CAL POLY
SAN LUIS OBISPO

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

2021-2022 Catalog

Updated 7/2/2021

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Computer Aided Drafting in Civil Engineering **CE 113 (2)**			*Introductory Experiments in Transportation Engineering* **CE 222 (1)**		*Programming Applications in Engineering* **CE 251 (2)** (CE 113; CE 204 or 208†; MATH 244)				*Civil Engineering Professional Practice* **CE 465 (1)** (Sr Standing and Instr. Consent)	*Senior Design Project I and II* **CE 466 (3)[3]** (CE 321, 322, 336, 337, 355, 381, 382, 465)	**CE 467 (3)[3]** (CE 466)
Introduction to Civil Engineering **CE 111 (1)**	*Design Principles in CE* **CE 112 (2)**			*Mechanics of Materials I* **CE 204 (3)[1]** (ME 211)	*Mechanics of Materials II* **CE 207 (2)[1]** (CE 204)	*Structural Engineering* **CE 352 (4)** (CE 207 or CE 208; CE 251†)					
	General Chemistry for Physical Science & Engineering I **CHEM 124 (4)** * [B1 & B3]	*General Chemistry for Physical Science & Engineering II* **CHEM 125 (4)** (CHEM 124)	*Engineering Statics* **ME 211 (3)** (MATH 241†; PHYS 131 or 141)	*Engineering Dynamics* **ME 212 (3)** (MATH 241; ME 211 or ARCE 211)	*Civil Engineering Materials* **CE 259 (2)** (CE 204 or 208†; CE 113†)		*Reinforced Concrete Design* **CE 355 (4)** (CE 259 & 352)		Approved Technical Elective **(4)[3]** ***	Approved Technical Elective **(4)[3]** ***	Approved Technical Elective **(4)[3]** ***
Calculus I **MATH 141 (4)** * [B4]	*Calculus II* **MATH 142 (4)** (MATH 141 w/min C-) [B4]	*Calculus III* **MATH 143 (4)** (MATH 142 w/min C-) [Area B Elective]	*Calculus IV* **MATH 241 (4)** (MATH 143)	*Linear Analysis I* **MATH 244 (4)** (MATH 143)		*Fundamentals of Transportation Engineering and Lab* **CE 321 (3) & CE 322 (1)** (PHYS 141; CE 259 or CM 113; CE 222; or graduate standing)					
						Water Resources Engineering and Hydraulics Lab **CE 336 (4) & CE 337 (1)** (ME 341 or ENVE 264)			Approved Technical Elective **(4)[3]** ***	Approved Technical Elective **(4)[3]** ***	Approved Technical Elective **(4)[3]** ***
						Geotechnical Engineering and Lab **CE 381 (4) & CE 382 (1)** (CE 207 or CE 208; ME 341 or ENVE 264. Concur: CE 382)					
Engineering Surveying **BRAE 239 (4)** (MATH 119)	*General Physics IA* **PHYS 141 (4)** * [Area B Elective]	*General Physics II* **PHYS 132 (4)** (PHYS 131, HNRS 131, or PHYS 141)	*General Physics III* **PHYS 133 (4)** (PHYS 131, 141, or HNRS 131; MATH 142. Recom: MATH 241)	*Materials Engineering* **MATE 210 (3)** (CHEM 111, 124, or 127. Recom: MATE 215 concur.)	*Fluid Mechanics I* **ME 341 (3)** (MATH 242 or 244; ME 212)	*Construction Management and Project Planning* **CE/CM 371 (4)** (ARCE 106, CE 259, or CM 113)					
						Fundamentals of Environmental Engineering **ENVE 331 (4)** (CHEM 125 or 128; MATH 242 or 244†)					
						Statistical Methods for Engineers **STAT 312 (4)** * [Upper-Division B]					
						Approved Engineering Science Elective **(2-4)[2]** ***					
Expository Writing **ENGL 133/134 (4)**** [A2]			*Physical Geology* **GEOL 201 (3)** (MATH 119)	*Materials Laboratory I* **MATE 215 (1)** (MATE 210†)	Take concurrently: **BIO 213 (2) & BMED 213 (2)** (MATH 142. Recom: CHEM 124) [B2]				**GE (4)** **		
Oral Communication **COMS 101/102 (4)**** [A1]											
GE (4) **	*Reasoning, Argumentation, & Writing* [A3] **COMS 126, 145, ENGL 145, 147, ES 145, PHIL 126, or WGS 145 (4)**** (Completion of GE A2 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.				**GE (4)** **	**GE (4)** **		**GE (4)** **	**GE (4)** **	**GE (4)** **	**GE (4)** **
						Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)					
17	18	18	15	14	15	18	15-17	13	17	15	15

TOTAL: 190-192

Notes:

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

* Refer to current catalog for prerequisites.

** One course from each of the following GE areas must be completed: A1, A2, A3, C1, C2, Lower-Division C Elective, Upper-Division C, D1, Area D Elective, E, F. Upper-Division C should be taken only after Junior standing is reached (90 units).

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: C1, Upper-Division C, D1, D2, Upper-Division D, or E.

*** Refer to current catalog for course selection and guidelines for technical electives.

† Course can be taken previously or concurrently.

[1] Transfer students take CE 208 (5) in the Fall Quarter in place of both CE 204 (3) and CE 207 (2)

[2] 2-4 units Approved Engineering Science Elective. See catalog. No double-counting of coursework with other requirements. Consultation with advisor recommended.

[3] 24 units Technical Electives. See catalog for course options and additional guidelines.

Legend:

Course Title
Course # (Units)
(Prerequisite)
[GE Area]

Major (72)
Support (74-76)
General Ed. (44)