

MATHEMATICS COMPREHENSIVE MAJOR: SECONDARY LICENSURE EMPHASIS (WITH A 3+2 MASTER OF ARTS IN EDUCATION)

The 3+2 Secondary and K-12 Licensure Program allows students to complete a B.A. in their academic major with an emphasis in Secondary and K-12 Licensure and a Master of Arts in Education in five years. Students apply to the program by December of their junior year. MUS majors interested in the program need to set up an individualized plan with their MUS and EDUC advisors. To be accepted into the 3+2 Program, each student must:

- Provide letters of recommendation from at least one Education Department faculty member and one faculty member from the student's major
- Prove content, as defined by the Colorado Department of Education
- Be accepted into Western's Teacher Licensure Program
- Successfully complete EDUC 340 (by Spring of junior year)
- Be on track to complete all coursework required within the academic major

Upon satisfactory completion of these requirements, students will be designated as "MAED candidates with provisional acceptance." Upon completion of the final undergraduate credits for the Western B.A., students will be designated as "MAED degree-seeking students." Students who have completed all other requirements of the 3+2 Secondary and K-12 Licensure Degree Program and all Western undergraduate requirements, yet choose to leave the MAED program before Year Five, will still have completed the BA in Secondary and K-12 Licensure, have earned 120 credits necessary for a Western undergraduate degree, and be eligible to apply for initial teacher licensure.

Program Requirements

Students interested in pursuing this comprehensive program should consult with the Teacher Education Program advisor in addition to the 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

In addition, the student must fulfill the requirements of the Secondary Licensure 3+2 Program (<https://catalog.western.edu/graduate/programs/education/#programrequirements>) (see description under Education), and the following:

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 603	Content Area Learning	3
EDUC 604	Learning Environments	3
EDUC 605	Curriculum Development and Assessment	3
EDUC 609	Secondary Student Teaching	3
EDUC 624	Managing to Differentiate	3
Credits		15
Spring		
EDUC 606	Reading and Writing Across the Content Areas	3
EDUC 607	Rethinking Learning in the 21st Century	3
EDUC 609	Secondary Student Teaching	3
EDUC 629	Inclusion and English Learners	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)	6
MATH 213	Probability and Statistics (GT-MA1)	3
MATH 251	Calculus II	4
Credits		16
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 603	Content Area Learning	3
EDUC 604	Learning Environments	3
EDUC 605	Curriculum Development and Assessment	3
EDUC 609	Secondary Student Teaching	3
EDUC 624	Managing to Differentiate	3
Credits		15
Spring		
EDUC 606	Reading and Writing Across the Content Areas	3
EDUC 607	Rethinking Learning in the 21st Century	3
EDUC 609	Secondary Student Teaching	3
EDUC 629	Inclusion and English Learners	3
Credits		12
Total Credits		120-125