MATHEMATICS COMPREHENSIVE MAJOR: SECONDARY LICENSURE EMPHASIS

Program Requirements

The Secondary Licensure Emphasis qualifies students for a State of Colorado teaching license to teach mathematics at the junior high, middle school or high school. Successful completion of this program requires a minimum of 50 credits including 25 credits from the Mathematics Core, 13 credits from the Mathematics Education Core, and 12 elective courses.

Students must also fulfill the requirements for the Secondary Licensure Option (described under Education). Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to their advisor in their major as soon as possible.

Code	Title	Credits
Mathematics Core		
CS 190	Computer Science I	3
MATH 151	Calculus I (GT-MA1)	4
MATH 251	Calculus II	4
MATH 260	Applied Linear Algebra	3
MATH 451	Analysis I	3
MATH 471	Abstract Algebra I	3
MATH 495	Senior Seminar	2
Choose one of the following:		3
MATH 200	Discrete Mathematics	
MATH 220	Introduction to Advanced Mathematics	
Total Credits		**25**

And the courses listed below. In addition, the student must fulfill the requirements of the Secondary Licensure Program (see description under Education).

Code	Title	Credits
Mathematics Education Core		
MATH 213	Probability and Statistics (GT-MA1)	3
MATH 330	Topics in Geometry	3
MATH 367	Current Trends in Mathematics Education	3
MATH 390	Introduction to Peer Tutoring in Mathematics	1
Choose one of the following:		3
MATH 300	Introduction to Mathematical Modeling	
MATH 313	Statistical Modeling and Simulation	
Mathematics Electives		
Select at least 12 credits of the following:		12
CS 191	Computer Science II	
MATH 252	Calculus III	
Any upper division mathematics course excluding MATH 317 and MATH 323		
Total Credits		**25**

Pre-calculus ready

Course	Title	Credits
Year One		
Fall		
CS 190	Computer Science I	3
EDUC 000	Education Gateway Course	0
ENG 102	Writing and Rhetoric I (GT-CO1)	3
Gen Ed	General Education (Area I)	3
Gen Ed	General Education (Area III)	3
HWTR 100	First Year Seminar	1
MATH 141	Precalculus (GT-MA1)	4
	Credits	**17**
Spring		
Gen Ed	General Education (Area I)	3
Gen Ed	General Education (Area III)	3
Gen Ed	General Education (Natural Sciences w/lab)	4
MATH 151	Calculus I (GT-MA1)	4
MATH 213	Probability and Statistics (GT-MA1)	3
	Credits	**17**
Year Two		
Fall		
ENG 103	Writing and Rhetoric II (GT-CO2)	3
MATH 220	Introduction to Advanced Mathematics	3
MATH 251	Calculus II	4
MATH 260	Applied Linear Algebra	3
MATH 300	Introduction to Mathematical Modeling	3
	Credits	**16**
Spring		
Elective	Elective	3
Gen Ed	General Education (Area I)	3
Gen Ed	General Education (Natural Sciences w/lab)	4
MATH Elective	Elective course	3-4
MATH 367	Current Trends in Mathematics Education	3
	Credits	**16-17**
Year Three		
Fall		
EDUC 340	Application of Pedagogy and Practice	3
Elective	Elective	3
MATH 330	Topics in Geometry	3
MATH 451	Analysis I	3
MATH 495	Senior Seminar	2
MATH Elective	Elective course	2-4
	Credits	**16-18**
Spring		
Elective	Elective	3
Gen Ed	General Education (Area III)	3
MATH 390	Introduction to Peer Tutoring in Mathematics	1
MATH 471	Abstract Algebra I	3
MATH Elective	Elective course	5-7
	Credits	**15-17**
Year Four		
Fall		
EDUC 403	Instruction & Assessment in Content Area	3
EDUC 404	Creating Positive Learning Environments	3
EDUC 405	Data-driven Instructional Practices	3
EDUC 409	Secondary Student Teaching	3
EDUC 424	Differentiation: Applying Learner-Centered Instruction	3
	Credits	**15**
Spring		
EDUC 406	Content Area Literacy	3
EDUC 407	Maximizing Learning through 21st Century Skills	3

EDUC 409	Secondary Student Teaching	3
EDUC 429	Teaching English Learners for Secondary and K-12 Teachers	3
	Credits	**12**
	Total Credits	**124-129**

Calculus ready

Course	Title	Credits
Year One		
Fall		
CS 190	Computer Science I	3
EDUC 000	Education Gateway Course	0
ENG 102	Writing and Rhetoric I (GT-CO1)	3
Gen Ed	General Education (Area I)	3
HWTR 100	First Year Seminar	1
MATH 151	Calculus I (GT-MA1)	4
	Credits	**14**
Spring		
Gen Ed	General Education (Area I)	3
Gen Ed	General Education (Area III)	3
MATH 213	Probability and Statistics (GT-MA1)	3
MATH 251	Calculus II	4
	Credits	**13**
Year Two		
Fall		
ENG 103	Writing and Rhetoric II (GT-CO2)	3
	4	
MATH 220	Introduction to Advanced Mathematics	3
MATH 260	Applied Linear Algebra	3
MATH 300	Introduction to Mathematical Modeling	3
	Credits	**16**
Spring		
Elective	Elective	3
Gen Ed	General Education (Area I)	3
Gen Ed	General Education (Natural Sciences w/lab)	4
MATH 367	Current Trends in Mathematics Education	3
MATH Elective	Elective course	3-4
	Credits	**16-17**
Year Three		
Fall		
EDUC 340	Application of Pedagogy and Practice	3
Elective	Elective	3
MATH 330	Topics in Geometry	3
MATH 451	Analysis I	3
MATH 495	Senior Seminar	2
MATH Elective	Elective course	2-4
	Credits	**16-18**
Spring		
Elective	Elective	3
Gen Ed	General Education (Area III)	3
MATH 390	Introduction to Peer Tutoring in Mathematics	1
MATH 471	Abstract Algebra I	3
MATH Elective	Elective course	5-7
	Credits	**15-17**
Year Four		
Fall		
EDUC 403	Instruction & Assessment in Content Area	3
EDUC 404	Creating Positive Learning Environments	3
EDUC 405	Data-driven Instructional Practices	3
EDUC 409	Secondary Student Teaching	3
EDUC 424	Differentiation: Applying Learner-Centered Instruction	3
	Credits	**15**
Spring		
EDUC 406	Content Area Literacy	3
EDUC 407	Maximizing Learning through 21st Century Skills	3
EDUC 409	Secondary Student Teaching	3
EDUC 429	Teaching English Learners for Secondary and K-12 Teachers	3
	Credits	**12**
	Total Credits	**117-122**