

Updated 8/27/2019

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Intro. to Industrial & Manufacturing Engineering <b>IME 101 (1)</b>	Intro. To Design & Manufacturing <b>IME 144 (4)</b> (Recom: IME 140, ME 129)	Manufacturing Processes: Materials Joining <b>IME 142 (2)</b>	Materials Engineering <b>MATE 210 (3)</b> (CHEM 111, 124, or 127; Recom: MATE 215†)	Process Improvement Fundamentals <b>IME 223 (4)</b> (MATH 141; Recom: IME 101)		Fundamentals of Manufacturing Engineering <b>IME 330 (4)</b> (IME 141 or IIP 341; IME 142; CE 204 or CE 208; MATE 210; MATE 215; IME 144 or IME 143; ME 251)	Computer-Aided Manufacturing I <b>IME 335 (4)</b> (MATH 244; IME 144 or 143 & ME 251; & CSC 101, 231, 232, or 234)	Manufacturing Process & Tool Engineering <b>IME 450 (4)</b> (Math 244, IME 330; Recom: IME 335)	Senior Design Project I <b>IME 481 (2)<sup>1,2</sup></b> (Sr Standing & Instr. consent)	Senior Design Project II <b>IME 482 (2)<sup>1,2</sup></b> (IME 481)	Senior Design Project III <b>IME 483 (2)<sup>1,2</sup></b> (IME 482)
Graphics Communication & Modeling <b>IME 140 (2)</b>		Manufacturing Processes: Net Shape <b>IME 141 (1)</b>	Materials Laboratory I <b>MATE 215 (1)</b> (MATE 210†)	Computer Programming for Scientists and Engineers <b>CSC 232 (3)</b> (MATH 118 or equiv.)	Probability and Statistics for Engineers and Scientists <b>STAT 321 (4)</b> (MATH 142) [B6]	Test Design & Analysis in Manufacturing Engineering <b>IME 327 (4)</b> (STAT 321 w/min C- or Instr. consent; or ME 236)	Manufacturing Systems Integration <b>IME 342 (4)</b> (MATH 241 & IME 223; Recom: STAT 321)	Manufacturing Automation <b>IME 356 (4)</b> (EE 321)	Product-Process Design <b>IME 418 (4)</b> (Sr Standing; Recom: IME 450)	Supply Chain & Logistics Management <b>IME 417 (4)</b> (IME 342 or 410)	Approved Technical Elective <b>(4)</b> ***
Basic Electronics Manufacturing <b>IME 156 (2)</b>	General Physics IA <b>PHYS 141 (4)</b> (MATH 141 w/min C-, MATH 142 or 182†) [Add'l Area B]	General Physics II <b>PHYS 132 (4)</b> (PHYS 131, HNRS 131, or PHYS 141)	General Physics III <b>PHYS 133 (4)</b> (PHYS 131, HNRS 131, or PHYS 141; MATH 142; Recom: MATH 241)	Engineering Statics <b>ME 211 (3)</b> (PHYS 131 or 141, MATH 241†)	Engineering Dynamics <b>ME 212 (3)</b> (MATH 241; ME 211 or ARCE 211)	Electric Circuit Theory <b>EE 201 (3)</b> (MATH 244 & PHYS 133)	<b>Choose One:</b> <b>IME 314 (3)</b> OR <b>IME 315 (3)</b> *		Quality Engineering <b>IME 430 (4)</b> (IME 326, 327, 503, STAT 302 or 312)	Approved Technical Elective <b>(4)</b> ***	Approved Technical Elective <b>(4)</b> ***
Calculus I <b>MATH 141 (4)</b> * [B1]	Calculus II <b>MATH 142 (4)</b> (MATH 141 w/min C-) [B1]	Calculus III <b>MATH 143 (4)</b> (MATH 142 w/min C-) [Add'l Area B]	Calculus IV <b>MATH 241 (4)</b> (MATH 143)	Linear Analysis I <b>MATH 244 (4)</b> (MATH 143)	Take concurrently: <b>BIO 213 (2) &amp; BMED 213 (2)</b> (MATH 142; Recom: CHEM 124) [B2]	Electric Circuits Laboratory <b>EE 251 (1)</b> (Concurrent: EE 201)	Thermodynamics I <b>ME 302 (3)</b> (ME 212 & PHYS 132)		Approved Technical Elective <b>(3)</b> ***	Approved Technical Elective <b>(2)</b> ***	
General Chem for Phys Sci & Eng I <b>CHEM 124 (4)*</b> [B3/B4]	General Chem for Phys Sci & Eng II <b>CHEM 125 (4)</b> (CHEM 124)										
Expository Writing <b>ENGL 133/134 (4)**</b> [A1]											
Oral Communication <b>COMS 101/102 (4)**</b> [A2]											
			Technical Writing for Engineers <b>ENGL 149 (4)</b> [A3] (Completion of GE A1 with a C- or better; Recom: Completion of GE A2) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years								
			Graduation Writing Requirement <b>GWR*</b> (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)								
17	16	15	16	18	15	15	17	16	17	16	14
										<b>TOTAL:</b>	<b>192</b>

**Notes:**

**MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET**

\* Refer to current catalog for prerequisites.

\*\* One course from each of the following GE areas must be completed: A1, A2, C1, C2, C3, C4, D1, D2, D3, E (formerly GE D4). C4 should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: C3, C4, D1, D3, or E.

\*\*\* 13 units of Technical Electives required. Select from Category A (8-13 units) & B (0-5 units). See catalog for course options. Consultation with advisor recommended prior to selecting courses. Courses may not be used to satisfy other major, support, or general education requirements (no double counting of coursework).

† Course can be taken previously or concurrently.

<sup>1</sup> ENGR 459, 460, 461 (6 units) or ENGR 463, 464, 465 (6) may substitute for IME 481, 482, 483 (6)

<sup>2</sup> ENGR 463, 464, 465 (6 units) or ENGR 463, 464, 465 (6) may substitute for IME 481, 482, 483 (6)

**Legend:**

Course Title	Major (74)
Course # (Units)	Support (78)
(Prerequisite)	
[GE Area]	General Ed. (40)