

Degree: Industrial Engineering, B.S.				
Requirement Area	Course	Course Title	Prerequisites	Units
<b>First Semester</b>				
			One from the following: Satisfactory score of 78 or higher on Mathematics Placement Exam, MATH 120 or MATH 125 (either course with grade C- or better).	
LD Major/B4	MATH 130	Calculus I		4
B1/B3 LD Major	CHEM 110	General Chemistry for Engineering		3
A2	ENGL 102			3
LD Major	PHYS 135	Physics for Scientists and Engrs. I		4
			<b>Total:</b>	<b>14</b>
<b>Second Semester</b>				
LD Major	PHYS 136	Physics for Scientists and Engrs. II	MATH 130 and PHYS 135.	4
LD Major	MATH 131	Calculus II	MATH 130 with grade C- or better.	3
LD Major/WII	ENGR 200	Introduction to Engineering and Design		3
LD Major	ENGR 210	Manufacturing Materials and Processes	CHEM 110 and MATH 130.	4
			<b>Total:</b>	<b>14</b>
<b>Third Semester</b>				
A1				3
LD Major	MATH 210	Linear Alg. With Differential Eq	MATH 130.	3
B2/Sustainability Overlay				3
LD Major	ENGR 220	Statics	PHYS 135.	3
UD Major	INDE 330	Engr. Statistics and Prob.	MATH 130.	3
			<b>Total:</b>	<b>15</b>
<b>Fourth Semester</b>				
A3				3
D1/LD Major	PSYC 100	General Psychology		3
LD Major	ENGR 215	Computer Methods in Engr.	MATH 131.	3
LD Major	ENGR 230	Electric Circuits I	PHYS 136 and MATH 210.	3
UD Major	INDE 340	Design of Engr. Experiments	INDE 330 or STAT 316.	3
			<b>Total:</b>	<b>15</b>
<b>Fifth Semester</b>				
Code 1/D2				3
C1				3
UD Major	ENGR 320	Engr. Economics	MATH 130.	3
B6/UD Major	INDE 390	Human Factors and Work Methods	INDE 330 or STAT 100; and completion of GE A1, A2, A3, and B4.	4
UD Major	INDE 360	Operations Research	MATH 131.	4
			<b>Total:</b>	<b>17</b>
<b>Sixth Semester</b>				
UD Major	INDE 410	Facilities Plan. Dsgn. and Mat. Handling	ENGR 210.	3
UD Major	INDE 430	Design of Work Systems	INDE 390.	4
UD Math		student choice		3
C2				3
Add'l C1 or C2*				3
			<b>Total:</b>	<b>16</b>
<b>Seventh Semester</b>				
Code 2/D3				3
C4/Social Justice Overlay				3
UD Major	INDE 420	Discrete Event Simulation	ENGR 215, and INDE 330 or STAT 316.	3
UD Major	INDE 440	Sustainable Production and Supply Systems	INDE 360, and either INDE 330 or STAT 316.	4
UD Math		student choice		3
			<b>Total:</b>	<b>16</b>
<b>Eighth Semester</b>				
D4/Diversity Overlay				3
UD Major	INDE 450	Systems Quality and Reliability	ENGR 210, and either INDE 330 or STAT 316.	4
UD Major	INDE 460	Service & Manu. Systems Modeling	INDE 360.	4
UD Major	INDE 492	Senior Design	Completion or enrollment in any three courses from: INDE 410, INDE 420, INDE 440, INDE 450, INDE 460.	4
			<b>Total:</b>	<b>15</b>
<b>Total Units:</b>				<b>122</b>

### General Education & University Requirements - Suggested Courses

Area A (9 units): Communication in the English Language & Critical Thinking (Must earn passing grade of C-/CR or better)

A1. COMM 100 or 104

A2. ENGL 101, 102, or 104

A3. PHIL 100

Area B (9 units): Scientific Inquiry & Quantitative Reasoning

B1. Physical Science

B2. Life Science

B3. Laboratory Activity

B4. Quantitative Reasoning (Must earn passing grade of C-/CR or better.)

Area C (9 units): Arts & Humanities - Minimum of three different disciplines as designated by course prefix (e.g., ART, THEA, MUS)

C1. Arts

C2. Humanities

\* Additional Lower-division Area C Course in Arts (C1) or Humanities (C2)

Area D (9 units): Social Sciences - Minimum of three different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC)

D1.

D2.

D3.

Second Composition: Requires completion of GE A2 with a C-/CR or better. Must be completed before attaining junior standing.

Writing II.

University Writing Skills Requirement

UWSR. Writing Skills Test (WST) or First and/or Second Tier Courses

U.S. Code (American Institutions Requirement) - Two courses (6 units) covering three U.S. Code Requirements of US-1 (U.S. History), US-2 (U.S. Constitution), and US-3 (California State & Local Government).

Code 1.

Code 2.

Upper Division GE Requirements (9 units): Should be taken after completion of A1, A2, A3, and B4 with a C- (CR)

B6. Upper-division Science Inquiry and Quantitative Reasoning

C4. Upper-division Arts OR Humanities

D4. Upper-division Social Sciences

Overlay Requirements (9 units): Courses may be upper or lower division, and GE or major

Diversity (Div)

Social Justice (SJ)

Sustainability (S)