B.A. in Mathematics -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

			Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is no semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
MATH-BA								
Lower Division Requirements		MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q25 and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2120Q25 to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
		CSE 201 (4 units, quarters) and MATH 241 (2 units, quarters)		CSE 2010		6	4	If a student has completed only MATH 241 on quarters, the student will still need to complete CSE 2010. If a student has only completed CSE 201 on quarters, then they have met the major requirement for this area but may still need to take additional units(s) to meet the total units required for graduation.
		MATH 270	MATH 2270			4	3	
		MATH 251, 252, and 331 (each 4 units, quarters)	MATH 2310 and 2320 (each 4 units, semesters)			12	8	If a student has completed only MATH 251 on quarters, then the student should complete MATH 3310Q25 and MATH 3320. If a student has completed MATH 251 and MATH 252 on quarters, then the student should complete MATH 3310Q25 to complete the sequence. If a student has completed MATH 251 and MATH 331 on quarters, then the student should complete MATH 2320 to complete the sequence.
Upper Division Requirements	Required courses	MATH 329	MATH 3329			4	3	
		MATH 345	MATH 3345			4	3	
		MATH 355		MATH 3100		4	4	
		MATH 372	MATH 3372			4	3	
		MATH 465	MATH 3460			4	3	
		MATH 545		MATH 4600		4	4	
		MATH 553	MATH 4300			4	4	
Electives	Twelve units of mathematics electives chosen from the following in consultation with an advisor	MATH 320	MATH 3320			12	9-10	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474.

If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.

If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455. |
		MATH 455	MATH 4455					
		MATH 470	MATH 4270					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 (4 units, semesters) or MATH 5600 (3 units, semesters)				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 565	MATH 5565					
		MATH 570			MATH 4455			
		MATH 576			MATH 4360			
		MATH 595D	MATH 5953					
						Total 74	56-57	

B.S. in Mathematics -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

			Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is **no** semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
		Quarter Courses						

Core Requirements

Lower Division Requirements	Required courses	MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q2S and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q2S to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
		CSE 201 (4 units, quarters) and MATH 241 (2 units, quarters)		CSE 2010		6	4	If a student has completed only MATH 241 on quarters, the student will still need to complete CSE 2010. If a student has only completed CSE 201 on quarters, then they have met the major requirement for this area but may still need to take additional unit(s) to meet the total units required for graduation.
		MATH 270	MATH 2270			4	3	
		MATH 251, 252, and 331 (each 4 units, quarters)	MATH 2310 and 2320 (each 4 units, semesters)			12	8	If a student has completed only MATH 251 on quarters, then the student should complete MATH 2310Q2S and MATH 2320. If a student has completed MATH 251 and MATH 252 on quarters, then the student should complete MATH 2310Q2S to complete the sequence. If a student has completed MATH 251 and MATH 331 on quarters, then the student should complete MATH 2320 to complete the sequence.
Upper Division Requirements	Required courses	MATH 329	MATH 3329			4	3	
		MATH 345	MATH 3345			4	3	
		MATH 355		MATH 3100		4	4	
		MATH 372	MATH 3372			4	3	
		MATH 465	MATH 3460			4	3	
		MATH 545		MATH 4600		4	4	
		MATH 553	MATH 4300			4	4	
						Total 62	**47**	

Concentration (40-56) - Students must choose either the general track or one of the applied concentrations which follow

General Track (MAGT)

Lower Division Requirement	Required course	PHYS 221	PHYS 2500			5	4	
Electives (Thirty-six units of mathematics electives selected from the following, with at least eight units chosen from 500-level courses. At least twelve units must be chosen from Group A, and at least twelve units must be chosen from Group B.)	Group A (Applied Mathematics)	MATH 320	MATH 3320			36	27-28	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474. If a student uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 455	MATH 4455					
		MATH 470	MATH 4270					
		MATH 474			MATH 3953			
		MATH 557	MATH 5170					
		MATH 565	MATH 5565					
		MATH 570			MATH 4455			
		MATH 576			MATH 4360			
	Group B (Pure Mathematics)	MATH 480	MATH 3480					If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 595D	MATH 5953					
						Total 41	**31-32**	

Concentration in Biology (MABC)

