

**General Engineering B.S. with Mechanical Engineering Minor**

For students entering Fall 2024 | 2025

First Year - Fall Semester			First Year - Spring Semester			
Course	Title	Credits	Course	Title	Credits	
CHEM 121/L CORE course 9	General Chemistry I / CORE 9 NatSci	4	CHEM122	General Chemistry II	4	
MATH 121 CORE course 8	Calculus I / CORE 8 Quant	3	MATH122	Calculus II	3	
ENGR 101 CORE course 1	Engineering CORE 1 (Foundations)	3	PHYS121	General Physics I	4	
CORE course 5	History	3	ENGR102	Introduction to Engineering II	1	
CORE course 3	WRIT 102, Research Writing	3	CORE course 7	Literature	3	
ENGR192	Freshman Engineering Seminar	0	CORE course 2	CORE course 2	3	
CORE 103	Community Enrichment Series	0	ENGR193	Freshman Engineering Seminar	0	
			CORE 104	Community Enrichment Series	0	
	<b>Total</b>	<b>16</b>		<b>Total</b>	<b>18</b>	
Second Year - Fall Semester			Second Year - Spring Semester			
Course	Title	Credits	Course	Title	Credits	
MATH221	Calculus III	3	MATH306	Differential Equations I	3	
PHYS122/L	General Physics II	4	ENGR202	Engineering Dynamics	3	
ENGR210/L	Programming for Eng (1 hr lec, 2 hr lab)	2	ENGR315/L	Mechanics of Materials (3 hr L)	3	
ENGR201	Engineering Statics	3	ENGR325/L	Fundamentals of Electrical Eng (2 hr L)	4	
ENGR250	Solid Modeling and CAD	3	ENGR279	Sophmore Engr. Design for Service	2	
CORE course 6	Social Science (Human Geography if approved)	3	CORE course 11	Religion or Philosophy	3	
ENGR292	Sophomore Engineering Seminar	0	ENGR293	Sophomore Engineering Seminar	0	
	<b>Total</b>	<b>18</b>		<b>Total</b>	<b>18</b>	
Third Year - Fall Semester			Third Year - Spring Semester			
Course	Title	Credits	Course	Title	Credits	
MATH322	Linear Algebra	3	ENGR335	Engineering Instrumentation (1 lect 1 lab)	1	
ENGR301/L	Fluid Mechanics	4	ENGR375	Heat Transfer	3	
ENGR321	Applied Engr. Thermodynamics	3	ECON 101 CORE course 4	Economics / CORE II, Civic responsibility	3	
ENGR350	Materials Science	3	ENGR435/L	Control Theory (3 hr L)	4	
ENGR379	Junior Engr. Design for Service	3	ENVE421 or 422	Energy conversion I or II	3	
ENGR392	Junior Engineering Seminar	0	ENGR497	Capstone Design Proposal	1	
			ENGR393	Junior Engineering Seminar	1	
	<b>Total</b>	<b>16</b>		<b>Total</b>	<b>16</b>	
Senior Year - Fall Semester			Senior Year - Spring Semester			
Course	Title	Credits	Course	Title	Credits	
ENGR427	Power/Thermal Systems Lab	1	ENGR498 CORE course 15	Capstone Design / CORE 15 (needs approval)	3	
ENGR415	Senior Lab	3	ENGR407 CORE course 14	Sustainability in Engineering Design / CORE III / CORE 14	3	
CORE course 12	Fine Arts	3	ENGR410/L	Applied Finite Element and Volume Modeling (3 hr lab)	4	
ENGR445	Mechanisms, Linkages, and Design of Machine Elements	3	ENGR425	Advanced Thermal and Fluid Systems	3	
CORE course 13	Ethics	3	ENGR493	Senior Engineering Seminar	0	
CORE course 10	Language / Culture	3				
ENGR492	Senior Engineering Seminar	0				
	<b>Total</b>	<b>16</b>		<b>Total</b>	<b>13</b>	
	Courses for CORE curriculum		<b>Total credits</b>			<b>131</b>
17	Courses for the minor					