

ENGINEERING: CIVIL ENGINEERING EMPHASIS – ASSOCIATE IN SCIENCE DEGREE

Top Code:

0901.00

The Associate in Science in Engineering: Civil Engineering Emphasis provides a strong preparation for students planning to transfer to a 4-year university and major in Civil Engineering. The curriculum includes fundamental engineering and science core courses as well as required lower-division courses in Civil Engineering.

Please Note: *The courses that universities and colleges require for transfer vary. When selecting courses for transfer purposes, students should consult with Counseling Services to determine the particular transfer requirements of specific transfer institutions.*

Program Outcomes

- Develop technical solutions to civil engineering problems using principles of mathematics, science, and engineering.
- Analyze and interpret empirical data to provide a basis for solutions to civil engineering problems.
- Communicate orally and in writing the results of experiments, projects, and data analysis.

Requirements for the Major

Code	Title	Units
CHEM 001A	GENERAL CHEMISTRY AND CHEMICAL ANALYSIS I	5
MATH 005A	SINGLE VARIABLE CALCULUS I or MATH 005A# HONORS SINGLE VARIABLE CALCULUS I	5
MATH 005B	SINGLE VARIABLE CALCULUS II or MATH 005B# HONORS SINGLE VARIABLE CALCULUS II	5
MATH 005C	MULTIVARIABLE CALCULUS or MATH 005C# HONORS MULTIVARIABLE CALCULUS	5
MATH 055	DIFFERENTIAL EQUATIONS or MATH 055H HONORS DIFFERENTIAL EQUATIONS	4
PHYS 008A	PHYSICS FOR SCIENTISTS AND ENGINEERS I: MECHANICS or PHYS 001A PHYSICS FOR SCIENTISTS AND ENGINEERS I: MECHANICS	5
PHYS 008B	PHYSICS FOR SCIENTISTS AND ENGINEERS II: WAVES, ELECTRICITY & MAGNETISM or PHYS 001C GENERAL PHYSICS	5
ENGR 001A	SURVEYING or ENGR 016 ENGINEERING CIRCUITS	3
ENGR 002	ENGINEERING GRAPHICS	3
ENGR 010	INTRODUCTION TO ENGINEERING	2

ENGR 011	STATICS	3
ENGR 014	MATERIALS OF CONSTRUCTION	3
ENGR 018	INTRODUCTION TO NUMERICAL ANALYSIS	3
Total Units		51

Recommended Electives

Code	Title	Units
ENGR 012	DYNAMICS	3
ENGR 013	STRENGTH OF MATERIALS	3
ENGR 016L	ENGINEERING CIRCUITS LABORATORY	1

General Education Requirements for the Associate in Science Degree

- General Information (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/>)
- PCC Local Gen Ed (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#pcclocaltext>)
- CSU Breadth (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#csubreadthtext>)
- IGETC (<https://curriculum.pasadena.edu/academic-programs-leading-degree-certificate/#igetctext>)

Visit the Program Mapper (<https://pasadena-city.programmapper.ws/academics/interest-clusters/35afad1b-8598-4ecf-a320-0ed4834a7df8/programs/d5a0e3ca-f281-ac92-f40f-910d2a45dd70/>) **for a suggested sequence of courses.**