

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 <b>CE 113 (2)</b>			Introductory Experiments in Transportation Engineering <b>CE 222 (1)</b>			Programming Applications in Engineering <b>CE 251 (2)</b> (CE 113; CE 204 or 208†; MATH 244)			Civil Engineering Professional Practice <b>CE 465 (1)</b> (Sr Standing and Instr. Consent)			
Introduction to Civil Engineering <b>CE 111 (1)</b>	Design Principles in CE <b>CE 112 (2)</b>			Mechanics of Materials I <b>CE 204 (3)<sup>1</sup></b> (ME 211)	Mechanics of Materials II <b>CE 207 (2)<sup>1</sup></b> (CE 204)	Structural Engineering <b>CE 352 (4)</b> (CE 207 or CE 208; CE 251†)					Senior Design Project I and II <b>CE 466 (3)<sup>3</sup></b> (CE 321, 322, 336, 337, 355, 381, 382, 465)	<b>CE 467 (3)<sup>3</sup></b> (CE 466)
	General Chemistry for Physical Science & Engineering I <b>CHEM 124 (4)</b> * [B3/B4]	General Chemistry for Physical Science & Engineering II <b>CHEM 125 (4)</b> (CHEM 124)	Engineering Statics <b>ME 211 (3)</b> (MATH 241†; PHYS 131 or 141)	Engineering Dynamics <b>ME 212 (3)</b> (MATH 241; ME 211 or ARCE 211)	Civil Engineering Materials <b>CE 259 (2)</b> (CE 204 or 208†; CE 113†)	Reinforced Concrete Design <b>CE 355 (4)</b> (CE 259 & 352)						
					Evaluation of Cost Alternatives <b>CM 232 (3)</b>	Fundamentals of Transportation Engineering and Lab <b>CE 321 (3)</b> (PHYS 141; CE 259 or CM 113; CE 222; or graduate standing)						
Calculus I <b>MATH 141 (4)</b> * [B1]	Calculus II <b>MATH 142 (4)</b> (MATH 141 w/min C-) [B1]	Calculus III <b>MATH 143 (4)</b> (MATH 142 w/min C-) [Add'l Area B]	Calculus IV <b>MATH 241 (4)</b> (MATH 143)	Linear Analysis I <b>MATH 244 (4)</b> (MATH 143)	Building Information Modeling <b>CM 280 (2)</b> (CE 113 or CM 115)	Water Resources Engineering and Hydraulics Lab <b>CE 336 (4) &amp; CE 337 (1)</b> (ME 341 or ENVE 264)			Advance Civil Computer Aided Site Design <b>CE 413 (2)</b> (BRAE 239)	Highway Pavement Design <b>CE 429 (4)</b> (CE 259, CE 381, CE 321)	Approved Technical Elective <b>(4)<sup>3</sup></b> ***	
Engineering Surveying <b>BRAE 239 (4)</b> (MATH 119)	General Physics IA <b>PHYS 141 (4)</b> * [Add'l Area B]	General Physics II <b>PHYS 132 (4)</b> (PHYS 131, HNRS 131, or PHYS 141)	General Physics III <b>PHYS 133 (4)</b> (PHYS 131, 141, or HNRS 131; MATH 142. Recom: MATH 241)	Materials Engineering <b>MATE 210 (3)</b> (CHEM 111, 124, or 127. Recom: MATE 215 concur.)	Fluid Mechanics I <b>ME 341 (3)</b> (MATH 242 or 244; ME 212)	Construction Management and Project Planning <b>CE/CM 371 (4)</b> (ARCE 106; CE 259 or CM 113)			Heavy Civil Construction <b>CM 314 (5)</b> (CE371)	HC Temporary Structures and Shorina <b>CM/CE 436 (4)</b> ARCE 315 or CE 352; and CM 314	HC Projects and Equipment <b>CM/CE 437 (4)</b> (CM 314)	
	Expository Writing <b>ENGL 133/134 (4)**</b> [A1]		General Physics <b>PHYS 133 (4)</b>	Materials Laboratory I <b>MATE 215 (1)</b> (MATE 210†)	Take concurrently: <b>BIO 213 (2) &amp; BMED/BRAE 213 (2)</b> (MATH 142. Recom: CHEM 124) [B2]	Fundamentals of Environmental Engineering <b>ENVE 331 (4)</b> (CHEM 125 or 128; MATH 242 or 244†)						
	Oral Communication <b>COMS 101/102 (4)**</b> [A2]		Physical Geology <b>GEO 201 (3)</b> (MATH 119)			Statistical Methods for Engineers <b>STAT 312 (4)</b> (MATH 142) [B6]			Environmental Compliance and Permitting <b>CE 474 (2)</b> (Senior Standing)			
						Approved Engineering Science Elective <b>(2-4)<sup>2</sup></b> ***						
<b>GE (4)</b> **	Technical Writing for Engineers <b>ENGL 149 (4)</b> [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			<b>GE (4)</b> **		<b>GE (4)</b> **	<b>GE (4)</b> **	Construction Means & Methodes <b>CM 310 (4)</b> (CE 259)		<b>GE (4)</b> **	<b>GE (4)</b> **	<b>GE (4)</b> **
					Heavy Civil Coop <b>CM 485 (3)</b> (Required During 2nd Summer)	Graduation Writing Requirement <b>GWR*</b> (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)	Minor Required Courses (15)
[GE Area]	Electives Directed By Minor (18)
	Minor Support in Major (16)
	Currently Required for B.S. (190-192)