

# Industrial Engineering

Catalog Term: Fall 2019

Total credit hours: 125

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
General Education* H/FA/S&BS Recommended: ECON 201 Principles of Macro Economics	3	PHYS 313 Physics for Scientist I Co-req: MATH 243 with "C" or better	4
IME 258 and IME 258L Manufacturing Methods I P: MATH 123 with "C" or better (Offered Fall and Spring only)	4	IME 222 and IME 222L Engineering Graphics P: MATH 123 or equivalent with "C" or better	3
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>15</b>

SOPHOMORE			
FALL	Hr	SPRING	Hr
COMM 111 * Public Speaking	3	IME 255 * Engineering Economy Coreq: MATH 242	3
General Education* H/FA/S&BS Recommended: ECON 202 Principles of Micro Economics Pre-req: ECON 201	3	IME 452 Work Systems Pre-req: IME 254 with a "C" or better Co-req: IME 255 (Offered in Spring only)	3
IME 254 Engineering Probability and Statistics I Pre-req: MATH 243 with "C" or better (Offered Fall and Spring only)	3	IME 524 Engineering Probability and Statistics II Pre-req: IME 254 with "C" or better (Offered in Spring only)	3
CS 211 Intro to Program. Pre-req: MATH 111 OR MIS 310 Fund. of Business App. Develop. Pre-req: Junior & Advanced standing OR MATH 451 Comp. Math using MATHLAB Pre-req: MATH 243 with "C" or better	3	IME 550 Operations Research I Pre-req: MATH 511 with "C" or better Co-req: IME 254 (Offered Fall and Spring only)	3
MATH 511 Linear Algebra Pre-req: MATH 243 with a "C" or better	3	PHYS 314 Physics for Scientist II Pre-req: MATH 243 with "C" or better and PHYS 313 (Offered Fall and Spring only)	4
<b>Total Hours</b>	<b>15</b>	<b>Total Hours</b>	<b>16</b>

JUNIOR			
FALL	Hr	SPRING	Hr
General Education* H/FA/S&BS <b>Note a</b>	3	General Education* H/FA/S&BS <b>Note a</b>	3
CHEM 211 General Chemistry I Co-req: MATH 111	5	IME 549 Industrial Ergonomics Pre-req: IME 254 with "C" or better or Department Consent (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	IME 565 System Simulations Co-req: IME 524 and IME 553 (Offered Spring only)	3
IME 556 Information Systems Pre-req: CS 211, MIS 310, or MATH 451 with "C" or better (Offered Fall only)	3	Technical Elective <b>Note b</b>	3
IME 650 Operations Research II Pre-req: IME 550 with "C" or better (Offered Fall 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>17</b>	<b>Total Hours</b>	<b>15</b>

SENIOR			
FALL	Hr	SPRING	Hr
PHIL 385 Engineering Ethics Pre-req: Junior or senior standing	3	General Education* H/FA/S&BS <b>Note a</b>	3
IME 563 Facilities Planning Pre-req: IME 452, IME 550, & IME 553 with "C" or better (Offered Fall only)	3	Math & Science Elective <b>Note b</b>	3
IME 590 Industrial Engineering Design I Pre-req: IME 553 with "C" or better and Department Consent (Offered Fall and Spring only)	3	IME 690 Industrial Engineering Design II Pre-req: IME 590 with "C" or better and Department Consent (Offered Fall and Spring only)	3
IME 554 Statistical Quality Control Pre-req: IME 524 (Offered Fall only)	3	Technical Elective <b>Note b</b>	3
Technical Elective <b>Note b</b>	3	Technical Elective <b>Note b</b>	2
Technical Elective <b>Note b</b>	3	Engineer of 2020 Requirement (3 of 3) See notes	
<b>Total Hours</b>	<b>18</b>	<b>Total Hours</b>	<b>14</b>

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

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

P: Prerequisite

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. Three electives must be IME courses. At least three electives must be from 1 track (options below).

**Track 1- Manufacturing:** IME 361, IME 410, IME 558, IME 676, IME 775, IME 758, IME 767, IME 768, ME 250, ME 251, & IME 672

**Track 2- Supply Chain & Analytics:** IME 664, IME 731, IME 753, IME 754, IME 755, IME 783, IB 400, & DS 625

**Track 3- Systems Engineering:** IME 664, IME 749, IME 759, IME 755, IME 764, IME 767, IME 740, MGMT 460, MIS 600, & MIS 605

**Non-IME technical elective courses:** ACCT 210, ACCT 220, ACCT 310, ACCT 420, ACCT 430, BLAW 431, ECON 201, ECON 202, ECON 660, ENTR 310, ENTR 440, ENTR 605, ENTR 705, IB 333, MGMT 360, MGMT 450, MGMT 462, MGMT 463, MGMT 661, & MGMT 662

**Math & Science elective courses:** CHEM 212, GEOL302, GEOL 310, GEOL 300, BIOL 103, BIOL 106, BIOL 107, MATH 344, MATH 321, MATH 513, MATH 555, PHYS 395, PHYS 517, & STAT 571

**Manufacturing Minor includes:**

IME 222, ME 250/251, IME 258, AE 333, IME 558, IME 576 or IME 676, and 3 additional approved hours. 1 course must be unduplicated from major requirements.