

Mathematics, B.S. - Secondary Teacher Prep/Pure Mathematics Subplan/Option: 120
units
2021-2022 Academic Year

	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
Year 1	MAT 1140 Calculus I (B4) [FSpSu] (Success Marker)	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] (Success Marker)	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
	GE Area A2: Written Communication [FSp] (Success Marker)		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	
	GE Area F: Ethnic Studies [FSp]		3	PHY 1510L Newtonian Mechanics Laboratory (B3) [FSp]	Coreq: PHY 1510.	1	
	Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3	GE Area B2: Life Sciences [FSp]	If a year of PHY 1510/L and 1520/L is planned, any B2 course. If only one semester of PHY 1510/L is planned, must take BIO 1210/L followed by BIO 1220/L.	3	
	GE Area E: Lifelong Learning and Self-Development [FSp]		3	GE Area D2: U.S. Constitution and California Government [FSp]		3	
	Total Units			16	Total Units		

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 2010 Introduction to Computational Methods in Mathematics [FSp]	Prereq: MAT 116 or MAT 1150. Coreq: MAT 2010L.	2	
MAT 2250 Linear Algebra with Applications to Differential Equations [FSpSu]	Prereq: MAT 116, MAT 1150, or MAT 1150C.	4	MAT 2010L Introduction to Computational Methods in Mathematics Laboratory [FSp]	Coreq: MAT 2010.	1		
Major Required	PHY 1520/L Introduction to Electromagnetism / Laboratory and Circuits or BIO 1220/L Foundations of Biology: Evolution, Ecology, and Biodiversity /Laboratory (see note on B2 course in Spring Year 1.)	4	STA 2100 Introduction to Statistics [FSpSu]	Prereq: AP Calc AB, AP Calc BC, MAT 114, MAT 1140, MAT 120, MAT 1200, MAT 130, MAT 1300, MAT 115, MAT 1150, MAT 116, MAT 214, MAT 2140, or MAT 215.	4		
Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3	MAT 3100 Introduction to Mathematical Proof [FSpSu]	Prereq: MAT 116 or MAT 1150.	4		
		0	Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3		
Semester Total Units		15	Semester Total Units		14		

Year 3	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
	STA 2200 Introduction to Probability [FSpSu]	Prereq: STA 2100.	3	MAT 4170 Introduction to Abstract Algebra I	Prereq: MAT 2240 or MAT 2250, and MAT 310 or MAT 3100.	4	
	MAT 3140 Introduction to Real Analysis I [FSpSu]	Prereq: MAT 310 or MAT 3100; and MAT 215 or MAT 2140.	4	Option Electives [FSp]	Select from Curriculum Sheet	4	
	Option Electives [FSp]	Select from Curriculum Sheet	3	Option Electives [FSp]	Select from Curriculum Sheet	3	
	Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3	Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3	
	Lower Division GE [FSp]	Lower Division GE areas: Choose any class from areas A1, A3, C1, C2, and D1. Take one class from each area, plus one additional class from area C1 or C2, in order to complete GE requirements	3			0	
	Semester Total Units		16	Semester Total Units		14	

Year 4	Fall		Units	Spring		Units	Comments
	Courses	Requirements/Comments		Courses	Requirements/Comments		
	MAT 4190 Advanced Linear Algebra [FSp]	Prereq: MAT 208 or MAT 2250; and MAT 310 or MAT 3100.	4	MAT 4280 Functions of a Complex Variable [FSpSu]	Prereq: MAT 3140 and MAT 2140; MAT 314 and MAT 2140; MAT 3140 and MAT 215; or MAT 314 and MAT 215.	4	
Option Electives [FSp]	Select from Curriculum Sheet	3	Upper Division Synthesis GE [FSp]	Upper division synthesis GE areas: Choose any class from areas B5, C3, D4. Take one class from each upper division synthesis area to complete GE requirements.	3		
Option Electives [FSp]	Select from Curriculum Sheet	3	Upper Division Synthesis GE [FSp]	Upper division synthesis GE areas: Choose any class from areas B5, C3, D4. Take one class from each upper division synthesis area to complete GE requirements.	3		
Upper Division Synthesis GE [FSp]	Upper division synthesis GE areas: Choose any class from areas B5, C3, D4. Take one class from each upper division synthesis area to complete GE requirements.	3	Unrestricted Elective		3		
Unrestricted Elective		3	Unrestricted Elective		2		
<i>File an application to graduate</i>							
Semester Total Units		16	Semester Total Units		15		
					Total Units	120	