

## ENGINEERING

### Associate in Science Degree

The Associate in Science in Engineering is designed to provide lower division education to students planning to major in engineering and who may pursue a baccalaureate degree. Students who complete the Associate in Science will be able to demonstrate aptitude for analysis and problem-solving using scientific principles.

### Program Learning Outcomes

Upon successful completion of this program a student will be able to:

- Identify and solve environmental problems
- Apply fundamental science and engineering in an integrative fashion, to effectively work and solve problems at the interface of mathematics, science, engineering and technology
- Demonstrate effective oral and written communication skills
- Apply diverse techniques, methods, and tools towards the solution of engineering problems
- Apply the engineering process and design-driven research
- Conduct independent work as well as teamwork
- Identify and apply ethical principles and standards

### Major Core Requirements (21 units)

Course Number	Course Title	Units
CHEM001A	General Chemistry	5 units
ENGR010	Introduction to Engineering	4 units
ENGR020	Engineering Graphics	4 units
ENGR025	Introduction to Materials	3 units
PHYS004A	Engineering Physics - Mechanics	5 units

### Major Electives (6-7 units)

Course Number	Course Title	Units
ENGR021	Intro Computing for Scientists and Engineers	3 units
ENGR060	Programming and Problem-Solving in MATLAB	3 units
ENGR098	Circuit Analysis	4 units
ENGR099	Statics/Vector Mechanics	3 units

Total Major Units: 27-28 units

To be awarded an Associate Degree, a student must:

1. Achieve a grade of "C" or better in the major requirements.
2. Completion of WVC, CSU-Breadth, or IGETC General Education patterns. Students whose goal is to obtain a bachelor's degree should complete the CSU-Breadth or IGETC General Education pattern.
3. Complete additional degree applicable units to meet the minimum 60-unit Associate Degree requirements.