DIVISION OF MATHEMATICS, SCIENCES, AND ENGINEERING

ENGINEERING

ASSOCIATE OF SCIENCE DEGREE

The **Associate of Science Degree in Engineering** will prepare those students interested in laying a foundation for further study and for a bachelor's degree in an engineering field from a four-year college or university.

This degree program is for the Associate of Science Degree in Engineering only and fulfills many of the requirements and foundation courses for transfer to baccalaureate engineering-related majors, but does not satisfy all transfer requirements for specific institutions. Students should consult with a counselor for major preparation for specific universities and colleges.

To acquire the **Associate of Science Degree in Engineering**, students must complete the required major courses below with a grade of "C" or better along with one of the following:

- o RHC GE and Proficiency requirements
- o CSU GE (California State University General Education Breadth)
- o IGETC (Intersegmental General Education Transfer Curriculum)

	Required Courses	Units	N	IP	С
MATH 190/	H *Calculus I/Honors	4			
MATH 191	*Calculus II	4			
PHY 211	*Physics for Scientists & Engineers I	4			
PHY 213	*Physics for Scientists & Engineers III	4			
Plus a minimum of 20 units from one of the following areas of specialization, including at least 3 units of Engineering courses listed in that area.					
	pecialization:				
	al, Aerospace, and Manufacturing Engineering				
	T 100 Intro. to Engineering	2			
ENGR 141	*Materials Science Engineering	3			
and ENGR 141L	*Materials Science Engineering Lab	1			
ENGR 1412	*Computational Methods in MATLAB/Octave	4			
ENGR 217	*Electric Circuit Analysis	3			
ENGR 217L	* Electric Circuit Analysis Lab	1			
ENGR 235	*Engineering Mechanics: Statics	3			
ENGR 240	*Strength of Materials	3			
ENGR 245	*Engineering Mechanics: Dynamics	3			
ENGT 122	Intermediate Engineering Design: Geometric Dimensioning & Tolerancing	3			
CHEM 130	*General Chemistry I	5			
CHEM 140	*General Chemistry II	5			
MATH 250	*Calculus III	4			
MATH 251	*Linear Algebra and Differential Equations	5			
OR MATH 260 OR	*Linear Algebra	4			
MATH 270 OR	*Differential Equations	4			
MATH 260 AND	*Linear Algebra	4			

MATH 270	*Differential Equations	4		
PHY 212	*Physics for Scientists & Engineers – II	4		
Electrical E	ngineering			
ENGR/ENG	T 100 Introd. to Engineering	2		
ENGR 141	*Materials Science Engineering	3		
and	*NA substitute Caisa a a Francis a a sissa Lada	,		
ENGR 141L ENGR 212	*Materials Science Engineering Lab *Computational Methods in MATLAB/Octave	1 4		
ENGR 217	*Electric Circuit Analysis	3		
ENGR 217L	* Electric Circuit Analysis Lab	1		
ENGR 235	*Engineering Mechanics: Statics	3		
CIT 125	Introduction to C++ Programming	4		
or		•		
CIT 127	*Python Programming I	3		
or CIT 135	Introduction to Java Programming	4		
CHEM 130	*General Chemistry I	5		
MATH 250	*Calculus III	4		
MATH 251	*Linear Algebra and Differential Equations	5		
OR		_		
MATH 260 OR	*Linear Algebra	4		
MATH 270	*Differential Equations	4		
OR	·			
MATH 260 AND	*Linear Algebra	4		
	*Differential Equations	4		
	*Physics for Scientists & Engineers – II	4		
Civil Engine	eering			
ENGR/ENG	T 100 Intro. to Engineering	2		
ENGR 141	*Materials Science Engineering	3		
and ENGR 141L	*Materials Science Engineering Lab	1		
ENGR 212	*Computational Methods in MATLAB/Octave	4		
ENGR 217	*Electric Circuit Analysis	3		
ENGR 235	*Engineering Mechanics: Statics	3		
ENGR 240	*Strength of Materials	3		
ENGR 245	*Engineering Mechanics: Dynamics	3		
CIV 140	Civil Engineering & Construction Fundamentals	4		
CIV 142	Introduction to Land Surveying and GPS	4		
CHEM 130	*General Chemistry I	5		
MATH 250	*Calculus III	4		
MATH 251	*Linear Algebra and Differential Equations	5		
OR		_		
MATH 260 OR	*Linear Algebra	4		
MATH 270	*Differential Equations	4		
OR		_		
MATH 260	*Linear Algebra	4		
AND			1	

