

Physics, B.S. - Integrated Science Subplan/Option: 120 units
2020-2021 Academic Year

	Fall		Units	Spring		Units	Comments	
	Courses	Requirements/Comments		Courses	Requirements/Comments			
Year 1	MAT 1140 Calculus I (B4) [FSpSu]	Prereq: C or better in MAT 1050 and MAT 1060, MAT 1070, or appropriate score on MDTP or ALEKS placement test.	4	MAT 1150 Calculus II (B4) [FSpSu]	Prereq: MAT 1140, MAT 115B, MAT 1140C, AP Calc AB ≥ 3 , or AP Calc BC ≥ 3 .	4	[] = Term Typically Offered F = Fall Sp = Spring Su = Summer e = even years o = odd years	
	CHM 1210 General Chemistry I (B1) [FSpSu]	Prereq: SAT Math ≥ 550 ; ACT Math ≥ 23 ; 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, Coreq: CHM 1210L.	3	PHY 1510 Introduction to Newtonian Mechanics (B1) [FSp]	Prereq: C- or better in MAT 114, MAT 1140, MAT 1140C, MAT 115, MAT 116 or MAT 1150. Coreq: PHY 1510L.	3		
	CHM 1210L General Chemistry Laboratory I (B3) [FSpSu]	Prereq: SAT Math ≥ 550 ; ACT Math ≥ 23 ; 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- or better in CHM 121 and CHM 121L. Coreq: CHM 1210.	1	PHY 1510L Newtonian Mechanics Laboratory (B3) [FSp]	Coreq: PHY 1510.	1		
	GE Area E: Lifelong Learning and Self-Development [FSp]		3	CHM 1220 General Chemistry II (B1) [FSpSu]	Prereq: C- or better in CHM 1210, CHM 122 or CHM 122B; and C- or better in CHM 1210L, CHM 122L or CHM122LB. Coreq: CHM 1220L.	3		
	GE Area A2: Written Communication [FSp]		3	CHM 1220L General Chemistry Laboratory II (B3) [FSpSu]	Prereq: C- or better in CHM 1210, CHM 122 or CHM 122B; and C- or better in CHM 1210L, CHM 122L or CHM122LB. Coreq: CHM 1220.	1		
			0	GE Area A1: Oral Communication [FSP]		3		
	Total Units		14	Total Units		15		

Year 2	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
	MAT 2140 Calculus III [FSpSu]	Prereq: MAT 116, MAT 214, MAT 1150, or MAT 1150C.	4	MAT 2250 Linear Algebra with Applications to Differential Equations [FSpSu]	Prereq: MAT 116, MAT 1150, or MAT 1150C.	4	
PHY 1520 Introduction to Electromagnetism and Circuits [FSp]	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 2530 Introduction to Electromagnetic Radiation and Special Relativity [FSp]	Prereq: C- or better in MAT 116 or MAT 1150; and C- or better in PHY 123, PHY 133, PHY 1220, or PHY 1520.	3		
PHY 1520L Introductory Laboratory on Electromagnetism and Circuits [FSp]	Coreq: PHY 1520.	1	PHY 2530L Introductory Laboratory on Electromagnetic Radiation and Special Relativity [FSp]	Coreq: PHY 2530.	1		
STS 2010 Introduction to Science, Technology, and Society (C2)		3	MAT 2010 Introduction to Computational Methods in Mathematics [FSp]	Prereq: MAT 116 or MAT 1150. Coreq: MAT 2010L.	2		
BIO 1210 Foundations of Biology: Energy, Matter, and Information (B2) [FSp]	Coreq: BIO 1210L.	3	MAT 2010L Introduction to Computational Methods in Mathematics Laboratory [FSp]	Coreq: MAT 2010.	1		
BIO 1210L Foundations of Biology: Energy, Matter, and Information Laboratory (B3) [FSp]	Coreq: BIO 1210.	1	BIO 1220 Foundations of Biology: Evolution, Ecology, and Biodiversity [FSp]	Coreq: BIO 1220L.	3		
		0	BIO 1220L Foundations of Biology: Evolution, Ecology, and Biodiversity Laboratory [FSp]	Coreq: BIO 1220.	1		
Semester Total Units		15	Semester Total Units		15		

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	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 3	PHY 2540 Introduction to Thermal and Quantum Physics [FSp]	Prereq: C- or better in PHY 234 or PHY 2530.	3	PHY 3210 Advanced Classical Mechanics [Sp]	Prereq: C- or better in PHY 2530; C- or better in MAT 201 or MAT 2010; and C- or better in MAT 216 or MAT 2250. Coreq: PHY 3210A.	3	<i>Graduation Writing Test must be taken before completion of 75 units.</i>
	PHY 2540L Introductory Laboratory on Thermal and Quantum Physics [FSp]	Coreq: PHY 2540.	1	PHY 3210A Advanced Classical Mechanics Recitation Activity [Sp]	Coreq: PHY 3210.	1	
	PHY 3600 Mathematical Methods of Physics I [FSp]	Prereq: C- or better in MAT 216 or MAT 2250. Coreq: PHY 2540 and PHY 3600A.	3	GSC 1110 Principles of Geology (B1) [FSp]		3	
	PHY 3600A Mathematical Methods of Physics I Recitation Activity [FSp]	Coreq: PHY 3600.	1	GSC 1410L Principles of Geology Laboratory (B3) [FSp]		1	
	GE Area A3: Critical Thinking [FSp]		3	Option Electives [FSp]	Select from Curriculum Sheet	3	
	GE Area C1: Visual and Performing Arts [FSp]		3	GE Area C1 or GE Area C2 [FSp]	Prereq: Select either C1: Visual and Performing Arts or C2: Literature, Modern Languages, Philosophy and Civilization course	3	
			0	GE Area D1: U.S. History American Ideals [FSp]		3	
	<i>Take the Graduation Writing Test</i>						
Semester Total Units		14	Semester Total Units		17		

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Year 4	Option Electives [FSp]	Select from Curriculum Sheet	3	PHY 4630 Undergraduate Seminar [Sp]	Prereq: C- or better in PHY 235 or PHY 2540.	1	
	Option Electives [FSp]	Select from Curriculum Sheet	3	Option Electives [FSp]	Select from Curriculum Sheet	3	
	GSC 1160 Introduction to Astronomy (B1) [FSp]		3	GE Area B5: Science and Technology Synthesis [FSp]	B5 Synthesis course from AST or PHY	3	
	GE Area D2: U.S. Constitution and California Government [FSp]		3	GE Area C3: Arts and Humanities Synthesis [FSp]		3	
	GE Area D3: Social Sciences: Principles, Methodologies, Value Systems, and Ethics [FSp]		3	GE Area D4: Social Science Synthesis [FSp]		3	
			0	Option Electives [FSp]	Select from Curriculum Sheet	2	
	<i>File an application to graduate</i>						
	Semester Total Units		15	Semester Total Units		15	
					Total Units	120	