### Degree: B.A. in Mathematics Freshman 4-Year Academic Roadmap

Year 1: Freshman Year					_				Year Total	28 to 30
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units		Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 2210 (GE B4)	Fall & Spring	7	Math 1401 or satisfactory score on department placement exam	4		MATH 2220	Fall & Spring	7	C-or better in MATH 2210	4
CSE 1100 (GE A3), 1250, or 2010*	Fall & Spring			3 or 4		MATH 2310	Fall & Spring	7	C-or better in MATH 2210 and MATH 2220 as a pre- or co-requisite	4
GE (E)	Fall & Spring			3	1 [	GE (A1)	Fall & Spring			3
GE (B1 or B2 with B3)	Fall & Spring			4 or 5	1 [	GE (A2)	Fall & Spring			3
			Semester Total	14 to 16	1 [				Semester Total	14

Year 2: Sophomore Year					_				Year Total	29
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units		Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 2320	Fall & Spring	~	C-or better in MATH 2220 and 2310	4		MATH 2270	Fall & Spring	~	MATH 2310	3
MATH 3100 (WI)	Fall & Spring	~	C- or better in MATH 2220	4		MATH 3329	Fall & Spring	~	MATH 2310 as a pre-req. or co-req. and MATH 3100	3
GE (C1)	Fall & Spring			3		GE (B1 or B2 w/o lab)	Fall & Spring			3
GE (C2)	Fall & Spring			3		GE (C2)	Fall & Spring			3
						GE (D1)	Fall & Spring			3
			Semester Total	14					Semester Total	15

Year 3: Junior Year					_				Year Total	32
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units		Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 4600	Fall & Spring	4	MATH 2320 and MATH 3100	4	Ļ	MATH 4300	Fall & Spring	~	MATH 2320 and MATH 3100	4
MATH Elective	Fall & Spring			3		MATH Elective	Fall & Spring			3
GE (D2)				3		GE (C2)	Fall & Spring			3
Free Elective				3		Free Elective	Fall & Spring			3
Free Elective				3		Free Elective	Fall & Spring			3
			Semester Total	16	5				Semester Total	16

Year 4: Senior Year									Year Total	30
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units	Sp	ring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH Elective	Fall & Spring			3	MA	ATH Elective	Fall & Spring			3
MATH Elective	Fall & Spring			3	GE	(D4)	Fall & Spring			3
GE (D3)	Fall & Spring			3	GE	(B5)	Fall & Spring			3
Free Elective	Fall & Spring			3	Fre	ee Elective	Fall & Spring			3
Free Elective	Fall & Spring			3	Fre	ee Elective	Fall & Spring			3
			Semester Total	15					Semester Total	15
*Course may be offered in summ	er						Degree Units	Гotal		120

\*Note: If a student takes CSE 1250 or CSE 2100 to satisfy the computer science requirement of the degree, then the student will still need to take a GE A3 course.

\*\*Note: Depending on course choices, the student may need to take another free elective course to total 120 units for graduation.

Degree: B.A. in Mathematics Transfer 2-Year Academic Roadmap

 Year 3: Junior Year
 Term(s)
 Pre-reg
 Pre-reg Course(s)
 Units

 MATH 3100 (WI)
 Fall & Spring
 C- or better in MATH 2220
 4

 MATH 3100 (WI)
 Fall & Spring
 MATH 2310
 3

 CSE 1100, 1250, or 2010
 Fall & Spring
 MATH 2310
 3 or 4

 GE (C1 or C2 upper division)
 Fall & Spring
 3
 3

 Free Elective
 Fall & Spring
 107
 3

 Semester Total

			Year Total	30
Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 3329	Fall & Spring	4	MATH 2310 as pre-req. or co-req. and MATH 3100	3
MATH 4600	Fall & Spring	4	MATH 2320 and MATH 3100	4
GE (B5)	Fall & Spring			3
GE (D4)	Fall & Spring			3
Free Elective	Fall & Spring			2
		S	emester Total	15

Term(s)	Pre-req	Pre-req Course(s)	Units
Fall & Spring	V	MATH 2320 and MATH 3100	4
Fall & Spring			3
Fall & Spring			3
Fall & Spring			5
Semeste	er Total		15
summer			
	Fall & Spring Fall & Spring Fall & Spring Fall & Spring	Fall & Spring     Image: Constraint of the synthesis of the synthesynthesyntext of the synthesynthesyntext of the synthesynthesynthes	Fall & Spring     MATH 2320 and MATH 3100       Fall & Spring        Fall & Spring        Fall & Spring        Semester Total