Lower Division Requirements	Required courses	BIOL 200, 201, and 202 (each 5 units, quarters)	BIOL 2010 and 2020 (each 5 units, semetsters)			15	10	
		CHEM 215	CHEM 2100			6	4	
		CHEM 216	CHEM 2200			6	4	
Upper Division Requirements	Required courses	BIOL 300	BIOL 3100			5	4	
		MATH 470	MATH 4270			4	3	
		MATH 565	MATH 5565			4	3	
		MATH 576		MATH 4360		4	3	
Electives	A minimum of eight units chosen from	BIOL 321	BIOL 3700 (4 units)			8-10	8-9	
		BIOL 423	BIOL 3300 (4 units)					
		BIOL 450	BIOL 3800 (4 units)					
		BIOL 522	BIOL 5720 (4 units)					
		BIOL 572	BIOL 5320 (4 units)					
		BIOL 573	BIOL 5370 (5 units)					
	Four units chosen from	MATH 320	MATH 3320			4	3	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474. If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546. If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 455	MATH 4455					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 570			MATH 4455			
		MATH 595D	MATH 5953					
						Total 56-58	**45-46**	

Concentration in Computer Science (MACS)

Lower Division Requirement	Required course	CSE 202 and CSE 330 (each 4 units, quarters)	CSE 2020			8	4	If a student has only completed CSE 202 on quarters, then the student must complete CSE 2020.
Upper Division Requirements	Required courses	CSE 320		CSE 5953		4	3	The topic for the independent study course should be on a programming languages related topic.
	Twelve units chosen from	CSE 420	CSE 4200			12	9	
		CSE 431	CSE 4310					
		CSE 500	CSE 5000					
		CSE 501	CSE 5010					
		CSE 512	CSE 5120					
		CSE 513			CSE 5140 or 5160			
		CSE 515	CSE 5150					
		CSE 520	CSE 5200					
		CSE 524			CSE 4500			
		CSE 535	CSE 5350					
		CSE 550	CSE 5500					
		CSE 551	CSE 5510					
Electives	Sixteen units of mathematics electives selected from the following with at least eight units chosen from 500-level courses	MATH 320	MATH 3320			16	12-13	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474. If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546. If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 455	MATH 4455					
		MATH 470	MATH 4270					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 565	MATH 5565					
		MATH 570			MATH 4455			
		MATH 576			MATH 4360			
		MATH 595D	MATH 5953					
						Total 40	**28-29**	

Concentration in Economics (MAEC)

Lower Division Requirements	Required courses	ECON 200	ECON 2201			4	3	
		ECON 202	ECON 2202			4	3	
Upper Division Requirements	Required courses	MATH 320	MATH 3320			4	3	
		MATH 565	MATH 5565			4	3	
		MATH 576		MATH 4360		4	3	
Electives	Sixteen units chosen from	ECON 300	ECON 4200 (3 units)			16	12	
		ECON 302	ECON 4100 (3 units)					
		ECON 360	ECON 3103 (3 units)					
		ECON 410	ECON 3400 (3 units)					
		ECON 430	ECON 3318 (3 units)					
		ECON 435	ECON 3780 (3 units)					
		ECON 475	ECON 3314 (3 units)					
		ECON 480	ECON 4400 (3 units)					
		ECON 490	ECON 4300 (3 units)					
	Four units chosen from	MATH 455	MATH 4455			4	3-4	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474. If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546. If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 470	MATH 4270					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 570			MATH 4455			
		MATH 595D	MATH 5953					
						Total 40	**30-31**	

Concentration in Geographic Information Systems (MAGI)

Lower Division Requirements	Required courses	GEOG 103	GEOG 1030			5	3	
		GEOG 201		GEOG 3904		4	3	
		GEOG 202	GEOG 2250			5	4	
Upper Division Requirements	Required courses	GEOG 308	GEOG 3710			5	4	
		GEOG 402	GEOG 4860			5	4	
		MATH 470	MATH 4270			4	3	
Electives	At least eight units to be chosen from	GEOG 306 and 406 (4 units each, quarters)	GEOG 4880 (4 units, semesters)			8	3-4	
		GEOG 575D-E	GEOG 5753 (3 unit, semesters)					
	Twelve units selected from the following with at least eight units chosen from 500-level	MATH 320	MATH 3320			12	9-10	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474. If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546. If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 455	MATH 4455					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 565	MATH 5565					
		MATH 570			MATH 4455			
		MATH 576			MATH 4360			
		MATH 595D	MATH 5953					
						Total 48	**33-35**	

Concentration in Physics (MAPC)

| Lower Division Requirements | Required courses | PHYS 221, 222, and 223 (each 5 units, quarters) | PHYS 2500 (4 units), 2500L (1 unit), 2510 (4 units), and 2510L (1 unit) | | | 15 | 10 | |
| | | PHYS 224 and 225 (each 3 units, quarters) | PHYS 2700 | | | 6 | 3 | |

