# CAL POLY

## B.S. in MECHANICAL ENGINEERING (General Concentration)

Suggested 4-Year Academic Flowchart

Updated 2/12/2016

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Introduction to Mechanical	Intro. to ME II ME 129^ (1)	Introduction to Mechanical	Engineering Statics	Engineering	Philosophy of	Intermediate	Introduction to	Intermediate	Mechanical	Take concurrently:	Thermal System
Engineering I	(ME 128, 2nd quarter. Con: ME 163)	Engineering III		Dynamics	Design	Dynamics	Design	Design	Control Systems	BIO 213 (2) and	Design
ME 128^ (1)	Orientation to ME	ME 130^ (1)	ME 211 (3) (MATH 241+, PHYS 131	ME 212 (3) (MATH 241; ME 211	ME 234 (3)	ME 326 (4) (MATH 244+, ME 212,	ME 328 (4)	ME 329 (4)	ME 422 (4)	BMED 213 (2) (MATH 142, Recom:	ME 420 (4) (ME 303; ME 347; &
(1st quarter freshman year)	ME 163^ (1) (Concur: ME 129)	(ME 129, 3rd quarter)	or 141)	or ARCE 211)	(ME 130 or 228†)	CSC 231 or 234)	*	(ME 328)	(ME 318)	CHEM 124) [B2]	ME 343 or 350)
Manufacturing Processes: Materials Joining IME 142 (2)			Intro to Detailed Design w/ Solid	Measurement & Engineering Data	Select one: Program./	Thermodynamics	Thermodynamics	Heat Transfer	Senior Design	Senior Design	Senior Design
Manufacturing Processes: Material Removal			Modeling	Analysis	Engin. Stud. CSC 231 (2)*	I	II	neat Transler	Project I	Project II	Project III
IME 143 (2)			ME 251 (2)	ME 236 (3) (Recom: ENGL 134,	or C & Unix	ME 302 (3)	ME 303 (3)	ME 350 (4) (CPE/CSC 101 or CSC 231	ME 428 (3)	ME 429 (2)	ME 430 (1)
	Manuf. Processes Elective  IME 141 (1) OR IT 341 (4)*		(ME 130 or 228)	CHEM 125, PHYS 131)	CSC 234 (3) (MATH 142)	(PHYS 132; ME 212 or CHEM 128)	(ME 302)	or 234; MATE 380 or 302; ME 236; & ME 341)	(ME 329. Coreq: ME 318 & 350/343)	(ME 428)	(ME 429)
Calculus I	Calculus II	Calculus III	Calculus IV	Linear Analysis I	Linear Analysis II	Fluid Mechanics I	Fluid Mechanics II	Mechanical Vibrations	Technical Elective	Technical Elective	Technical Elective
MATH 141 (4)	MATH 142 (4)	MATH 143 (4)	MATH 241 (4)	MATH 244 (4)	MATH 344 (4) (MATH 206 & 242; or	ME 341 (3)	ME 347 (4)	ME 318 (4)	(3-4)	(4) ***	(4) ***
* [B1]	(MATH 141 w/min C-) [B1]	(MATH 142 w/min C-) [Add'l Area B]	(MATH 143)	(MATH 143)	MATH 241 & 244) [B6]	(ME 212 or ARCE 225)	(ME 236, ME 341, ME 302 or Instr. consent)	(ME 326, MATH 344. Recom: EE 201)			
	General Physics I	General Physics II	General Physics III	Mechanics of Materials I	Mechanics of Materials II	Electric Circuit Theory and Lab	Electronics, and Electronics Lab	Energy Conversion Electromagnetics & Lab			
GE (4)	PHYS 131 or	PHYS 132 (4)	PHYS 133 (4)	CE 204 (3)	CE 207 (2)	EE 201 (3) and	EE 321 (3) and	EE 255 (3) and	GE (4)	GE (4)	GE (4)
**	PHYS 141 (4) * [Add'l Area B]	(PHYS 131, HNRS 131, or PHYS 141)	(PHYS 131, 141, or HNRS 131; MATH 142. Recom: MATH 241)	(ME 211)	(CE 204)	EE 251 (1) (MATH 244, PHYS 133)	EE 361 (1) (EE 201/251)	EE 295 (1) (EE 212 & 242 or EE 201 & 251)	**	**	**
		Gen. Chem. For	Gen. Chem. For		Materials Engineering &						
		Phys Sci & Engineering I	Phys Sci & Engineering II		Laboratory I MATE 210 (3)						
		CHEM 124 (4)*	CHEM 125 (4)	GE (4) **	and MATE 215 (1)	<b>GE (4)</b> Rec: ECON 201				GE (4) **	GE (4) **
		[B3/B4]	(CHEM 124)		(CHEM 111, 124, or 127. Rec: Conc MATE 215)	**					
	Technical Writing ENGL 149 (4) [A3] (Completion of GE A1 with a C- or better, Recom: Completion of GE A2)										
			Freshman and Winter of Sop								
	Expository Writing ENGL 133 or 134 (4)** [A1] Can be taken anytime during Freshman Year					Graduatio	on Writing Requireme	ent GWR*			
Oral Communication COMS 101 or 102 (4)** [A2] Can be taken anytime during Freshman Year						(Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)					
15	17	17	17	17	15-16	18	15	16	15-16	18	17
									TOTAL:	196-202	

### Notes:

#### MOST GENERAL EDUCATION COURSES CAN BE TAKEN IN ANY ORDER AS LONG AS PREREQUISITES ARE MET

\* Refer to current catalog for prerequisites.

Refer to online catalog for GE course selection, United States Cultural Pluralism (USCP) and Graduation Writing Requirement (GWR). USCP requirement can be satisfied by some (but not all) courses within GE categories: C3, C4, D1, D3, or D4.

\*\*\* Refer to current catalog for course selection. ME 470, ME 471, ME 570 and ME 571 are variable topics courses and may or may not count as ME electives. Please contact instructor for additional information. ME 400 and ME 500 are independent study classes and may be acceptable for technical elective credit. A course substitution form is required. Exceptions to this policy are possible through consultation with the department chair.

† Course can be taken previously or concurrently.

### Legend:



<sup>\*\*</sup> One course from each of the following GE areas must be completed: A1, A2, C1, C2, C3, C4, D1, D2, D3, D4. C4 should be taken only after Junior standing is reached (90 units).

 $<sup>^{\</sup>wedge}$  Transfer students take ME 228 & 229 in lieu of ME 128, 129, 130 and 163