

## Associate in Science Degree: Engineering

The Engineering program provides curriculum concerned with the fundamentals of mechanics, electrical theory, and materials that can be applied to all disciplines within engineering. The degree concentrates on helping students develop critical thinking skills, a creative imagination, and excellent communication skills to effectively function in the professional environment. Most careers in engineering require a baccalaureate or graduate degree. Career options include: mechanical engineer, civil engineer, computer engineer, aerospace engineer, biomedical engineer, automotive engineer, and manufacturing engineer.

Degree Student Learning Outcome:

Students will be able to interpret, analyze, and evaluate engineering concepts.

Program Requirements:

Units Required: 48

	Units:
ENGR-151 Materials of Engineering	3.0
ENGR-152 Statics	3.0
ENGR-260 Electrical Circuits I	3.0
ENGR-260L Electrical Circuits I Laboratory	1.0
CHEM-201 General Chemistry I	6.0
OR	
CHEM-201H General Chemistry I – Honors	6.0
MATH-211 Calculus I	5.0
MATH-212 Calculus II	5.0
MATH-213 Calculus III	5.0
MATH-215 Differential Equations	3.0
PHYSIC-220 Physics for Scientists and Engineers: Mechanics of Solids and Fluids	4.0
PHYSIC-221 Physics for Scientists and Engineers: Electricity and Magnetism	4.0

Plus a minimum of three units from the following:

ENGR-101 Introduction to Engineering	2.0
ENGR-110 Introduction to Engineering Graphics with AutoCAD	3.0
ENGR-114 Solids Modeling for Mechanical Drafting	3.0
ENGR-151L Materials of Engineering Lab	1.0
ENGR-230 Dynamics	3.0
ENGR-240 Strength of Materials	3.0
MATH-214 Linear Algebra	3.0
PHYSIC-222 Physics for Scientists and Engineers: Wave Motion, Heat, Optics and Modern Physics	4.0
SURV-101 Introduction to Land Surveying	4.0

Plus a minimum of three units from the following:

ENGR-220 Programming and Problem-Solving in MATLAB	3.0
CMPSCI-111 Introduction to Algorithms and Programming/Java	3.0
CMPSCI-111L Introduction to Algorithms and Programming Lab	1.0
CMPSCI-235 'C' Programming	3.0