenance of all types of electrical equipment. Graduates are employed in a variety of technical fields including: product design, prototyping, testing, automation/robotics, instrumentation, equipment installation and maintenance. Because of their wide range of specialties and capabilities, Electrical Engineering Technologists are employable in numerous industries, and enjoy excellent starting salaries/opportunities for career advancement.

## Skills and Competencies

Electronic Engineering Technologists perform a variety of important functions in industry, it is important for them to be literate in a number of areas. You must not only learn the current technology, you must also become a self-directed learner to keep up with technological advancements. You will need to apply current knowledge and adapt to emerging applications as well as improve current installations. A strong background in electrical basics with area specific knowledge will allow you to learn and adapt to evolving technology. Being able to work in teams to identify, analyze and solve technical problems in essential, as are effective communication skills. As an engineering professional, you need to be conscious of societal and global issues that affect your decisions.

## Course Work

This degree includes the following courses as part of the program requirements, and specific major requirements along with general education courses and graduation requirements.

### Core

<b>ET112</b>	<b>DC Circuit Analysis (4 cr.)</b>
<b>ET113</b>	<b>AC Circuit Analysis (4 cr.)</b>
<b>ET210</b>	<b>Discrete Semiconductors (4 cr.)</b>
<b>ET211</b>	<b>Digital Electronics (4 cr.)</b>
<b>ET212</b>	<b>Advanced Linear Circuits (3 cr.)</b>
<b>ET250</b>	<b>Industrial Electrical Machinery (4 cr.)</b>
<b>ET252</b>	<b>Industrial Motor Controls (4 cr.)</b>
<b>ET311</b>	<b>Applied Programmable Controllers (4 cr.)</b>
<b>ET321</b>	<b>Embedded Systems Programming (4 cr.)</b>
<b>ET360</b>	<b>Process Control Systems (4 cr.)</b>
<b>ET410</b>	<b>Testing and Data Acquisition Techniques (4 cr.)</b>
<b>ET415</b>	<b>Controls (3 cr.)</b>
<b>ET420</b>	<b>Microcontroller Applications (4 cr.)</b>
<b>ET431</b>	<b>Senior Project I (1 cr.)</b>
<b>ET432</b>	<b>Senior Project II (2 cr.)</b>

### Other required courses

<b>CH105</b>	<b>Chemical Principles (4 cr.)</b>
<b>DD105</b>	<b>Schematic/Diagram Drafting (2 cr.)</b>
<b>IT180</b>	<b>Introduction to Fluid Power (3 cr.)</b>
<b>IT215</b>	<b>General Industrial Safety (2 cr.)</b>
<b>IT420</b>	<b>Quality Control (3 cr.)</b>
<b>MA104</b>	<b>College Algebra and Trigonometry with Applications in Science and Technology (4 cr.)</b>
<b>MA106</b>	<b>Trigonometry (3 cr.)</b>
<b>MA171</b>	<b>Introduction to Probability and Statistics (4 cr.)</b>
<b>MA271</b>	<b>Calculus with Applications (4 cr.)</b>
<b>MET211</b>	<b>Mechanics-Statics (4 cr.)</b>
<b>PH201</b>	<b>College Physics (5 cr.)</b>
<b>TE351</b>	<b>Humanity and Technology (4 cr.)</b>

*Detailed course descriptions can be found at [www.nmu.edu/bulletin](http://www.nmu.edu/bulletin).*

## Career Development

You should begin the resume-building process as soon as you can. The Academic and Career Advise-ment Center can assist you with career planning, while Career Services will help you fine tune your resume and look for jobs related to your field. In the meantime, the more hands-on experience you have, the better the chances are that you will find a job. Becoming involved in a professional related internship is a way to develop your professional skills and gain experience. Your academic course work is important as well, so be sure to maintain a high grade point average.

## Additional Considerations

It is necessary to have good communication skills, be organized and pay attention to detail. Some positions will require supervisory or management skills.

You must be able to keep up with rapid advances in technological applications.

## Job Outlook

Starting salaries are contingent upon geographic location and individual work experience. Starting income figures were not available. Job growth is scheduled to be as fast as average, hovering around 7%.

# Potential Careers

NMU's Electronics Engineering Technology Program prepares students for employment in the following careers:

- Application Engineer
- Control Engineer
- Field Service Engineer
- Electronics Technician
- Medical Field Service Engineer
- Operations Engineer
- Project Engineer
- Project Engineering Technician
- Project Manager
- Software Engineer
- Test Engineer

# Additional Resources and Information

For Career Planning and Opportunities:  
Academic & Career Advisement Center  
3302.1 C.B. Hedgcock  
906-227-2971  
[www.nmu.edu/acac](http://www.nmu.edu/acac)

Engineering Technology Department  
123 Jacobetti Complex  
906-227-2141  
[www.nmu.edu/engineering](http://www.nmu.edu/engineering)

For Job Search, Resume and Career Information:  
Career Services  
3302.3 C.B. Hedgcock  
906-227-2800  
[www.nmu.edu/careers](http://www.nmu.edu/careers)

For Information about NMU Student Organizations Associated with this Major Contact:  
Center for Student Enrichment  
1206 University Center  
906-227-2439  
[www.nmu.edu/cse](http://www.nmu.edu/cse)

Society of Automotive Engineers Baja Racing

Internet Resource Links:  
[www.careers.org](http://www.careers.org)  
[www.bls.gov](http://www.bls.gov)

For Career Information with National Organizations:  
[www.ieee.org](http://www.ieee.org) -Institute of Electrical and Electronic Engineers (IEEE)  
[www.aes.org](http://www.aes.org) -American Assoc. of Engineering Societies, Inc.



**NORTHERN MICHIGAN  
UNIVERSITY**

MARQUETTE, MICHIGAN

The Academic & Career Advisement Center  
2018



What to do with  
a major in...

# Electrical Engineering Technology

