

Degree: Industrial Engineering, B.S. 25-26				
Requirement Area	Course	Course Title	Prerequisites	Units
First Semester (FALL)				
LD Major/Area 2	MATH 130	Calculus I	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).	4
5A/5C LD Major	CHEM 110	General Chemistry for Engineering		3
1A	ENGL 102			3
LD Major	PHYS 135	Physics for Scientists and Engrs. I		4
			Total:	14
Second Semester (SPRING)				
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/Second Comp	ENGR 200	Introduction to Engineering and Design		3
LD Major	ENGR 210	Manufacturing Materials and Processes	CHEM 110 and MATH 130.	4
			Total:	14
Third Semester (FALL)				
1C				3
LD Major	MATH 215	Introduction to Linear Algebra	MATH 130.	3
5B/Sustainability Overlay				3
LD Major	ENGR 220	Statics	PHYS 135.	3
UD Major	INDE 330	Engr. Statistics and Prob.	MATH 130.	3
			Total:	15
Fourth Semester (SPRING)				
1B/Second Comp				3
Area 4/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 215.	3
UD Major	INDE 340	Design of Engr. Experiments	INDE 330 or STAT 316.	3
			Total:	15
Fifth Semester (FALL)				
Code 1/Area 4				3
3A/Diversity Overlay				3
UD Major	ENGR 320	Engr. Economics	MATH 130.	3
UD-Area 5/UD Major	INDE 390	Human Factors and Work Methods	INDE 330 or STAT 100; and Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	4
UD Major	INDE 360	Operations Research	MATH 131.	4
			Total:	17
Sixth Semester (SPRING)				
Area 6		Ethnic Studies		3
UD Major	INDE 410	Facilities Plan. Dsgn. and Mat. Handling	ENGR 210.	3
UD Major	INDE 430	Design of Work Systems	INDE 390.	4
UWR/UD-Area 3/Social Justice Overlay			Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	3
3B				3
			Total:	16
Seventh Semester (FALL)				
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
UD Math		student choice		3
Free Elective				1
			Total:	14
Eighth Semester (SPRING)				
UD-Area 4/Code	HIST 382 (Recommended)		Completion of GE Areas 1A, 1B, 1C and GE-2 with grade C- (CR) or better	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
			Total:	15
Total Units:				120

Note: No changes to, or from, the credit/no credit pattern are permitted after the Grade Type Change period. There are no exceptions to this rule. Courses in a student's major department, regardless of course prefix, may not be taken "CR/NC," unless that is the only grading pattern in the course.

CSUEB General Breadth and Graduation Requirement Checklist	
Area 1 (9 units): English Communication	
☐ 1A - Lower Division English Composition	
☐ 1B - Lower Division Critical Thinking and Composition	
☐ 1C - Lower Division Oral Communication	
Area 2 (3 units) : Mathematical Concepts and Quantitative Reasoning	
☐ Area 2 - Mathematical Concepts and Quantitative Reasoning	
Area 3 (6 units): Arts & Humanities - Minimum of two different disciplines as designated by course prefix (e.g., ART, THEA, MUS)	
☐ 3A - Arts and Humanities (Arts)	
☐ 3B - Arts and Humanities (Humanities)	
Area 4 (6 units) : Social and Behavioral Sciences - Minimum of two different disciplines as designated by course prefix (e.g., ANTH, ECON, POSC)	
☐ Area 4 - Lower Division Social and Behavioral Sciences	
☐ Area 4 - Lower Division Social and Behavioral Sciences	
Area 5 (7 units): Physical and Biological Sciences	
☐ 5A - Lower Division Physical and Biological Sciences (Physical)	
☐ 5B - Lower Division Physical and Biological Sciences (Biological)	
☐ 5C - Lower Division Physical and Biological Sciences (Laboratory) -- May be embedded in 5A or 5B course, as long as 7 units met for lower-division Subject Area 5.	
Area 6 (3 units): Ethnic Studies	
☐ Area 6 - Ethnic Studies	
Second Composition : Second Composition as part of 1B for 2025-26 or later catalog) (Required)	
☐ Second Composition	
University Writing Requirement (3-4 units)	
☐ UWR	
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 1A, 1B, 1C, and Area 2 with a C- (CR)	
☐ UD- Area 3 - Upper Division Arts or Humanities	
☐ UD- Area 4 - Upper Division Social and Behavioral Sciences	
☐ UD- Area 5 - Upper Division Science or Mathematical Concepts/Quantitative Reasoning	
Overlay Requirements (9 units): Courses may be upper or lower division, and GE or major	
☐ Diversity (Div)	
☐ Social Justice (SJ)	
☐ Sustainability (S)	
Elective Courses	
Under consultation with their advisor, students shall select a minimum of 6 units of approved, upper-division Math/Basic Science elective courses.	

*Students are required to take a minimum of 40 semester units as upper division (includes 9 units upper division GE)