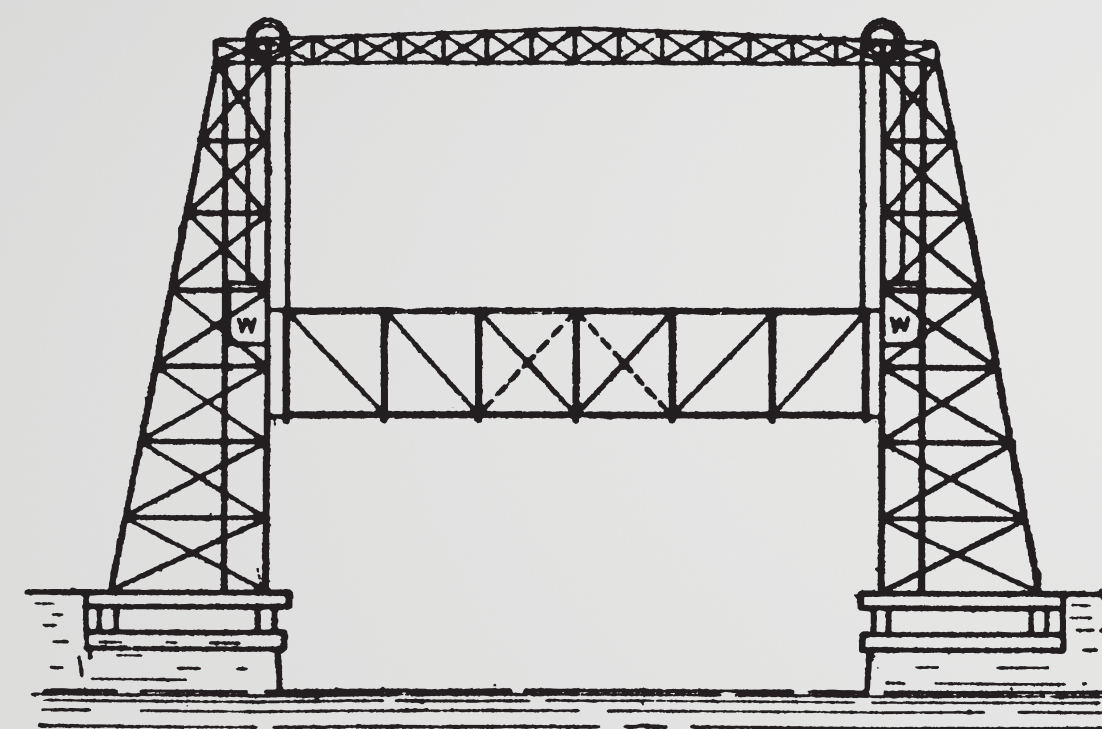


Re-assessing the Granite Heavy Civil Minor

Issues contributing to the decline of student retention were focused in this study. Two surveys were conducted and sent to both students in the minor program and students who had recently dropped out of the program, to gain insights as to what specific issues are driving students out of the program. The results concluded that certain courses are not conducive to student preparation for the heavy civil industry, and have been leading students astray from the program. Other factors, such as curriculum scheduling leading to extensions in student graduation dates, have also been driving factors for student drop-outs.



Did you ever take any courses in the minor that you felt were not essential/not useful in preparing you for the Heavy Civil industry?

[More Details](#)

