



Electro-Mechanical Technician Occupational Skills Award

IACE1.EMTEC
OSA1.EMTEC

Texas Southmost College
Workforce Training and Continuing Education

This introductory program will focus on the study of electronic systems which will equip the students with skills to troubleshoot and repair electromechanical system failures. The program covers mechanical topics, such as industrial control devices, control circuits, industrial process control, and PLCs. This course will also teach the skills needed to understand symbols, control valves, control assemblies, and the operation of fluid power systems. Students will learn basic component function programming methods, including basic knowledge on motor control systems and understanding the basic principles of hydraulics systems. Upon completion of the program, students will have the opportunity to earn an Occupational Skill Award.



| COURSES | Hours |
|--|------------|
| ELMT 1001 Programmable Logic Controller (PLC) I | 48 |
| HYDR 1045 Hydraulics and Pneumatics | 64 |
| ELPT 1041 Motor Controls | 64 |
| Total Contact Hours for Occupational Skills Award | 176 |

Learning Outcomes:

- Understand and apply the principles of programmable logic controllers (PLCs) in industrial settings.
- Analyze, operate, and maintain hydraulic and pneumatic systems.
- Implement and troubleshoot various motor control systems using both solid-state and conventional techniques.
- Interpret and create wiring and schematic diagrams for complex electro-mechanical systems.
- Effectively troubleshoot and resolve issues in electro-mechanical equipment to ensure optimal performance and safety.

Award

TSC Certificate of Completion
Occupational Skills Award
Smart Automation Certification Alliance (S.A.C.A) Certifications

*Must successfully complete all courses with a Satisfactory (S) for graduation.