

BACHELOR OF SCIENCE (B.S.) MAJOR IN MANUFACTURING ENGINEERING (MECHANICAL SYSTEMS CONCENTRATION)

**Minimum required: 129
semester credit hours**

General Requirements

1. The general education core curriculum courses are listed in the degree plan below along with the statewide component code number. See the General Education Core Curriculum (<http://mycatalog.txstate.edu/undergraduate/general-education-core-curriculum>) section of this catalog for the Texas State requirements and options in the core curriculum, including Honors courses.
2. Majors must complete a minimum of 36 advanced hours (3000 or 4000 level courses).
3. Nine semester credit hours must be writing intensive (WI).
4. If two years of the same language are taken in high school, then no additional language hours will be required for the degree. In the absence of such high school language, two semesters of the same modern language must be taken at the college level.
5. The Manufacturing Engineering degree programs include all the courses required for an Applied Mathematics minor.

Course Requirements

				Freshman
First Semester	Hours	Second Semester	Hours	
CHEM 1335 or 1341	3	ENGR 2300	3	
CHEM 1141	1	MATH 2472	4	
ENGR 1313	3	PHYS 1430 (Life & Physical Sciences Component Code 030)	4	
MATH 2471 (Mathematics Component Code 020)	4	COMM 131C (or ENG Literature Component Area Option Code 090)	3	
US 1100	1	ENG 1320 (Communication Component Code 010)	3	
ENG 1310 (Communication Component Code 010)	3			
15		17		

				Sophomore	
First Semester	Hours	Second Semester	Hours	Summer	Hours
MFGE 2332	3	CS 1342	3	MATH 3377	3
MATH 3323	3	IE 3330	3	PHIL 1305 or 1320 (Language, Philosophy & Culture Component Code 040)	3
IE 3320	3	ENGR 3375	3		
PHYS 2425 (Life & Physical Sciences Component Code 030 and Component Area Option Code 090/093)	4	ECO 2301 (Social & Behavioral Sciences Component Code 080)	3		
HIST 1310 (American History Component Code 060)	3	HIST 1320 (American History Component Code 060)	3		
16		15		6	
				Junior	
First Semester	Hours	Second Semester	Hours		
MFGE 3316	3	MFGE 4365	3		
ENGR 3311	3	MFGE 4396	3		
ENGR 3315	3	IE 3360	3		
ENGR 3373	3	PHYS 3315	3		
POSI 2310 (Government/Political Science Component Code 070)	3	ART 2313, DAN 2313, MU 2313, or TH 2313 (Creative Arts Component Code 050)	3		
15		15			
				Senior	
First Semester	Hours	Second Semester	Hours		
MFGE 4357	3	MFGE 4355	3		
MFGE 4390	3	MFGE 4376	3		
MFGE 4395	3	MFGE 4391	3		
IE 4355	3	MFGE Electives ¹	3		

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MFGE Electives ¹	3 POSI 2320 (Government/ Political Science Component Code 070)	3
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	15	15
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Total Hours: 129

¹ A minimum of six (6) hours of advanced Manufacturing Engineering electives chosen from the list below are required.

Advanced Manufacturing Engineering Electives

Code	Title	Hours
MFGE 4367	Polymer Properties and Processing	3
MFGE 4392	Microelectronics Manufacturing I	3
MFGE 4394	Microelectronics Manufacturing II	3
MFGE 4399A	Reverse Engineering and Rapid Prototyping	3
MFGE 4399B	Introduction to Reinforced Polymer Nanocomposites in Industrial Applications	3
MFGE 4399C	Introduction to Industrial Robotics	3
TECH 4330	Foundry & Heat Treatment	3
ENGR 3190	Cooperative Education	1
ENGR 4395	Independent Studies in Engineering	3