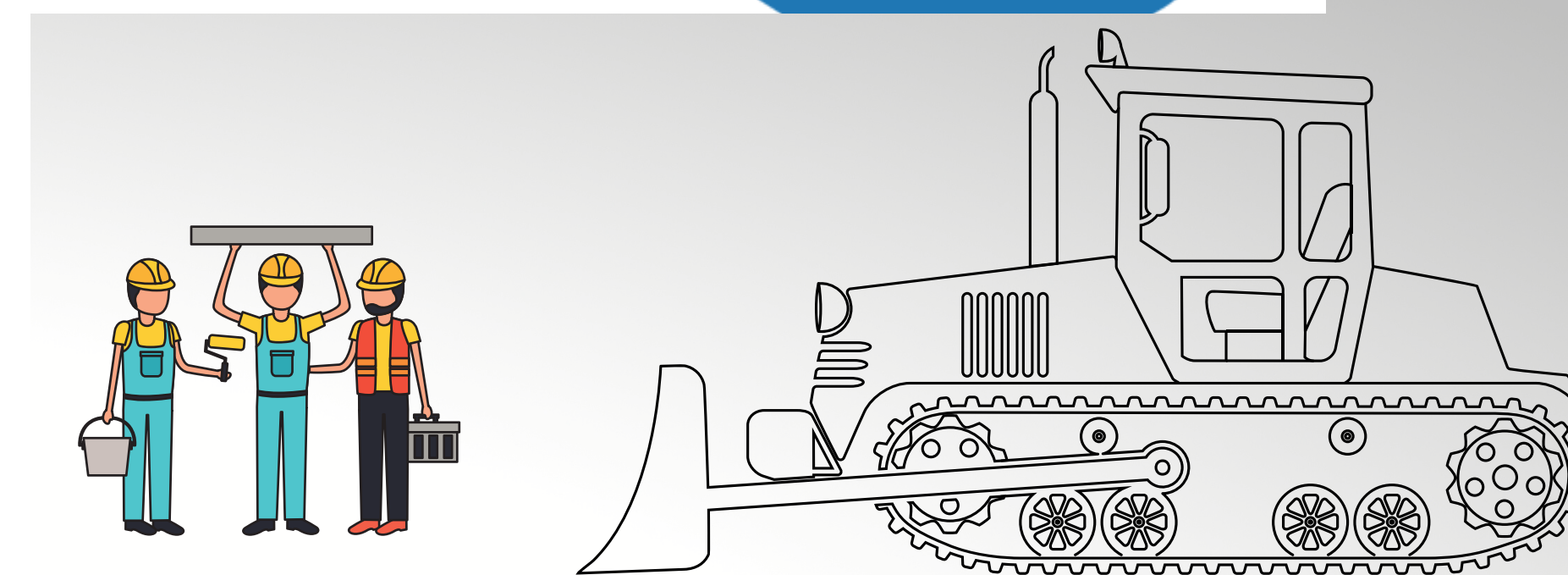
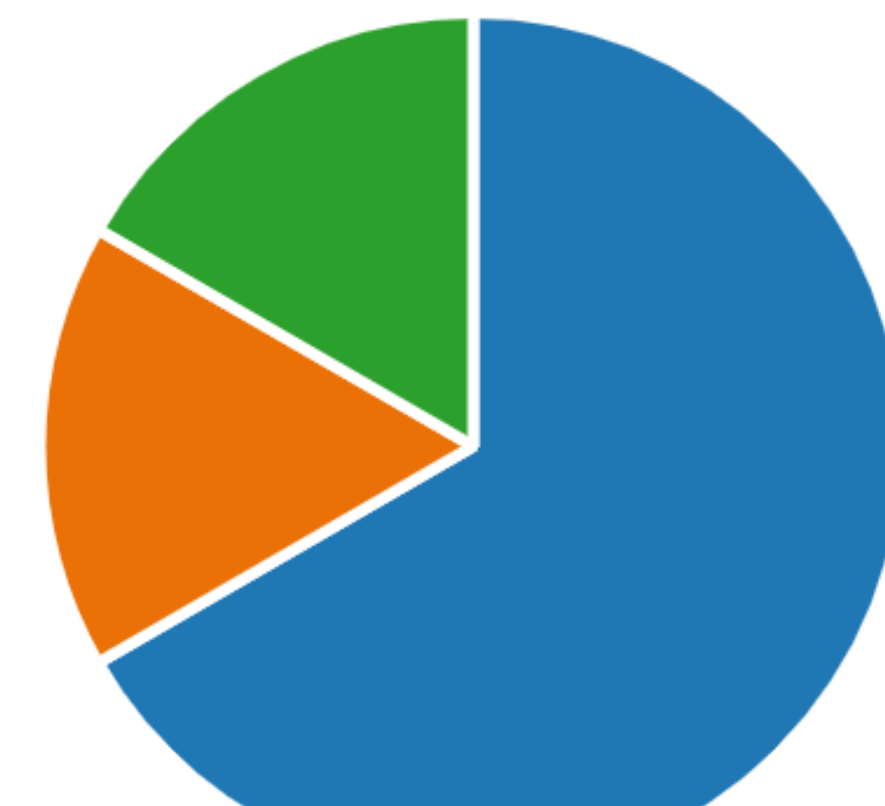
Insights



[More Details](#)



If you dropped the minor, was it in part due to extending your graduation date?