			Year Total	30
Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH Elective	Fall & Spring			3
MATH Elective	Fall & Spring			3
MATH Elective	Fall & Spring			3
Free Electives	Fall & Spring			6
		S	emester Total	15
	Degree Units	Total		60

#### Degree: B.S. in Mathematics-General Mathematics Concentration Freshman 4-Year Academic Roadmap

Year 1: Freshman Year								Year Total	29 to 30
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units	Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 2210 (GE B4)	Fall & Spring	<b>L</b>	Math 1401 or satisfactory score on department placement exam	4	MATH 2220	Fall & Spring	<b>L</b>	C-or better in MATH 2210	4
CSE 1100 (GE A3), 1250, or 2010*	Fall & Spring			3 or 4	MATH 2310	Fall & Spring	<b>L</b>	C-or better in MATH 2210 and MATH 2220 as a pre- or co-requisite	4
2000-level science (B1 or B2 with B3; or D3)	Fall & Spring			3 to 5	GE (A1)	Fall & Spring			3
GE (E)	Fall & Spring			3	GE (A2)	Fall & Spring			3
					Free Elective	Fall & Spring			1
		Semester	Total	14 to 15				Semester Total	15
					-				
Year 2: Sophomore Year								Year Total	30
Fall	Term(s)		Pre-req Course(s)	Units	Spring			Pre-req Course(s)	Units
MATH 2320	Fall & Spring	7	C-or better in MATH 2220 and 2310	4	MATH 2270	Fall & Spring	7	MATH 2310	3
MATH 3100 (WI)	Fall & Spring	۲	C-or better in MATH 2220	4	MATH 3329	Fall & Spring		MATH 3100 and MATH 2310 as pre-req or co-req	3
GE (B1 or B2 w/o lab)	Fall & Spring			3	GE (B1 or B2 with B3; or D3)	Fall & Spring			3 to 4
GE (C1)	Fall & Spring			3	GE (C2)	Fall & Spring			3
Free Elective				1	Free Elective	Fall & Spring			2 to 3
		Semester	Total	15				Semester Total	15
Year 3: Junior Year								Year Total	30
Fall	Term(s)		Pre-req Course(s)	Units	Spring	Term(s)		Pre-req Course(s)	Units
MATH 4600	Fall & Spring	V	MATH 2320 and MATH 3100	4	MATH 5600	Spring	V	C- or better in MATH 4600	3
MATH Elective	Fall & Spring			3	MATH Elective	Fall & Spring			3
MATH Elective	Fall & Spring			3	GE (C2)	Fall & Spring			3
GE (C2)	Fall & Spring			3	GE (D1)	Fall & Spring			3
Free Elective	Fall & Spring			2	Free Elective	Fall & Spring			3
		Semester	Total	15				Semester Total	15
Year 4: Senior Year								Year Total	30 to 31
Fall	Term(s)			Units	Spring			Pre-req Course(s)	Units
MATH 4300	Fall & Spring	V	MATH 2320 and MATH 3100	4	MATH 5300	Spring	V	C- or better in MATH 4300	4
MATH Elective	Fall & Spring			3	MATH Elective	Fall & Spring			3
GE (D2)	Fall & Spring			3	GE (B5)	Fall & Spring			3
GE (D4)	Fall & Spring			3	Free Electives	Fall & Spring			5
Free Electives	Fall & Spring			2 to 3					
		Semester	Total	15 to 16				Semester Total	15

\*Note: If a student takes CSE 1250 or CSE 2100 to satisfy the computer science requirement of the degree, then the student will still need to take a GE A3 course.

