

**Electromechanical Technology**  
**Certificate in Applied Science**  
**30 Semester Hours<sup>^</sup>**

ONETonline.org SOC Code: 17-3024.00

The Electromechanical Technology (ELM) Certificate in Applied Science provides a technical education at the certificate level. It is a broad based curriculum that provides instruction and practical application of a variety of technical concepts and practices. The courses include electricity, pneumatics, hydraulics, and industrial controls.

Successful completion of the ELM program will allow graduates to enter the workforce at the technician level. They will be prepared to assemble, install, calibrate, troubleshoot, service and repair equipment and system components used in industry and business. Employment opportunities for graduates include areas of plant maintenance, computer systems, programmable logic control, technical service and sales, instrumentation, and research and development.

Corequisite courses may be required in English and mathematics. Requirements will be determined by placement test scores.

Upon successful completion of the program the student will be able to:

- Apply accepted safety and health practices in the workplace.
- Demonstrate a working knowledge of the construction, operation and function of components and devices used in mechanical, electrical and fluid power systems.
- Apply principles, knowledge and analysis skills in troubleshooting, repairing and maintaining mechanical, electrical and fluid power systems.
- Use tools and instrumentation to troubleshoot and/or repair industrial equipment and systems.
- Read, interpret, and design schematics and wiring diagrams for mechanical, electric and fluid power systems.
- Apply effective written communication and computation skills.
- Demonstrate computational skills to solve problems involving parameters contained in mechanical, electrical, electronic, and fluid power systems.
- Demonstrate computer literacy.

**Special Certificate:** Students successfully completing WTT 110, Wind Safety and OSHA, will receive an OSHA Certificate of Completion for General Industry Safety (30-hour).

**Program Implementation:** Full-time evening; (Students attending part-time should see advisor for recommended course sequencing).

**Recommended Course Sequence – Electromechanical Technology, Certificate in Applied Science**

First Year—Fall Semester				First Year—Spring Semester			
Dept.		Course Title	Sem. Hrs.	Dept.		Course Title	Sem. Hrs.
ELM	121	<a href="#">Fundamentals of Hydraulics and Pneumatics</a>	4	ENL	101 or 115	<a href="#">English Composition I</a> or <a href="#">Technical Communications</a>	3
ELM	210	<a href="#">PLC Fundamentals</a>	3	MTH	117	<a href="#">Math for Technicians</a>	4
WTT	110	<a href="#">Wind Safety and OSHA</a>	4	WTT	150	<a href="#">Industrial Motor Controls</a>	4
WTT	120	<a href="#">DC/AC Circuits</a>	4	WTT	160	<a href="#">Power Generation and Transmission</a>	4
<i>Total Semester Hours</i>			<b>15</b>	<i>Total Semester Hours</i>			<b>15</b>

Students enrolled in this program may be eligible for related Skill Set Certifications. Students should contact their academic program advisor or refer to the [Skill Set section in this catalog \(page 99\)](#) for additional information.

**Cost to Complete Program:**

Tuition: \$4,290  
 Room & Board: \$3,000+  
 Books/Supplies: \$1,200+  
 Personal: \$1,850+  
 Transportation: \$2,500+  
 Total: \$12,840+

+Amounts shown are estimated to show possible, not actual, expenses

**Median loan debt upon completion:** N/A

**Financial Aid** is available for those who qualify.

See Gainful Employment Disclosure ([Page 28](#)) for more information.

Students enrolling in Electromechanical (ELM) and Wind Technology (WTT) courses will be assessed a laboratory fee for classes having a laboratory component. This fee is used to replace expendable materials and to maintain and upgrade laboratory equipment. See advisor for details.

At the end of select courses, students will take a PMMI (The Association for Packaging and Processing Technologies)