						Units	Units	Notes
		PHYS 114 and 115 (each 3 units, quarters)	PHYS 415					
Upper Division Requirement	Required course	PHYS 373	PHYS 3100			4	4	
Electives	Twelve units chosen from	PHYS 306	PHYS 3200			12	6-12	PHYS 307, PHYS 461, PHYS 463, PHYS 480A, PHYS 480B, and PHYS 573 have been deleted. Consultation with the PHYS department is recommended for any issues related to repeating these courses for grade forgiveness.
		PHYS 307						
		PHYS 313	PHYS 3400					
		PHYS 314	PHYS 4400					
		PHYS 315	PHYS 5400					
		PHYS 324	PHYS 3500					
		PHYS 370	ASTR 3300					
		PHYS 421	PHYS 4700					
		PHYS 422	PHYS 5700					
		PHYS 430	PHYS 4800					
		PHYS 450	PHYS 5500					
		PHYS 461						
		PHYS 463						
		PHYS 473	PHYS 5100					
		PHYS 480A						
		PHYS 480B						
		PHYS 485A	PHYS 4851					
		PHYS 573						
	Twelve units of mathematics electives selected from the following with at least one four unit course chosen from 500-level	MATH 320	MATH 3320			12	9-10	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474.
		MATH 455	MATH 4455					
		MATH 470	MATH 4270					
		MATH 474			MATH 3953			
		MATH 480	MATH 3480					
		MATH 485	MATH 4485					
		MATH 510	MATH 5510					
		MATH 529	MATH 5529					
		MATH 531	MATH 5310					
		MATH 546		MATH 4600 or MATH 5600				If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.
		MATH 554	MATH 5300					
		MATH 555	MATH 5550					
		MATH 557	MATH 5170					
		MATH 565	MATH 5565					
		MATH 570			MATH 4455			If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
		MATH 576			MATH 4360			
		MATH 595D	MATH 5593					
					Total	49	32-39	

B.A. in Mathematics - Teaching Track -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

			Quarter Courses	Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is **no** semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
MATT									
Lower Division Requirements	Required courses		MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q2S and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q2S to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
			MATH 241		CSE 1100 or CSE 1250		2	3	
			MATH 199 (3 units, quarters) and MATH 299 (4 units, quarters)	MATH 2900 (4 units, semesters)			7	4	If a student has only completed MATH 199 on quarters, then the student will need to take MATH 2900 to complete the sequence. If a student has only completed MATH 299 on quarters, then the student should take MATH 1990Q2S.
			MATH 251, 252, and 331 (each 4 units, quarters)	MATH 2310 and 2320 (each 4 units, semesters)			12	8	If a student has completed only MATH 251 on quarters, then the student should complete MATH 3310Q2S and MATH 2320. If a student has completed MATH 251 and MATH 252 on quarters, then the student should complete MATH 3310Q2S to complete the sequence. If a student has completed MATH 251 and 331 on quarters, then the student should complete MATH 2320 to complete the sequence.
Upper Division Requirements	Required courses		MATH 329	MATH 3329			4	3	
			MATH 345	MATH 3345			4	3	
			MATH 355		MATH 3100		4	4	
			MATH 372	MATH 3372			4	3	
			MATH 465	MATH 3460			4	3	
			MATH 480	MATH 3480			4	3	
			MATH 399 (2 units, quarters) and MATH 499 (4 units, quarters)	MATH 4900 (4 units, semesters)			6	4	If a student has completed only MATH 399 on quarters, then the student will need to take MATH 4900 to complete the sequence.
			MATH 529	MATH 5529			4	3	
			MATH 545		MATH 4600		4	4	
			MATH 553	MATH 4300			4	4	
			MATH 565	MATH 5565			4	3	
			MATH 599	MATH 5900			2	3	
Electives	Eight units chosen from the following in consultation with an advisor with at least 4 units chosen at the 400-level and above		MATH 270	MATH 2270			8	6-7	If a student uses MATH 3953 (directed study) as a grade replacement substitute for MATH 474, then the topic for the directed study course should be connected to the content of MATH 474.
			MATH 320	MATH 3320					
			MATH 455	MATH 4455					
			MATH 470	MATH 4270					
			MATH 474			MATH 3953			
			MATH 485	MATH 4485					If a student has completed MATH 545 on quarters and wants to complete the MATH 546 elective on semesters, then the student should take MATH 4600 as a substitute for MATH 546. If a student has not completed MATH 545 on quarters and wants to complete the MATH 545-546 sequence on semesters, then the student can substitute MATH 4600 for MATH 545 and can substitute MATH 5600 for MATH 546.
			MATH 510	MATH 5510					
			MATH 531	MATH 5310					
			MATH 546		MATH 4600 or MATH 5600				If a student is uses MATH 4455 as grade replacement substitute for MATH 570, then the student may not use MATH 4455 to count as a semester elective equivalent for MATH 455.
			MATH 554	MATH 5300					
			MATH 555	MATH 5550					
			MATH 557	MATH 5170					
			MATH 570			MATH 4455			
			MATH 576			MATH 4360			
			MATH 595D	MATH 5953					
						Total	89	69-70	