### Degree: B.S. in Mathematics-Applied Mathematics Concentration Freshman 4-Year Academic Roadmap

Fall								Year Total	
			Pre-reg Course(s)	Units	Spring	Term(s)		Pre-reg Course(s)	Unit
MATH 2210 (GE B4)	Fall & Spring		Math 1401 or satisfactory score on department placement exam	4	MATH 2220	Fall & Spring		C-or better in MATH 2210	
CSE 1100 (GE A3), 1250, or 2010*	Fall & Spring			3 or 4	MATH 2310	Fall & Spring		C-or better in MATH 2210 and MATH 2220 as a pre- or co-requisite	
2000 level science course that counts towards math concentration**	Fall & Spring			3 to 5	2000 level science course that counts towards math concentration**	Fall & Spring			3 to
GE (E)				3	GE (A1)	Fall & Spring			
Free Elective				0 to 2	Free Elective	Fall & Spring			0 to
	Semester T	otal		15		Semeste	r Total		
Year 2: Sophomore Year								Year Total	
Fall			Pre-reg Course(s)	Units	Spring	Term(s)		Pre-reg Course(s)	Units
MATH 2320	Fall & Spring		C-or better in MATH 2220 and 2310	4	MATH 2270	Fall & Sprin		MATH 2310	
MATH 3100 (WI)	Fall & Spring		C-or better in MATH 2220	4	MATH 5310	Spring	2	MATH 2310 and MATH 3100	
GE (A2)	Fall & Spring			3	GE (B1 or B2 with B3; or D3)	Fall & Spring			3 to
GE (C1)	Fall & Spring			3	GE (C2)	Fall & Spring			
					Free Elective	Fall & Spring			1 to
	Semester T	iotal		14		Semeste	r Total		
Year 3: Junior Year	-		1			-		Year Total	
Fall	Term(s)		Pre-reg Course(s)	Units	Spring	Term(s)		Pre-reg Course(s)	Units
MATH 4600	Fall & Spring		MATH 2320 and MATH 3100	4	MATH 4300	Fall & Spring		MATH 2320 and MATH 3100	
MATH 3329	Fall & Spring		MATH 3100 and MATH 2310 as pre-reg or co-reg	3	MATH Elective	Fall & Spring			
GE (C2)	Fall & Spring			3	MATH Elective	Fall & Spring			
GE (D1)	Fall & Spring			3	GE (C2)	Fall & Sprin			
Free Elective	Fall & Spring			2	Free Elective	Fall & Spring			
	Semester T	otal		15		Semeste	r Total		
Year 4: Senior Year								Year Total	_
Fall	Term(s)	-	Pre-reg Course(s)	Units		Term(s)	-		Units
			Pre-reg Course(s)	Units	Spring			Pre-req Course(s)	Units
MATH Elective	Fall & Spring			3	MATH Elective	Fall & Spring			
MATH Elective	Fall & Spring			3	MATH Elective	Fall & Sprin			
GE (D2)	Fall & Spring			3	GE (B5)	Fall & Spring			
GE (D4)	Fall & Spring			3	Free Elective	Fall & Spring			_
Free Elective	Fall & Spring			3				1	_
	Semester T	otal		15		Semeste			
*Course may be offered in summer						Degree Unit			1

#### Degree: B.S. in Mathematics-Teaching Mathematics Concentration Freshman 4-Year Academic Roadmap

Year 1: Freshman Year	r							Year Total	30
Fall	Term(s) F	Pre-req	Pre-req Course(s)	Units	Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 2210 (GE B4)	Fall & Spring	1	Math 1401 or satisfactory score on department placement exam	4	MATH 2220	Fall & Spring	1	C-or better in MATH 2210	4
MATH 2265	Fall & Spring	N	MATH 2210 as pre-req or co-req	3	MATH 2310	Fall & Spring	ß	C-or better in MATH 2210 and MATH 2220 as a pre- or co-requisite	4
GE (E )	Fall & Spring			3	GE (A1)	Fall & Spring			3
GE (B1 or B2 with B3)	Fall & Spring			4 to 5	GE (B1 or B2 w/o lab)	Fall & Spring			3 to 4
Free Elective	Fall & Spring			0 to 1	Free Elective	Fall & Spring			1
			Semester Total	15				Semester Total	15
Year 2: Sophomore Ye								Year Total	30
Fall		Pre-reg	Pre-rea Course(s)	Units	Spring	Term(s)	Pre-reg	Pre-reg Course(s)	Units
MATH 2320	Fall & Spring		C-or better in MATH 2220 and 2310	4	MATH 3100	Fall & Spring		C- or better in MATH 2220	4
MATH 2900	Fall & Spring		Equivalent to MATH 1401	4	MATH 3460	Fall & Spring		MATH 2320	3
GE (A2)	Fall & Spring		equivalent to mixtri 1401	3	GE (C1)	Fall & Spring		WWWWE ESEC	3
GE (A3)	Fall & Spring			3	GE (C2)	Fall & Spring			3
Free Elective	Fall & Spring			1	Free Elective	Fall & Spring			2
	[ en er ep ma		Semester Total	15		1 to sp8		Semester Total	15
Year 3: Junior Year								Year Total	29
Fall			Pre-req Course(s)	Units	Spring	Term(s)		Pre-req Course(s)	Units
MATH 3329	Fall & Spring		MATH 2310 as pre-req or co-req and MATH 3100	3	MATH 4300	Fall & Spring	1	MATH 2320 and MATH 3100	4
MATH 3480	Fall & Spring	V	C- or better in MATH 2220	3	MATH 4900	Fall & Spring	1	C or better in MATH 2900 and MATH 3329	4
Math Elective	Fall & Spring			3	GE (C2)	Fall & Spring			3
GE (C2)	Fall & Spring			3	GE (D1)	Fall & Spring			3
Free Elective	Fall & Spring			3					
			Semester Total	15				Semester Total	14
Year 4: Senior Year								Year Total	31
Fall	Term(s) F	Pre-rea	Pre-reg Course(s)	Units	Spring	Term(s)	Pre-rea	Pre-reg Course(s)	Units
MATH 3345			MATH 3100	3	MATH 5900	Fall & Spring		Senior status, MATH 4900, and C or better in MATH 4300 and MATH 4600	3

