

# PROGRAM OF STUDY

## Engineering Associate in Science

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 minimum of a baccalaureate degree, with a graduate degree in engineering recommended for career advancement. Career options include: mechanical engineer, civil engineer, computer engineer, aerospace engineer, electrical engineer, biomedical engineer, automotive engineer, and manufacturing engineer.

### **Student Learning Outcome:**

Interpret, analyze, and evaluate engineering concepts.

### **Program Requirements:**

		<b>Units</b>
ENGR 151	Materials of Engineering	3 - 0
ENGR 152	Statics	3 - 0
ENGR 153	Electrical Circuits I	4 - 0
CHEM 201	General Chemistry I	6 - 0
	<b>or</b>	
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 & Magnetism	4 - 0

### **Plus a minimum of three units from the following:**

		<b>Units</b>
ENGR 101	Introduction to Science, Engineering, & Technology	2 - 0
ENGR 110	Introduction to AutoCAD	3 - 0
ENGR 114	Solids Modeling for Mechanical Drafting	3 - 0
ENGR 151L	Materials of Engineering Lab	1 - 0
ENGR 155	Dynamics	3 - 0
ENGR 240	Strength of Materials	3 - 0
MATH 214	Linear Algebra	3 - 0
PHYSIC 222	Physics for Scientist & Engineers: Wave Motion, Heat, Optics & Modern Physics	4 - 0
SURV 101	Introduction to Land Surveying	4 - 0

### **Plus a minimum of three units from the following:**

		<b>Units</b>
COMPSCI 111	Introduction to Algorithms & Programming/Java	3 - 0
COMPSCI 111L	Introduction to Algorithms and Programming Lab	1 - 0
COMPSCI 235	'C' Programming	3 - 0

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**Total Units****48**

PID 230