

B.S. in MANUFACTURING ENGINEERING
Suggested 4-Year Academic Flowchart

2019-2020 Catalog

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

Fall:
CEA Madrid, Spain
CEA Paris, France

Summer:
TECNUN, Spain
CEA Barcelona, Spain

Spring:
Munich, Germany

Summer:
Munich, Germany
TECNUN, Spain

Fall - Spring:
CSU IP Queretaro, Mexico

Summer:
CEA Barcelona, Spain
Cal Poly Affiliated Programs

Fall:
CEA Madrid, Spain
Swinburne, Australia
TECNUN, Spain
Lucerne, Switzerland

Fall:
KTH, Sweden
TECNUN, Spain
Lucerne, Switzerland