

Major: Civil Engineering, B.S. - Geospatial Engineering Option: 126 Units
2018-2019 Academic Year

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 1	CE 1001 Civil Engineering	Prereq: BSCE, BSCET, BSCEM or MSCE Major. Coreq: CE 1001L or CE 127L; and College Level Math.	1	CE 1011 Surveying Engineering	Prereq: CE 1001L, CE 1101L, or CE 127; and MAT 114, MAT 1140, MAT 130, or MAT 1300; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 1011L or CE 134L.	3	
	CE 1001L Civil Engineering Laboratory	Prereq: BSCE, BSCET, BSCEM or MSCE Major. Coreq: CE 1001 or CE 127; and College Level Math.	1	CE 1011L Surveying Engineering Laboratory	Prereq: CE 1001L, CE 1101L, or CE 127L; MAT 114, MAT 1140, MAT 130, or MAT 1300; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 1011 or CE 134.	1	
	EGR 1000 Engineering, Society, and You (E)		2	CHM 1210 General Chemistry I (B1)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- o	3	
	EGR 1000L Engineering, Society, and You Laboratory (E)		1	CHM 1210L General Chemistry Laboratory I (B3)	Prereq: C or better in MAT 12, 105, 106, 112, 114, 115, 116, 120, 125, 130, 191, 214, 216, 224, MAT 1050, MAT 1052, MAT 1060, MAT 1140, MAT 1150, MAT 1200, MAT 1250, MAT 1300, MAT 1310, MAT 1910, MAT 2140, MAT 2240, MAT 2250, STA 120, or STA 1200; or C- o	1	
	MAT 1140 Calculus I (B4)	Prereq: C or better in MAT 1050 and MAT 1060, or appropriate score on MDTP or ALEKS placement test.	4	MAT 1150 Calculus II (B4)	Prereq: MAT 1140, MAT 115B, MAT 1140C, AP Calc AB >=3, or AP Calc BC >=3.	4	
	GE Area A1: Oral Communication		3	PHY 1510 Introduction to Newtonian Mechanics (B1)	Prereq: C- or better in MAT 114 or MAT 1140. Coreq: PHY 1510L.	3	
	BIO 1110 Life Science (B2)	Prereq: Undergraduate standing. Coreq: BIO 1110L.	2	PHY 1510L Newtonian Mechanics Laboratory (B3)		1	
	GE Area A2: Written Communication		3			0	
		Total Units	17		Total Units	16	

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Year 2	CE 2011 Technical Communications	Prereq: GE Area A and BSCE, BSCET, BSCEM, or MSCE Major.	3	IME 3011 App. of Stats in Engineering	Prereq: MAT 115, MAT 116, MAT 214, MAT 215, MAT 216, MAT 224, or MAT 1150.	2	
	CE 2041 Engineering Statics	Prereq: C- or better in MAT 115, MAT 1150, MAT 130, or MAT 131; PHY 131 or PHY 1510, and PHY 1510L or PHY 131L.	3	CE 2051 Mechanics of Materials	Prereq: C- or better in ME 214, ETT 210, CE 2041, ARO 2041, or ETM 2101.	3	
	MAT 2140 Calculus III	Prereq: MAT 116, MAT 214, MAT 1150, or MAT 1150C.	4	MAT 2240 Elementary Linear Algebra and Differential Equations	Prereq: MAT 116 or MAT 1150.	3	
	PHY 1520 Introduction to Electromagnetism and Circuits	Prereq: C- or better in MAT 115 or MAT 1150; and C- or better in PHY 132, PHY 132B or PHY 1510. Coreq: PHY 1520L.	3	GE Area D1: U.S. History American Ideals		3	
	PHY 1520L Introductory Laboratory on Electromagnetism and Circuits		1	GE Area C2a: Philosophy and Civilization		3	
	GE Area C1: Visual and Performing Arts		3			0	
			0			0	
			0			0	
	Semester Total Units		17	Semester Total Units		14	

