

# Mechanical Engineering

Bachelor of Science Degree

Stephen F. Austin State University



Fall Semester				Spring Semester			
Year 1	ENGR 1301	Foundations in Engineering I	3	ENGR 1302	Foundations in Engineering II	3	
	MATH 2211/2	Pre-Calculus (MTH 141 & 142) *	4	MATH 2313	Calculus I	4	
	PHYS 1308	Intro to PHY/EGR (Recommended) *	3	CSCI 1302	Computer Science	3	
	ENGL 1301	English	3	ENGL 1302	English	3	
	HIST 1301	U.S. History	3	HIST 1302	U.S. History	3	

Fall Semester				Spring Semester			
Year 2	PHYS 2325	Technical Physics I	4	PHYS 2326	Technical Physics II	4	
	MATH 2314	Calculus II	4	MATH 3315	Calculus III	4	
	ENGR 2305	Linear Circuit Analysis I	4	ENGR 1310	Geom. Modeling for Mech. Design	3	
	GOVT 2305	Political Science	3	GOVT 2306	Political Science	3	
				Core <sup>2</sup>	Language, Philosophy, & Culture <sup>2</sup>	3	

Fall Semester				Spring Semester			
Year 3	ENGR 2401	Engineering Statics	4	ENGR 3421	Engineering Dynamics	4	
	ENGR 3301	Principles of Thermodynamics	3	MATH 3320	Differential Equations	3	
	ENGR 4145	Mechanical Engineering Lab I	1	ENGR 4146	Mechanical Engineering Lab II	1	
	ENGR 3316	Heat Transfer	3	SPCH 1315	Communication <sup>4</sup>	3	
	CHEM 1311	General Chemistry I	4	Core <sup>3</sup>	ECO/PSY/SOC <sup>3</sup>	3	

Fall Semester				Spring Semester			
Year 4	ENGR 3305	Mechanics of Materials	3	ENGR 3345	Fluid Mechanics	3	
	ENGR 4260	Engineering Captone Design I	2	ENGR 4270	Engineering Captone Design II	2	
	ENGL 2311	Technical Writing or Equivalent	3	ENGR 4342	Materials Science	3	
	CHEM 1312	General Chemistry II	4	ENGR 4341	Machine Design	3	
	ENGR 4343	Mechanical Vibrations	3	Core <sup>1</sup>	ART/MUS/THR/DAN/MHL <sup>1</sup>	3	

Note: Students will be required to repeat pre-requisite courses when the grade is below a C. A minimum of 42 semester hours of work must be completed at SFA, of which at least 36 hours must be advanced. A maximum of 66 academic hours plus 4 hours of kinesiology activity from junior/community colleges may apply towards a bachelor's degree. Students can make up for the difference in the number of hours by taking independent study courses at SFA. Contact your SFA advisor for alternative courses to the core courses listed.

\* There are several ways to meet the pre-requisite requirements for Calculus I:

- Take Pre-Calculus A & B during 1 or 2 semesters depending on ACT or SAT scores. (MTH 141,142 = MATH 2412)
- Take Algebra, Trigonometry, and Analytical Geometry. (MTH 138,133,139 = MATH 1314,1316,2412)
- Received AP credit or take a CLEP exam in the SFA Testing Services center.

Students that are qualified to take calculus their first semester at SFA can choose to replace MTH 141, MTH 142, and PHY 108 with other courses to bring the degree total to 120 credit hours. Students are encouraged to take math and chemistry courses during the summer to reduce fall and spring semester loads and to decrease the time required for a degree.

(1) Options include ART 280; MUS 140; THR 161; MHL 245; DAN 140 (ARTS 1301; MUSI 1306; DRAM 1310; MUSI 1307; DANC 2303)

(2) Options include ENG 200-233H; HIS 151,152; PHI 153,223 (ENGL 2322-233; HIST 2311-2312; PHIL 1301, 2306)

(3) Options include ECO 231,232; PSY 133; SOC 137 (ECON 2301,2302; PSYC 2301; SOCI 1301)

(4) Options include COM 111,170,215 (SPCH 1315,1318)