ELECTROMECHANICAL TECHNOLOGY

# Advanced Manufacturing

*Level Four*

*Level One*

*Level Two*

*Level Three*

|  |
| --- |
| **Industry Certifications options include:**  Machining Level I: Measurement, materials, and Safety Certification (NIMS)  Snap-On Precision Measurement |

**ABOUT THE PROGRAM OF STUDY**

The *Electromechanical Technology* program of study is designed to provide students with the knowledge and skills to effectively perform basic industrial maintenance procedures in an advanced manufacturing facility. This program of study is designed for students that are interested in becoming a general maintenance and repair worker, industrial machinery mechanic, master mechanic, electromechanical technician, mechanical engineer, or an electromechanical engineer. The course focuses on the electromechanical domains, including: fundamental safety practices in electromechanical technology, shielded metal arc welding (SMAW), basic metal inert gas (MIG) welding, electrical systems, AC and DC motors, calibrating instruments, drive systems, pipe fabrication, hydraulic systems, pumps, digital electronics, programmable logic controllers (PLC), and troubleshooting procedures. Upon completion of this program of study, proficient students will be prepared to pursue postsecondary electromechanical technology programs and entry-level industrial maintenance technology careers in the advanced manufacturing industry.

This is not an exhaustive list of all of the opportunities available in Tennessee.

**CAREER OPPORTUNITIES**

The *Electromechanical Technology* program of study offers opportunities to funnel into careers at a variety of education levels. Pursuing just an additional year or two of study, however, can yield great returns for students. Among Tennessee graduates from public two-year colleges who completed programs in electrical engineering technology, median wages for their first year out of school was $60,570 which is higher than the state average for all Associate’s holders.

**Employment Projections for *Electromechanical Technology* careers in Tennessee**

******



**POSTSECONDARY OPTIONS**

|  |  |
| --- | --- |
| **School** | **Degree Program** |
| Nashville State Community College | Mechanical Engineering Technologist |
| Chattanooga State Community College | Electromechanical Technologist |
| Middle Tennessee State University | Mechanical Engineer |

For more college and career planning resources, visit <http://collegefortn.org>.

****Have you registered for the Tennessee Promise? Seniors enrolled in this program have the chance to attend a two-year program at a Tennessee College of Applied Technology (TCAT), community college, or some two-year university programs for free! To learn more, please see your school counselor or visit <http://www.tennesseepromise.gov> .

***Electromechanical Technology* Related Occupations with the most Annual Average Openings in Tennessee (2014-2024)**

|  |  |  |  |
| --- | --- | --- | --- |
| Occupation | 2014 Estimated Employment | 2024 Projected Employment | Total Percent Change |
| Electronics Engineering Technician | 2,460 | 2,620 | 7.00% |
| Electro-Mechanical Technician | 270 | 310 | 17.00% |
| Industrial Engineering Technician | 1,610 | 1,680 | 5.00% |
| Mechanical Engineering Technician | 940 | 1,090 | 16.00% |

Tennessee Department of Labor and Workforce Development, Job4TN Online. (2017). *Occupational Projections (Long-term)*. Retrieved from <https://www.jobs4tn.gov/vosnet/analyzer/results.aspx?session=occproj>

Students in this program of study will be eligible to join SkillsUSA. In addition to school events, students will be able to compete at the regional, state, and national level. SkillsUSA improves the quality of America’s skilled workforce through a structured program of citizenship, leadership, employability, technical and professional skills training. SkillsUSA enhances the lives and careers of students, instructors and industry representatives as they strive to be champions at work. See your manufacturing teacher to learn more about SkillsUSA or visit <http://www.skillsusa.org>

**For more information, contact:**

**High School Name**

**County Name**

**CTE Director: Name**

**Email**

**Instructor: Name**

**Email**