Mathematics Minor -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

		Quarter Courses	Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is no semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
MATH-MIN								
Lower Division Requirements	A minimum of two units chosen from	CSE 201	CSE 2010			2	3-4	
		MATH 241		CSE 1100 or CSE 1250				
	Required courses	MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2100Q25 and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2100Q25 to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
		MATH 251		MATH 2310		4	4	
		MATH 252		MATH 2320		4	4	
Upper Division Requirements	Required course	MATH 331		MATH 3320-5953 (3 units)		4	3-4	Any upper division mathematics course (ranging from 3320 to 5953) applicable to the math major with the exception of MATH 2900, MATH 4900, and MATH 5900, selected in consultation with a math faculty advisor.
	Four units chosen from	MATH 345				4	4	
		MATH 355		MATH 3100				
	Four units chosen from upper-division elective course work in mathematics courses applicable to the major	MATH 300-599	MATH 3320-5953			4	3-4	Any upper division mathematics course (ranging from 3320 to 5953) applicable to the math major with the exception of MATH 2900, MATH 4900, and MATH 5900, selected in consultation with a math faculty advisor.
					Total	34	29 to 32	

Applied Mathematics Minor-- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

			Quarter Courses	Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is **no** semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
APMA-MIN									
Minor Requirements	Required courses		MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q25 and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q25 to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
			MATH 241		CSE 1100 or CSE 1250		2	3	
			MATH 251		MATH 2310		4	4	
			MATH 252		MATH 2320		4	4	
Choose One of the Following Groups	Group A		MATH 270	MATH 2270			12-16	9-12	The semester prerequisite to MATH 5565 is MATH 2265, which is not a requirement for the minor in applied mathematics. Students should consult with faculty prior to registering for MATH 5565.
			MATH 355		MATH 3100				
			MATH 470	MATH 4270					
	Group B		MATH 270	MATH 2270					
			MATH 331		MATH 3100				
			MATH 470	MATH 4270					
	Group C		CSE 201	CSE 2010					
			MATH 331		MATH 3320				
			MATH 474		MATH 4270 or MATH 4320 or PHYS 5100				
	Group D		MATH 372	MATH 3372					
			MATH 465	MATH 3460					
			MATH 565	MATH 5565					
	Group E		MATH 331		MATH 2265 or MATH 3320				
			MATH 372	MATH 3372					
			MATH 465	MATH 3460					
			MATH 576		MATH 4270 or MATH 4320 or PHYS 5100				
					Total		34-38	28-31	

Actuarial Science Certificate -- Quarter to Semester Translation Table
Quarter Requirements (AY 2017-18)

		Quarter Courses	Semester Course Equivalencies (Course is the same as the quarter course. This can be 1:1; 1:many; many:1; or many:many courses. Anywhere (for any program) which the quarter course was required or listed, this (these) semester course(s) can be used. This information will also be displayed in the course conversion guide. Repeat rules apply.)	Acceptable Semester Course Substitutions (Course is NOT the same as the semester course, but it is acceptable for this particular program requirement area for all students. This information WILL NOT be displayed in the course conversion guide, but will be reflected on the PAWS as a choice for the student. Repeat rules DO NOT apply.)	Acceptable Semester Course Repeats (If there is no semester course equivalency, this is the alternative course to allow for grade forgiveness/grade discounting.)	Quarter Units (Current number of units which are required for each requirement area.)	Semester Units (Number of semester units which will be required for each requirement area.)	Notes
Actuarial Science								
Certificate Requirements	Lower- division required courses	ECON 200	ECON 2201			4	3	
		ECON 202	ECON 2202			4	3	
		MATH 211, 212, and 213 (each 4 units, quarters)	MATH 2210 and 2220 (each 4 units, semesters)			12	8	If a student has completed only MATH 211 on quarters, then the student should complete MATH 2120Q25 and MATH 2220. If a student has completed MATH 211 and MATH 212 on quarters, then the student should take MATH 2130Q25 to complete the sequence. If a student only completes MATH 2210, then the student will only earn credit for MATH 211.
		MATH 241		CSE 1100 or CSE 1250		2	3-4	
		MATH 251	MATH 2310			4	4	
		MATH 252	MATH 2320			4	4	
	Upper-division required courses	ECON 300	ECON 4200			4	3	
		ECON 302	ECON 4100			4	3	
		MATH 320	MATH 3320			4	3	
		MATH 372	MATH 3372			4	3	
		MATH 465	MATH 3460			4	3	
					Total	50	40-41	