

B.S. in MECHANICAL ENGINEERING
(General Concentration)
Suggested 4-Year Academic Flowchart

Updated 8/1/2019

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Intro. to ME I ME 128^ (1) (1st qtr freshman year. Concur: ME 163)	Intro to ME II ME 129^ (1) (ME 128, 2nd quarter)	Intro to ME III ME 130^ (1) (ME 129, 3rd quarter)	Philosophy of Design ME 234 (3) (Soph standing)	Measurement & Engineering Data Analysis ME 236 (3) Recom: CHEM 125, ENGL 149, & PHYS 132	Design for Strength & Stiffness ME 338 (4) (BMED 212 or ME 234; ME 207; CSC 231 or 234; MATE 210; ME 212 & 213; ME 141+ or ITP 341+)						
Orientation to ME ME 163^ (1) (Concur: ME 128)			Engineering Statics ME 211 (3) (MATH 241+, PHYS 131 or 141)	Engineering Dynamics ME 212 (3) (MATH 241; ME 211 or ARCE 211)	Thermodynamics I ME 302 (3) (ME 212 & PHYS 132)		Mechanical Systems Design ME 329 (2) (ME 328)				
	Sub. Manuf. I IME 145 (1) (Concur: ME 129)	Sub. Manuf. II IME 146 (1) (IME 145; Concur: ME 130)			Fluid Mechanics I ME 341 (3) (MATH 242 or 244; ME 212)		Thermodynamics II ME 303 (2) (ME 302)				
Manufacturing Processes: Materials Joining IME 142 (2)			Intro to Detailed Design ME 251 (2) (ME 130 or 228. Recom: IME 143)				Fluid Mechanics II ME 347 (4) (ME 236; ME 341; ME 302)				
Manufacturing Processes Elective IME 141 (1) OR ITP 341 (4) OR ME 161 (2) *				MATE & Laboratory I MATE 210 (3) & MATE 215 (1) (CHEM 111, 124, or 127)			Heat Transfer ME 350 (4) (CPE/CSC 101 or CSC 101 or 234; MATE 360 & 380 or ME 236 & 302 & 341)				
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)	Linear Analysis II MATH 344 (4) (MATH 206 & 242; or 241 & 244) [B6]	Mechanical Vibrations ME 338 (4) (ME 212, MATH 337, Recom: EE 201)		Intro to System Dynamics ME 342 (4) (CSC 231 or 234; EE 201; ME 251; ME 318; ME 341)	Technical Elective (3-4) ***	Technical Elective (4) ***	Technical Elective (4) ***
	General Physics IA PHYS 141 (4) * [Add'l Area B]	General Physics II PHYS 132 (4) (PHYS 131 or HNRS 131 or PHYS 141)	General Physics III PHYS 133 (4) (PHYS 131, 141, or HNRS 131; MATH 142. Recom: MATH 241)	Mechanics of Materials I CE 204 (3)^2 (ME 211)	Mechanics of Materials II CE 207 (2)^2 (CE 204)	Electric Circuit Theory and Lab EE 201 (3) & EE 251 (1) (MATH 244, PHYS 133)	Electronics and Electronics Lab EE 321 (3) & EE 361 (1) (EE 201, EE 251)		Senior Design Project I, II, and III ME 428 (2)^1 (ME 329. Coreq: ME 318 & 350)	ME 429 (2)^1 (ME 428)	ME 430 (2)^1 (ME 429)
		Gen. Chem. For Phys Sci & Engineering I CHEM 124 (4) * [B3/B4]	Gen. Chem. For Phys Sci & Engineering II CHEM 125 (4) (CHEM 124)	Select one: Programming for Engin. Stud. CSC 231 (2) (MATH 142; PHYS 121, 131, or 141) OR C & Unix CSC 234 (3) (MATH 142)		Intermediate Dynamics ME 326 (4) (ME 212; CSC 231 or 234; MATH 344+)			Select One: Implementation of Mech Controls ME 418 (4) (ME 322) OR Advanced Control Systems ME 419 (4) (ME 322, ME 236)		
Expository Writing ENGL 133 or 134 (4)** [A1] Can be taken anytime during Freshman Year	Oral Communication COMS 101 or 102 (4)** [A2] Can be taken anytime during Freshman Year					GE (4) Rec: ECON 201 **			GE (4) **	GE (4) **	GE (4) **
GE (4) **		Technical Writing I (Completion of GE A1 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years	ENGL 149 (4) [A3] (Recom: Completion of Sophomore Years)			Graduation Writing Requirement (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)				GE (4) **	GE (4) **
13-16	18	18	17	17	15-16	18	16	15	13-14	18	18
										TOTAL:	196-201

Fall:
CEA Madrid, Spain
CEA Paris, France

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

Spring:
Munich, Germany

Fall:
KTH, Sweden
Chalmers, Sweden
Swinburne, Australia
TECNUN, Spain
Lucerne, Switzerland

Fall - Spring:
CSU IP Queretaro, Mexico

Summer:
CEA Barcelona, Spain
Cal Poly Affiliated Programs

Summer:
CEA Barcelona, Spain
TECNUN, Spain

Summer:
Munich, Germany
TECNUN, Spain