MATH 270				
	*Differential Equations	4		
	*Physics for Scientists & Engineers – II	4		
Computer,	Software Engineering			
ENGR/ENG	T 100 Intro. to Engineering	2		
ENGR 212	*Computational Methods in MATLAB/Octave	4		
ENGR 217	*Electric Circuit Analysis	3		
ENGR 217L	* Electric Circuit Analysis Lab	1		
CIT 125	Introduction to C++ Programming	4		
or	laka di akan ka Jawa Da awasanin s			
CIT 135	Introduction to Java Programming *Python Programming I	3		
CIT 128	*Python Programming II	3		
CS 152	*Discrete Structures	3		
MATH 250	*Calculus III	4		
MATH 251 OR	*Linear Algebra and Differential Equations	5		
MATH 260	*Linear Algebra	4		
OR	G			
MATH 270 OR	*Differential Equations	4		
MATH 260	*Linear Algebra	4		
AND	•			
	*Differential Equations	4		
	*Physics for Scientists & Engineers – II	4		
	Engineering			
ENGR/ENG		2		
ENGR 212	*Computational Methods in MATLAB/Octave	4		
ENGR 217	*Electric Circuit Analysis	3		
	* Electric Circuit Analysis Lab	1		
ENGR 217L				
ENGR 217L ENGR 235	*Engineering Mechanics: Statics	3		
	*Engineering Mechanics: Statics *General Chemistry I	3 5		
ENGR 235				
ENGR 235 CHEM 130	*General Chemistry I	5		
ENGR 235 CHEM 130 CHEM 140	*General Chemistry I *General Chemistry II	5		
ENGR 235 CHEM 130 CHEM 140 CHEM 230	*General Chemistry I *General Chemistry II *Organic Chemistry I	5 5 5		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231	*General Chemistry I *General Chemistry II *Organic Chemistry II *Organic Chemistry II	5 5 5 5		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR	*General Chemistry I *General Chemistry II *Organic Chemistry I *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations	5 5 5 5 4 5		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260	*General Chemistry I *General Chemistry II *Organic Chemistry I *Organic Chemistry II *Calculus III	5 5 5 5 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR	*General Chemistry I *General Chemistry II *Organic Chemistry I *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra	5 5 5 5 4 5 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260	*General Chemistry I *General Chemistry II *Organic Chemistry I *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations	5 5 5 5 4 5		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260	*General Chemistry I *General Chemistry II *Organic Chemistry I *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra	5 5 5 5 4 5 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260 AND	*General Chemistry I *General Chemistry II *Organic Chemistry II *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra *Differential Equations *Linear Algebra	5 5 5 4 5 4 4 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260 AND MATH 270	*General Chemistry I *General Chemistry II *Organic Chemistry II *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra *Differential Equations *Linear Algebra *Differential Equations	5 5 5 4 5 4 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260 AND MATH 270	*General Chemistry I *General Chemistry II *Organic Chemistry II *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra *Differential Equations *Linear Algebra	5 5 5 4 5 4 4 4 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260 AND MATH 270 PHY 212	*General Chemistry II *General Chemistry II *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra *Differential Equations *Differential Equations *Differential Equations *Physics for Scientists & Engineers – II	5 5 5 5 4 4 4 4 4		
ENGR 235 CHEM 130 CHEM 140 CHEM 230 CHEM 231 MATH 250 MATH 251 OR MATH 260 OR MATH 270 OR MATH 260 AND MATH 270 PHY 212 Total majo	*General Chemistry I *General Chemistry II *Organic Chemistry II *Organic Chemistry II *Calculus III *Linear Algebra and Differential Equations *Linear Algebra *Differential Equations *Linear Algebra *Differential Equations	5 5 5 4 5 4 4 4 4		