CAL POLY
SAN LUIS OBISPO

B.S. in Architectural Engineering

Suggested 4-Year Academic Flowchart

2020-2021 Catalog

Updated 11/20/2019

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Introduction to Building Systems **ARCE 106 (2)**			*Structures I* **ARCE 211 (3)** PHYS 141; MATH 142	*Structures II* **ARCE 212 (3)** (ARCE 211 w/min C-)	*Structures III* **ARCE 227 (2)** (ARCE 212 w/min C-)	*Structural Analysis* **ARCE 302 (3)** (ARCE 223; 227 w/min C-. Concur: ARCE 352)	*Matrix Analysis of Structures* **ARCE 306 (3)** (ARCE 302 w/min C-. Concur: ARCE 353)	*Dynamics of Framed Structures* **ARCE 412 (3)** (ME 212; MATH 244; ARCE 306 w/min C-. Concur: ARCE 354)	*Seismic Analysis and Design* **ARCE 483 (3)** (ARCE 372; 412 w/min C-)	*Concrete Structures Design…* **ARCE 452 (3)** (ARCE 257; 444; 372 or 451 w/min C-)	
Design & Visual Communication 1.1 **ARCH 131 (4)**	*Design & Visual Communication 1.2* **ARCH 132 (4)** (ARCH 131)	*Design & Visual Communication 1.3* **ARCH 133 (4)** (ARCH 132)	*Fundamentals of Construction Management* **CM 115 (6)** (ARCE 106 or CM 113; MATH 141; PHYS 141)	*Engineering Dynamics* **ME 212 (3)** (MATH 241; ME 211 or ARCE 211)	*Mechanics of Structural Members* **ARCE 223 (3)** (ARCE 212 w/min C-. Concur: ARCE 224)	*Structural Computing Analysis* **ARCE 352 (1)** (CSC 231 or 234. Concur: ARCE 302)	*Matrix Structural Computing Analysis* **ARCE 353 (1)** (ARCE 352 w/min C-. Concur: ARCE 306)	*Numerical Analysis Laboratory* **ARCE 354 (1)** (MATH 244; ARCE 353 w/min C-. Concur: ARCE 412)	*Reinforced Concrete Design* **ARCE 444 (4)** (ARCE 371; ARCE 302 w/min C-)	*Interdisciplinary Capstone Project* **ARCE 415 (4)** (ARCE 303; 304; 305; 444; 372 or 451 w/min C-)	*Introduction to Engineering Surveying* **BRAE 237 (2)**
Calculus I **MATH 141 (4)[1]** * [B4]	*Calculus II* **MATH 142 (4)[1]** (MATH 141 w/min C-) [B4]	*Calculus III* **MATH 143 (4)[1]** (MATH 142 w/min C-) [Area B Elective]	*Calculus IV* **MATH 241 (4)** (MATH 143)	*Structural CAD for Building Design* **ARCE 257 (2)** (ARCH 133; CM 115)	*Mechanics of Structural Members Lab* **ARCE 224 (1)** (Concur: ARCE 223)	*Structural Systems Lab* **ARCE 371 (3)** (ARCE 223; ARCE 227 w/min C-; 3rd year standing. Coreq: ARCE 302)	*Steel Design I* **ARCE 303 (3)** (ARCE 223 w/min C-. Coreq: ARCE 371)	*Steel Structures Design Laboratory* **ARCE 372 (3)** (ARCE 257; 302; 303; 352; 371 w/min C-)	*ARCE Building Systems* **ARCE 476 (3)** (Sr Standing)	**Statistics STAT 312 (4)[1]** (MATH 142) OR **STAT 321 (4)[1]** (MATH 142) [Upper-Division B]	
	General Physics IA **PHYS 141 (4)[1]** (MATH 141 w/min C-, concur: MATH 142 or 182) [Area B Elective]	*General Physics II* **PHYS 132 (4)** (PHYS 131 or 141 or HNRS 131)		*Programming for Engineering Students* **CSC 231 (2)** (MATH 142; PHYS 121, 131, or 141)	*Gen Chem for Phys Sci & Engineering I* **CHEM 124 (4)[1]** * [B1 & B3]	*Soil Mechanics* **ARCE 421 (3)** (ARCE 212 w/min C-; GEOL 201)	*Foundation Design* **ARCE 422 (3)** (ARCE 421 w/min C-)	*Timber Design* **ARCE 304 (3)** (ARCE 371 w/min C-)	*Timber & Masonry Structures…* **ARCE 451 (3)** (ARCE 257; 304; 305; 371 w/min C-)	*Fluid Mechanics I* **ME 341 (3)** (MATH 242 or 244; ME 212)	
				Linear Analysis I **MATH 244 (4)** (MATH 143)	*Physical Geology* **GEOL 201 (3)** (MATH 119)	*General Physics III* **PHYS 133 (4)** (PHYS 131 or 141 or HNRS 131; MATH 142. Recom: MATH 241)	*Electric Circuit Theory* **EE 201 (3)** (MATH 244; PHYS 133)	*Masonry Design* **ARCE 305 (2)** (ARCE 371 w/min C-)	*Eval of Cost Alt* **CM 232 (3)** (MATH 142 or 182) OR *Engineering Econ* **IME 314 (3)** (MATH 241)		
Expository Writing **ENGL 133 or 134 (4)**** [A2] Can be taken anytime during Freshman Year											**GE (4)** **
Oral Communication **COMS 101 or 102 (4)**** [A1] Can be taken anytime during Freshman Year			**History of World Architecture or Structures ARCH 217 or 218 or 219 or ARCE 260 (4)[1]** [C1]					*Thermodynamics I* **ME 302 (3)** (ME 212 and PHYS 132)			**GE (4)** **
	Reasoning, Argumentation, & Writing [A3] **COMS 126, COMS/ENGL 145, ENGL 148, ENGL 149, or PHIL 126 (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) **			**Graduation Writing Requirement GWR*** (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)					
			GE (4) **								
14	16	16	17	18	17	18	17	15	16	18	14
										TOTAL:	196

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, B2, C2, Lower-Division C Elective, Upper-Division C, D1, D2, Area D Elective, and E. Upper-Division C should be taken only after Junior standing is reached (90 units).

Refer to online catalog for GE course selection, USCP and Graduation Writing Requirement (GWR).

USCP requirement can be satisfied by some (but not all) courses within GE categories: Upper-Division C, D1, D2, or E.

Quarterly advisor meetings are required prior to registration.

A corequisite course can be taken previously or concurrently. Concurrent courses must be taken together.

All ARCE Majors must receive a C- or better in ARCE Courses that are prerequisites for other ARCE courses.

[1] Required in Support; also satisfies GE.

Legend:

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

Major (71)

Support (81)

General Ed. (44)

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