

## Computer Science, B.S.: 120 units 2019-2020 Academic Year

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
<b>Year 1</b>	CS 1300 Discrete Structures	Prereq: C or better in MAT105/MAT 1050 & MAT 106/MAT 1060; or MAT 1052 & MAT 106/MAT 1060; or MAT 112, MAT 114, MAT 115, MAT 116, MAT 214, MAT 215, MAT 216, MAT 1140, MAT 1150, or MAT 2140.	4	CS 1400 Introduction to Programming and Problem Solving	Prereq: C or better in MAT 114, MAT 115, MAT 116, MAT 214, MAT 215, MAT 216, MAT 1140, MAT 1150 or MAT 2140; or Eligibility for MAT 114 or MAT 1140.	4	
	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 $\geq 3$ , or AP Calc BC $\geq 3$ .	4	
	GE Area A2: Written Communication		3	BIO 1110 Life Science (B2)	Prereq: Undergraduate standing. Coreq: BIO 1110L.	2	
	GE Area E: Lifelong Learning and Self-Development		3	BIO 1110L Life Science Laboratory (B3)	Coreq: BIO 1110.	1	
			0	GE Area A1: Oral Communication		3	
			0	GE Area A3: Critical Thinking		3	
		<b>Total Units</b>	<b>14</b>		<b>Total Units</b>	<b>17</b>	

Year 2	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
	CS 2400 Data Structures and Advanced Programming	Prereq: C or better in CS 141 or CS 1400; CS 130 or CS 1300; and MAT 114, MAT 115, MAT 116, MAT 214, MAT 215, MAT 216, MAT 1140, MAT 1150 or MAT 2140.	4	CS 2640 Computer Organization and Assembly Programming	Prereq: CS 240 or CS 2400.	3	
Major Electives	Select from Curriculum Sheet	3	CS 3310 Design and Analysis of Algorithms	Prereq: CS major; C or better in CS 241 or CS 2400; and MAT 208 or MAT 2250.	4		
MAT 2250 Linear Algebra with Applications to Differential Equations	Prereq: MAT 116, MAT 1150, or MAT 1150C.	4	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, PHY 1510B or PHY 1510. Coreq: PHY 1520L.	3		
PHY 1510 Introduction to Newtonian Mechanics (B1)	Prereq: C- or better in MAT 114, MAT 1140, MAT 1140C, MAT 115, MAT 116 or MAT 1150 . Coreq: PHY 1510L.	3	PHY 1520L Introductory Laboratory on Electromagnetism and Circuits	Coreq: PHY 1520.	1		
PHY 1510L Newtonian Mechanics Laboratory (B3)	Coreq: PHY 1510.	1	GE Area D2: U.S. Constitution and California Government		3		
		0	GE Area C1: Visual and Performing Arts		3		
<b>Semester Total Units</b>		<b>15</b>	<b>Semester Total Units</b>		<b>17</b>		

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Year 3	CS 3110 Formal Languages and Automata	Prereq: CS major, and C or better in CS 241 or CS 2400.	3	CS 4080 Concepts of Programming Languages	Prereq: CS major; C or better in CS 311 or CS 3110; and CS 264 or CS 2640.	3	<i>Graduation Writing Test must be taken before completion of 75 units.</i>
	CS 3650 Computer Architecture	Prereq: CS major, and C or better in CS 264 or CS 2640.	4	Major Electives	Select from Curriculum Sheet	3	
	STA 2260 Probability and Statistics for Computer Scientists and Engineers	Prereq: MAT 116, MAT 1150, MAT 132, or MAT 1310.	3	Major Electives	Select from Curriculum Sheet	3	
	GE Area D1: U.S. History American Ideals		3	GE Area C1 or GE Area C2	Prereq: Select either C1: Visual and Performing Arts or C2: Literature, Modern Languages, Philosophy and Civilization course	3	
	GE Area C2: Literature, Modern Languages, Philosophy and Civilization		3	GE Area D3: Social Sciences: Principles, Methodologies, Value Systems, and Ethics		3	
	<i>Take the Graduation Writing Test</i>						
	<b>Semester Total Units</b>		<b>16</b>	<b>Semester Total Units</b>		<b>15</b>	

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 4	CS 4800 Software Engineering	Prereq: CS major, and C or better in CS 241 or CS 2400.	3	CS 4310 Operating Systems	Prereq: C or better in CS 241 or CS 3650; and CS 365 or CS 3650.	3	
	CS 4630 Undergraduate Seminar	Prereq: CS major and senior standing.	1	Major Electives	Select from Curriculum Sheet	3	
	Major Electives	Select from Curriculum Sheet	4	Major Electives	Select from Curriculum Sheet	3	
	CS 3750 Computers and Society (B5, D4)	Prereq: Junior or senior standing.	3	GE Area D4: Social Science Synthesis		3	
	GE Area C3: Arts and Humanities Synthesis		3			0	
	<i>File an application to graduate</i>						
	<b>Semester Total Units</b>		<b>14</b>	<b>Semester Total Units</b>		<b>12</b>	
					<b>Total Units</b>	<b>120</b>	