

ENGINEERING TECHNOLOGY - ASSOCIATE IN SCIENCE

Plan Code: 2521

The Associate in Science in Engineering Technology Degree provides students with a fundamental knowledge of the, engineering technology field, engineering design, principles of engineering technology, digital electronics technology and computer integrated manufacturing. This degree program develops students' critical thinking skills through applying the principles of engineering to solve design, manufacturing and automation problems in the field. Students will be able to create and innovate on products and manufacturing processes by, recognizing, analyzing real world processes in order to improve process to eliminate waste in lean manufacturing settings. The Associate in Science in Engineering Technology degree prepares students for transfer to a California State University.

Program Student Learning Outcomes

- Demonstrate the ability to attain the Institutional Student Learning Outcomes (ISLOs).
- Apply principles of engineering technology to design problems and constraints.
- Create and design robotic tools using automated equipment.

Program Requirements

This degree requires the completion of General Education coursework plus the following:

Code Number	Course Title	Units
REQUIRED COURSES		
ADMT 50	Advanced Manufacturing, Introduction	3
CAD 51	Mechanical Drafting, Intermediate	2
CAD 60	Geometric Dimensioning and Tolerancing	3
ELECT 230A	Robotics Technology - Design	2
ELECT 230B	Robotics Technology - Integration	2
ELECT 231	Electro-Hydraulics and Pneumatic Systems	2
ETEC 10	Introduction to Engineering Technology	1
ETEC 20	Introduction to Engineering and Design	2.5
ETEC 30	Principles of Engineering Technology	2.5
ETEC 40	Electronics for Engineering Technology	2.5
ETEC 60	Material Science for Engineering Tech	3
MTFAB 280	Introduction to Robotic Welding	2.5
Required Subtotal		28
Complete one of the following: ¹		19-39
LBCC General Education (Plan A) (https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-a/)		
CSU GE Breadth (Plan B) (https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-b/)		
IGETC Pattern (Plan C) (https://lbcc-public.courseleaf.com/academic-requirements/general-education-transfer-degree-certificate-requirements/general-education-plans/plan-c/)		

Electives (as needed to reach 60 degree-applicable units) ²

Minimum Degree Total **60**

¹ Units for the major may be double-counted for LBCC GE, CSU GE, or IGETC; see counselor for limitations.

² Elective units from course(s) numbered 1-599, if needed, to reach 60 degree-applicable units.

ENGINEERING TECHNOLOGY - CERTIFICATE OF ACHIEVEMENT

Plan Code: 3521

The Certificate of Achievement in Engineering Technology provides students with a fundamental knowledge of the, engineering technology field, engineering design, principles of engineering technology, digital electronics technology and computer integrated manufacturing. This certificate program develops students' critical thinking skills through applying the principles of engineering to solve design, manufacturing and automation problems in the field. Students will be able to create and innovate on products and manufacturing processes by, recognizing, analyzing real world processes to improve process to eliminate waste in lean manufacturing settings.

Program Student Learning Outcomes

- Apply principles of engineering technology to design problems and constraints.
- Create and design robotic tools using automated equipment.

Program Requirements

Code Number	Course Title	Units
REQUIRED COURSES		
ADMT 50	Advanced Manufacturing, Introduction	3
CAD 51	Mechanical Drafting, Intermediate	2
CAD 60	Geometric Dimensioning and Tolerancing	3
ELECT 230A	Robotics Technology - Design	2
ELECT 230B	Robotics Technology - Integration	2
ELECT 231	Electro-Hydraulics and Pneumatic Systems	2
ETEC 10	Introduction to Engineering Technology	1
ETEC 20	Introduction to Engineering and Design	2.5
ETEC 30	Principles of Engineering Technology	2.5
ETEC 40	Electronics for Engineering Technology	2.5
ETEC 60	Material Science for Engineering Tech	3
MTFAB 280	Introduction to Robotic Welding	2.5
Total Units		28

ENGINEERING AUTOMATION TECHNOLOGY - CERTIFICATE OF ACHIEVEMENT

Plan Code: 3522

The Engineering Automation Technology certificate provides students the knowledge and training they need to enter a specialized career or enhance their skills for advancement in their job. Coursework completed while earning a Certificate can also be applied to an Associate Degree. The Engineering Automation Certificate provides a student the necessary skills for an entry level/internship opportunity in the automation field with a focus design, production and control of automation tools and equipment.

Program Student Learning Outcomes

- Create and design robotic tools using automated equipment.

Program Requirements

Code Number	Course Title	Units
REQUIRED COURSES		
ADMT 50	Advanced Manufacturing, Introduction	3
CAD 51	Mechanical Drafting, Intermediate	2
ELECT 230A	Robotics Technology - Design	2
ELECT 230B	Robotics Technology - Integration	2
ELECT 231	Electro-Hydraulics and Pneumatic Systems	2
ETEC 60	Material Science for Engineering Tech	3
MTFAB 280	Introduction to Robotic Welding	2.5
Total Units		16.5