

ASSOCIATE OF SCIENCE IN INDUSTRIAL MAINTENANCE TECHNOLOGY (AS)

This degree prepares students for entry-level employment and/or potential further study in the fields of Industrial Technology/Industrial Maintenance. Students completing this degree will have a foundation for the field of Industrial Technology through the study of electricity, motor controls and programmable motor drives, programmable logic controllers, hydraulics/pneumatics, industrial mechanics, machining, refrigeration and boilers, and various welding methods. Students will acquire skills and abilities in design of electrical circuits, reading and interpreting schematics, encoding programmable devices, and design of facility changes for industrial applications.

Program Outcomes

- Identify, design, and troubleshoot an industrial electrical circuit with a multi-meter to include motor control and building power distribution.
- Read a print, repair and maintain the mechanical components of hydraulic and pneumatic circuits found in industrial machines to like new condition.
- Design, program, and troubleshoot both programmable logic controllers (PLC), and variable frequency drives (VFD). This is accomplished in single phase and three phase circuits.
- Weld in three modes: MIG, STICK, and TIG to industrial maintenance standards.
- Have additional entry level job skills in: boilers, refrigeration and power distribution.

Career Opportunities

Upon successful completion of this degree, students will be prepared for careers or employment in the following fields: industrial maintenance technician, industrial machine operator, industrial electrician, corrections facilities maintenance, hospital engineer, and food service machine technician.

Note

This degree is not designed for transfer; however, the courses included in this degree may be transferable and apply to other degrees designed for transfer.

Program Requirements

Code	Title	Units
GENERAL EDUCATION AND SUBJECT REQUIREMENTS		25
College of the Sequoias' Associate Degree General Education (COS-GE)		
+		
REQUIRED MAJOR COURSES		30
ITEC 110	Electricity and Electronics	3
ITEC 111	Manufacturing Processes	3
ITEC 112	Welding Principles 1	4
ITEC 120	Programmable Logic Controllers	3
ITEC 213	Industrial Mechanics	5
ITEC 222	Automated Controls	5

ITEC 223	Welding Principles 2	4
ITEC 224	Hydraulics and Pneumatics	3
+		
ELECTIVES		5
Select additional degree applicable courses numbered 1-299 to achieve 60 units. The courses below are suggestions and are completely voluntary. See instructor for supervision before adding.		
WEXP 193M	Maintenance Technology Work Experience – First Semester	1-4
WEXP 194 M		
=		
TOTAL		60

The Associate Degree requirements include completion of the:

1. Required major courses and restricted elective courses with a "C" or better grade in each course (required and restricted elective courses may be substituted with the approval of the Division Chair),
2. General Education requirements,
3. Subject requirements including PE, Health & Wellness, and American Institutions, and
4. A minimum of 60 units of degree applicable courses numbered 1-299, at least 12 of which must be taken in residence at College of the Sequoias, with a "C" (2.0) average (see Associate Degree Requirements (<https://catalog.cos.edu/associate-degree-requirements/>) for additional details).