

# ASSOCIATE OF SCIENCE IN INDUSTRIAL AUTOMATION (AS)

This degree prepares students for advanced-level employment in the fields of industrial automation and industrial maintenance. Students are required to complete the industrial maintenance program or have equivalent experience before advancing to the industrial automation program. Students completing this program will acquire employment skills in the areas of instrumentation, process control, electrical wiring and troubleshooting, motor controls, variable frequency drives, programmable logic controllers, human-machine interfaces, and industrial networks.

## Program Outcomes

- Safely demonstrate technical skills required for employment in automation and manufacturing industries.
- Develop and apply problem-solving skills to design and maintain automated systems.
- Function effectively in a technical capacity as an individual and as a team member, demonstrating a commitment to professionalism, quality, timeliness, and safety.

## Career Opportunities

Upon successful completion of this degree, students will be prepared for employment in the following occupations: Industrial maintenance technician, industrial automation technician, instrumentation technician, electronics technician, field service representative, technical sales representative.

## 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 174	Programmable Logic Controllers for Industrial Automation	3
ITEC 176	Advanced Programmable Logic Controllers for Industrial Automation	3
ITEC 182	Methods of Automatic Control	4
ITEC 184	Instrumentation	4
ITEC 283	Industrial Motion Control	4
ITEC 285	Industrial Networks	4
ITEC 286	Human-Machine Interfacing	4
ITEC 287	Industrial Automation Capstone Project	4
+		
ELECTIVES		5
Select additional degree applicable courses numbered 1-299 to achieve 60 units.		
=		
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 (<http://catalog.cos.edu/associate-degree-requirements/>) for additional details).