CAL POLY
SAN LUIS OBISPO

B.S. in Construction Management Suggested 4-Year Academic Flowchart WITH GRANITE HEAVY CIVIL MINOR

2019-2020 Catalog

FRESHMAN			SOPHOMORE			JUNIOR			SENIOR		
Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
Introduction to Construction Management CM 102 (2)	Construction Materials and Assemblies CM 113 (2) (Recom: CM 102)	Fundamentals of Construction Management CM 115 (6) (ARCE 106 or CM 113; MATH 141; PHYS 143)	Residential Construction Management CM 214 (5) (CM 115, PHYS 132 or CHEM 124, CM 232)	Construction Law CM 334 (2) (CM 115 and BUS 207)	Commercial Construction Management CM 313 (5) (CM 214, ARCE 212)	Jobsite Construction Management CM 413 (5) (CM 313)	Sustainability and the Built Environment CM 317 (4) (Jr. standing; GE Areas A and B) [B7]	Heavy Civil Construction Management CM 314 (5) (CM 239 or BRAE 239; CM 313; Coreq: CM 334)	Specialty Contracting Const Mgmt CM 411 (5) (CM 313)	Management of the Construction Firm CM 443 (3) (CM 334; 335; and 413)	Integrated Project, Design & Program Mgmt CM 450 (5) (CM 313 and 334)
Principles of Environmental Design EDES 123 (4) [E]	Construction Materials and Assemblies Lab CM 114 (2) (CM 113; Recom: CM 102)	Select one: Surveying BRAE 239 (4) (MATH 119 or equiv) OR CM 239 (4) (MATH 119 or equiv)	Evaluation of Cost Alternatives CM 232 (3) (MATH 142 or 182)	Survey of Economics ECON 201 (4) [D2]	Introduction to Structural Systems ARCE 226 (3) (ARCE 212)	Construction Accounting CM 335 (2) (BUS 215 and CM 232)	Advanced Civil CAD & Env. Compliance/Permitting CE 413 (2) & CE 474 (2) (replace tech elect)	Senior Project Methodology CM 460 (2) (CM 313, Jr standing)	Highway Design CE 429 (4) (replace tech elect)	Civil Mechanics ARCE 421 (3) (ARCE 212; GEOL 201)	Senior Project I CM 461 (1) (CM 460 & consent of project advisor)
Calculus I MATH 141 (4)* [B1]	Calc for Arch & Construction Mgmt MATH 182 (4) ¹ (MATH 141)	Select one: PHYS/CHEM PHYS 132 (4)* CHEM 124 (4)* CHEM 127 (4)*	Building Information Modeling CM 280 (2) (CE 113 or CM 115)	Financial Accounting BUS 214 (4)	Statistics STAT 251 (4)* OR STAT 312 (4)*	Housing and Communities CM 318 (4) (Jr. Stand.; GE-A; GE-B; lower-div GE-D) [D5]	Physical Geology GEOL 201 (3) (MATH 119)	Corporate Communication ENGL 310 (4)* (GE Area A, Recom: Jr Standing) [GWR]	Upper-Div BUS, ECON, or ITP course (4)*	Senior Project II CM 462 (1) (CM 460 & consent of project advisor)	Senior Project II CM 462 (1) (CM 460 & consent of project advisor)
General Physics 1A PHYS 141 (4) (MATH 141 w/min C-; MATH 142 or 182) [B3]	General Physics 1A PHYS 141 (4) (MATH 141 w/min C-; MATH 142 or 182) [B3]	General Physics 1A PHYS 141 (4) (MATH 141 w/min C-; MATH 142 or 182) [B3]	Legal Responsibilities of Business BUS 207 (4) (BUS 212 or 214 or equiv)	Introductory Experiments in Transportation CE 222 (1)	Managerial Accounting BUS 215 (4) (BUS 212 or 214 or equiv)	Introduction to Structural Design ARCE 313 (4) (ARCE 226)	Fundamentals of Transportation CE 321 (3)	HC Temporary Structures and Shoring CM/CE 436 (4) (CM 314 and ARCE 212)	HC Projects and Equipment CM/CE 437 (4) (CM 314)		
Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Structural Steel Design ARCE 211 (3) & ARCE 212 (2) (PHYS 121 or 141; MATH 142 or 182)	Heavy Civil Coop CM 485 (3) (Required During 2nd or 3rd Summer)							
Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	GE (4)	GE (4)	GE (4)	GE (4)	GE (4)	GE (4)	GE (4)	GE (4)	GE (4)
Reasoning, Argumentation, & Writing [A3] COMS 126, COMS/ENGL 145, ENGL 148, or PHIL 126 (4)** (Completion of GE A1 with a C- or better) Can be taken anytime between Winter of Freshman and Winter of Sophomore Years.			Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)			Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)			Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)		
14	16	18	17	18	19	19	18	15	17	18	15
TOTAL:			TOTAL:			TOTAL:			TOTAL:		
204			204			204			204		