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Year 3	CE 2030 Civil Engineering Materials	Prereq: C- or better in ME 218, ETT 220, or CE 2051; CHM 121 or CHM 1210; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 221L or CE 2030L.	2	CE 3211 Water Resources Engineering	Prereq: CE 2061 or ME 311; and BSCE, BSCET, BSCEM, or MSCE Major.	3	<i>Graduation Writing Test must be taken before completion of 75 units.</i>
	CE 2061 Fluid Mechanics	Prereq: C- or better in ME 214, ETT 210, CE 2041, ARO 2041, or ETM 2101.	3	CE 4350 Photogrammetry	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4350L .	2	
	CE 3301 Engineering Geomatics	Prereq: C- or better in CE 134L or CE 1011L; CE 134 or CE 1011; and BSCE, BSCET, BSCEM, or MSCE Major.	3	CE 4350L Photogrammetry Laboratory	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4350.	1	
	CE 2070 Computer Programming and Numerical Methods	Prereq: C- or better in MAT 224, MAT 2240, or MAT 216.	3	Option Electives	Select among CE 3101/L, CE 3201/L, CE 3401/L, CE 3501/L, or CE 3601/L	3	
	GSC 3210 Engineering Geology I (B5)	Prereq: Completion of the lower division GE requirements in Area A and Area B; and Upper Division standing. Coreq: GSC 3210L.	2	Option Electives	Select among CE 3101/L, CE 3201/L, CE 3401/L, CE 3501/L, or CE 3601/L	4	
	GSC 3210L Engineering Geology I Laboratory (B5)	Prereq: Completion of Lower Division GE requirements in Area A and Area B; and Upper Division standing. Coreq: GSC 3210.	1	GE Area D2: U.S. Constitution and California Government		3	
	CE 2030L Civil Engineering Materials Laboratory	Prereq: C- or better in ME 218, ETT 220, or CE 2051; CHM 121L or CHM 1210L . Coreq: CE 221 or CE 2030.	1			0	
						0	
	<i>Take the Graduation Writing Test</i>						
	Semester Total Units		15	Semester Total Units		16	

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Year 4	EGR 4810 Project Design Principles and Applications (B5)		1	EGR 4820 Project Design Principles and Applications (B5)		1	
	CE 4301 Digital Mapping	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4301L.	2	EGR 4830 Project Design Principles and Applications (B5)		1	
	CE 4301L Digital Mapping Laboratory	Prereq: CE 134 or CE 1011; and CE 134L or CE 1011L; BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4301.	1	CE 4321 Subdivision Engineering and Land Survey Descriptions	Prereq: CE 1011 or CE 134; CE 1011L or CE 134L; CE 3211, CE 332, ETC 305, or CE 3140; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4321L.	3	
	CE 4331 GIS Applications in Engineering and Remote Sensing	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4331L.	2	CE 4321L Subdivision Engineering and Land Survey Descriptions Laboratory	Prereq: CE 1011 or CE 134; CE 1011L or CE 134L; CE 3211, CE 332, ETC 305, or CE 3140; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4321.	1	
	CE 4331L GIS Applications in Engineering and Remote Sensing Laboratory	Prereq: CE 134 or CE 1011; CE 134L, or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4331.	1	CE 4341 Satellite Surveying in Engineering	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4341L.	2	
	Option Elective	Select from Curriculum Sheet	2	CE 4341L Satellite Surveying in Engineering Laboratory	Prereq: CE 134 or CE 1011; CE 134L or CE 1011L; and BSCE, BSCET, BSCEM, or MSCE Major. Coreq: CE 4341L	1	
	GE Area D3: Social Sciences: Principles, Methodologies, Value Systems, and Ethics		3	EGR 3321A CA Boundary Law and Public Lands Activity	Prereq: Completion of all GE Area A, D1, D2, and D3 requirements. Coreq: EGR 3321.	1	
	GE Area C2b: Literature and Language Other than English		3	IME 4020 Ethical Concepts in Technology and Applied Science (B5, C3)		3	
			0	EGR 3321 CA Boundary Law and Public Lands (D4)	Prereq: Completion of all GE Area A, D1, D2, and D3 requirements. Coreq: EGR 3321A.	3	
	<i>File an application to graduate</i>						
Semester Total Units			15	Semester Total Units		16	
						Total Units	126