Fall	Term(s)	Pre-req	Pre-req Course(s)	Units	Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 3345	Fall & Spring	<b>L</b>	MATH 3100	3	MATH 5900	Fall & Spring	V	Senior status, MATH 4900, and C or better in MATH 4300 and MATH 4600	3
MATH 4600	Fall & Spring	<b>L</b>	MATH 2329 and MATH 3100	4	MATH Elective	Fall & Spring			3
GE (D2)	Fall & Spring			3	GE (D3)	Fall & Spring			3
GE (D4)	Fall & Spring			3	GE (B5)	Fall & Spring			3
Free Elective	Fall & Spring			3	Free Elective	Fall & Spring			3
			Semester Total	16				Semester Total	15
*Course may be offered	in summer					Degree Units	Total		120

## Degree: B.S. in Mathematics - Teaching Mathematics Concentration Transfer 2-Year Academic Roadmap

Fall	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 2265	Fall & Spring	V	MATH 2210 as pre-req or co-req	3
MATH 2900	Fall & Spring	V	Equivalent to MATH 1401	4
MATH 3100 (WI)	Fall & Spring	V	C- or better in MATH 2220	4
CSE 1100, 1250, or 2010	Fall & Spring			3 to 4
		Semester 1	Total	14 to 15

			Year Total	29 to 30
Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 3329	Fall & Spring	~	MATH 2310 as pre-req. or co-req. and MATH 3100	3
MATH 3345	Fall & Spring	~	MATH 3100	3
MATH 3460	Fall & Spring	~	MATH 2320	3
GE (C1 or C2 upper division)	Fall & Spring			3
GE (D4)	Fall & Spring			3
Semester Total				15

fear 4. Senior fear					
Fall	Term(s)	Pre-req	Pre-req Course(s)	Units	
MATH 3480	Fall & Spring	V	C- or better in MATH 2220	3	
MATH 4300	Fall & Spring	V	MATH 2320 and MATH 3100	4	
MATH 4900	Fall & Spring	V	C or better in MATH 2900 and MATH 3329	4	
GE (B5)	Fall & Spring			3	
Free elective	Fall & Spring			1 to 2	
		Semester T	otal	15 to 16	
*Course may be offered in summer					

			Year Total	30 to 31
Spring	Term(s)	Pre-req	Pre-req Course(s)	Units
MATH 4600	Fall & Spring	1	MATH 2320 and MATH 3100	
MATH 5900	Fall & Spring	1	Senior status, MATH 4900, and C or better in MATH 4300 and MATH 4600	
MATH Elective	Fall & Spring			
MATH Elective	Fall & Spring			3
Free elective	Fall & Spring			2
			Semester Total	15
Degree Units Total			60	

# **General Education Courses**

GE Ca	ategory	Courses	Designation	
A1	Oral Communication		University Foundations	
A2	Written Communication		University Foundations	
A3	Critical Thinking		University Foundations	
B1	Physical Science		Disciplinary Perspectives	
B2	Life Science		Disciplinary Perspectives	
B3	Lab Activity		Disciplinary Perspectives	
B4	Mathematics		University Foundations	
B5	Upper Division Scientific Inquiry		Disciplinary Perspectives	
C1*	Arts		Disciplinary Perspectives	
C2*	Literature		Disciplinary Perspectives	
C2*	Philosophy		Disciplinary Perspectives	
	World Languages or Literature in			
C2*	Translation		Disciplinary Perspectives	
	*one choice must be upper-division			
_				
D1 <b>^</b>	U.S. History	4	University Foundations	
D2 <b>^</b>	American Government		University Foundations	
	Social Sciences Discipline			
D3 <b>^</b>	Perspectives		Disciplinary Perspectives	
D4 <b>^</b>	Upper Division Social Science		Disciplinary Perspectives	
	^at least 2 disciplines must be represented in D, including choices in US History & Government			
Е	Foundation Seminar		University Foundations	

(WI)	Writing Intensive	At least 2 courses reqd, one UD
	Diversity and Inclusiveness	
(DI)	Perspectives	At least 1 course required
(G)	Global Perspectives	At least 1 course required