

# Product Design and Manufacturing Engineering



Catalog Term: Fall 2019

Total credit hours: 128

FRESHMAN			
FALL	Hr	SPRING	Hr
ENGL 101 * College English I Pre-req: See Course Catalog	3	ENGL 102 * College English II Pre-req: ENGL 101 with "C" or better	3
MATH 242 Calculus I Pre-req: MATH 111 and 123 with "C" or better or MATH 112 with "C" or better	5	MATH 243 Calculus II Pre-req: MATH 242 with "C" or better	5
CHEM 211 General Chemistry I Co-req: MATH 111	5	PHYS 313+315 Physics for Scientist I & Lab Co-req: MATH 243 with "C" or better	5
IME 222 and IME 222L Engineering Graphics & Lab Pre-req: MATH 123 or equivalent with "C" or better	3	ME 250 Materials Engineering Pre-req: CHEM 211 & MATH 242 both with "C" or better	3
		ME 251 Materials Engineering Lab Co-req: ME 250	1
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>17</b>

SOPHOMORE			
FALL	Hr	SPRING	Hr
COMM 111 * Public Speaking	3	MATH 555 Differential Equations Pre-req: MATH 243 with "C" or better	3
MATH 451 Computational Mathematics Using MATLAB Pre-req: MATH 243 with "C" or better	3	PHYS 314+316 Physics for Scientist II & Lab Pre-req: MATH 243 with "C" or better and PHYS 313 (Offered Fall and Spring only)	5
AE 223 Statics Pre-req: PHYS 313 with "C" or better, Co-req: MATH 243	3	IME 255 * Engineering Economy Coreq: MATH 242 (Offered Fall and Spring only)	3
IME 254 Engineering Probability and Statistics I Pre-req: MATH 243 with "C" or better (Offered Fall and Spring only)	3	AE 333 Mechanics of Materials Pre-req: AE 223 with "C" or better, Co-req: MATH 344 or MATH555	3
EE 282 Circuits I Co-req: MATH 243	4	IME 258 and IME 258L Manufacturing Methods I Pre-req: MATH 123 with "C" or better (Offered Fall and Spring only)	4
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>18</b>

JUNIOR			
FALL	Hr	SPRING	Hr
PHIL 385 Engineering Ethics Pre-req: Junior or senior standing	3	IME 410 Robotics Tech Pre-req: IME 361 with "C" or better (Spring only)	3
IME 554 Statistical Quality Control Pre-req: IME 254 (Fall only)	3	IME 558 Manufacturing Methods II Pre-req: IME 258 and ME 250 with "C" or better (Spring only)	4
IME 361 Industrial Controls and Instrumentation Pre-req: EE 282 with "C" or better (Fall only)	4	IME 672 Manufacturing of Composites Pre-req: ME250, ME251, and AE 333 with "C" or better (Spring only)	3
IME 425 Kinematic and Dynamic Design Pre-req: IME 222, IME 258, and PHYS 313 with "C" or better (Offered Fall only)	3	IME 625 Robust Product Design Pre-req: AE 333 and IME 425 with "C" or better (Offered Spring only)	3
IME 553 Production Systems Pre-req: IME 254 with "C" or better, Co-req: IME 255 (Offered Fall and Spring only)	3	Technical Elective <b>Note b</b>	3
Engineer of 2020 Requirement (1 of 3) See notes		Engineer of 2020 Requirement (2 of 3) See notes	
<b>Total Hours</b>	<b>16</b>	<b>Total Hours</b>	<b>16</b>

SENIOR			
FALL	Hr	SPRING	Hr
General Education* H/FA/S&BS <b>Note a</b>	3	Technical Elective <b>Note b</b>	2
General Education* H/FA/S&BS <b>Note a</b>	3	General Education* H/FA/S&BS <b>Note a</b>	3
Technical Elective <b>Note b</b>	3	General Education* H/FA/S&BS <b>Note a</b>	3
Technical Elective <b>Note b</b>	3	General Education* H/FA/S&BS <b>Note a</b>	3
Engineer of 2020 Requirement (3 of 3) See notes		IME 590 Industrial Engineering Design I Pre-req: IME 553 with "C" or better and Department Consent (Offered Fall and Spring only)	3
<b>Total Hours</b>	<b>12</b>	<b>Total Hours</b>	<b>14</b>

SUMMER	Hr
IME 676 Aircraft Manufacturing and Assembly Pre-req: IME 258 with "C" or better (Summer only)	3

Notes: Students admitted after fall 2007 must fulfill the Engineer 2020 requirements.

Last Updated: 3/22/2018

\* May be available as an online or hybrid class.

P: Prerequisite, see catalog

a. Humanities/Fine Arts/Social & Behavioral Science Courses must be from an approved list which appears in the Schedule of Courses and/or the community college Transfer Guides.

b. Check with Advisor for specific courses to fulfill electives.