CAL POLY
SAN LUIS OBISPO

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

2019-2020 Catalog

WITH GRANITE HEAVY CIVIL MINOR

Updated 7/1/2019

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)** * [B3/B4]	*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)				
					Evaluation of Cost Alternatives **CM 232 (3)**	*Fundamentals of Transportation Engineering and Lab* **CE 321 (3) & CE 322 (1)** (PHYS 141; CE 259 or CM 113; CE 222; or graduate standing)					
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)	*Building Information Modeling* **CM 280 (2)** (CE 113 or CM 115)	*Water Resources Engineering and Hydraulics Lab* **CE 336 (4) & CE 337 (1)** (ME 341 or ENVE 264)			Advance Civil Computer Aided Site Design **CE 413 (2)** (BRAE 239)	Highway Pavement Design **CE 429 (4)** (CE 259, CE 381, CE 321)	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)					
						Construction Management and Project Planning **CE/CM 371 (4)** (ARCE 106; CE 259 or CM 113)					
Engineering Surveying **BRAE 239 (4)** (MATH 119)	*General Physics IA* **PHYS 141 (4)** * [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, 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)	*Fundamentals of Environmental Engineering* **ENVE 331 (4)** (CHEM 125 or 128; MATH 242 or 244†)			Heavy Civil Construction **CM 314 (5)** (CE371)	*HC Temporary Structures and Shoring* **CM/CE 436 (4)** ARCE 315 or CE 352; and CM 314	*HC Projects and Equipment* **CM/CE 437 (4)** (CM 314)
						Statistical Methods for Engineers **STAT 312 (4)** (MATH 142) [B6]					
Expository Writing **ENGL 133/134 (4)**** [A1]			*Physical Geology* **GEOL 201 (3)** (MATH 119)	*Materials Laboratory I* **MATE 215 (1)** (MATE 210†)	Take concurrently: **BIO 213 (2) & BMED/BRAE 213 (2)** (MATH 142. Recom: CHEM 124) [B2]	Approved Engineering Science Elective **(2-4)[2]** ***			Environmental Compliance and Permitting **CE 474 (2)** (Senior Standing)		
Oral Communication **COMS 101/102 (4)**** [A2]								**Construction Means & Methodes CM 310 (4)** (CE 259)			
GE (4) **	*Technical Writing for Engineers* **ENGL 149 (4)** [A3] (Completion of GE A1 with a C- or better, Recommended: Completion of GE A2) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years		**GE (4)** **		*Heavy Civil Coop* **CM 485 (3)** (Required During 2nd Summer)	**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	18	18	18	18	19	17	15	15
										TOTAL:	205-207

Notes:

Minor customized flow chart that should be consider along the main B.S degree flow chart

Legend:

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

- **Minor Required Courses (15)**
- **Electives Directed By Minor (16)**
- **Minor Support in Major (16)**
- **Currenty Required for B.S. (190-192)**
- **Approved Engineering Science Elective**