CAL POLY
SAN LUIS OBISPO

B.S. in CIVIL ENGINEERING Suggested 4-Year Academic Flowchart WITH GRANITE HEAVY CIVIL MINOR

2019-2020 Catalog

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)	Computer Aided Drafting in Civil Engineering CE 113 (2)	Computer Aided Drafting in Civil Engineering CE 113 (2)	Introductory Experiments in Transportation Engineering CE 222 (1)	Introductory Experiments in Transportation Engineering CE 222 (1)	Introductory Experiments in Transportation Engineering CE 222 (1)	Programming Applications in Engineering CE 251 (2) (CE 113; CE 204 or 208; MATH 244)	Programming Applications in Engineering CE 251 (2) (CE 113; CE 204 or 208; MATH 244)	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)	Senior Design Project I and II CE 467 (3) ³ (CE 466)
Introduction to Civil Engineering CE 111 (1)	Design Principles in CE CE 112 (2)	Design Principles in CE CE 112 (2)	General Chemistry for Physical Science & Engineering I CHEM 124 (4) [B3/B4]	General Chemistry for Physical Science & Engineering II CHEM 125 (4) (CHEM 124)	General Chemistry for Physical Science & Engineering II CHEM 125 (4) (CHEM 124)	Mechanics of Materials I CE 204 (3) ¹ (CE 204)	Mechanics of Materials II CE 207 (2) ¹ (CE 204)	Structural Engineering CE 352 (4) (CE 207 or CE 208; CE 251*)			
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 I MATH 244 (4) (MATH 143)	Civil Engineering Materials CE 259 (2) (CE 204 or 208; CE 113)	Civil Engineering Materials CE 259 (2) (CE 204 or 208; CE 113)	Reinforced Concrete Design CE 321 (3) & CE 322 (1) (CE 207 or CE 208; CE 113; CE 222; or graduate standing)	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
Engineering Surveying BRAE 239 (4) (MATH 119)	General Physics 1A 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, HNRS 131, or PHYS 141)	Materials Engineering MATE 210 (3) (CHEM 111, 124, or 127; Recom: MATE 215 concour)	Materials Engineering MATE 210 (3) (CHEM 111, 124, or 127; Recom: MATE 215 concour)	Fluid Mechanics I ME 341 (3) (MATH 242 or 244; ME 212)	Fluid Mechanics I ME 341 (3) (MATH 242 or 244; ME 212)	Water Resources Engineering and Hydraulics Lab CE 336 (4) & CE 337 (1) (ME 341 or ENVE 284)	Heavy Civil Construction CM 314 (5) (CE371)	HC Temporary Structures and Shoring CM/CE 436 (4) (CE 315 or CE 352; and CM 314)	HC Projects and Equipment CM/CE 437 (4) (CM 314)
Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Expository Writing ENGL 133/134 (4)** [A1]	Take concurrently: BIO 213 (2) & BMED/BRAE 213 (2) (MATH 142; Recom: CHEM 111)	Take concurrently: BIO 213 (2) & BMED/BRAE 213 (2) (MATH 142; Recom: CHEM 111)	Statistical Methods for Engineers STAT 312 (4) (MATH 142) [B6]	Environmental Compliance and Permitting CE 474 (2) (Senior Standing)	GE (4)	GE (4)
Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	Oral Communication COMS 101/102 (4)** [A2]	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 Year.	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 Year.	Construction Means & Methods CM 310 (4) (CE 259)	Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)	Graduation Writing Requirement GWR* (Students can attempt to fulfill the requirement after 90 earned units; students should complete the requirement before senior year)	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:			TOTAL:			TOTAL:			TOTAL:		
205			205			205			205		