

MIDDLE SCHOOL MATHEMATICS: 6-8 TEACHER PREPARATION CONCENTRATION, BACHELOR OF SCIENCE

The Middle School Mathematics major, which leads to a B.S. degree, is specifically designed to lead to a Colorado teaching license for Middle School Mathematics (grades 6-8). It requires the completion of an Education Minor as well, which will be added to students' programs once they are fully admitted to Education.

Student Learning Outcomes & Assessment Activities

1. Demonstrate a deep understanding of mathematical concepts appropriate for middle school, including algebra, geometry, statistics, probability, and number theory.
2. Apply mathematical reasoning and problem-solving skills to a variety of situations.
3. Communicate mathematical ideas both verbally and in writing using both everyday language and mathematical terminology.
4. Demonstrate proficiency with pedagogical strategies to enhance student engagement and learning.

Specific Program Requirements

Course	Title	Credits
General Education Requirements		
General Education Skill Requirements:		
ENG 101	Rhetoric & Writing I (GT-CO1)	3
ENG 102	Rhetoric & Writing II (GT-CO2)	3
MATH 156	Introduction to Statistics (GT-MA1)	3
General Education Knowledge Requirements:		
Humanities		
CID 103	Speaking & Listening	3
Humanities Electives		6
History		
History Elective		3
Social Sciences		
PSYC 151	Human Development (GT-SS3)	3
Social Sciences Elective		3
Natural Sciences		
Laboratory Science Sequence		10
Major Requirements		
MATH 126	Calculus & Analytic Geometry I (GT-MA1)	5
MATH 207	Matrix and Vector Algebra with Applications	3
MATH 224	Calculus and Analytic Geometry II	5
MATH 319	Number Theory	3
MATH 330	Introduction to Higher Geometry	3
MATH 360	Elementary Mathematics Concepts I	3
MATH 361	Elementary Mathematics Concepts II	3

MATH 362	Problem Solving for K-6 Teachers	3
MATH 463	History of Mathematics	3
Electives in Math/Math Ed		7
Computer Programming		4
Electives		7
Minor Requirements		
Education Minor requirements listed below.		37
Total Credits		123

1. Credit hours for this course are counted in ED minor

Specific Requirements for the Secondary and K-12 Teaching Endorsements/Minor

The student must complete an appropriate major and the following Education courses:

Course	Title	Credits
PSYC 151	Human Development (GT-SS3) ¹	3
or PSYC 251	Childhood and Adolescence	
or PSYC 342	Educational Psychology	
ED 202	Foundations of Education	3
ED 280	Educational Media and Technology ²	3
ED 301	Frameworks of Teaching (Admission to Education is completed in this course)	4
RDG 355	Linguistics for Educators ³	3
RDG 435	Disciplinary Literacy ^{3, 5}	4
Special Methods in Education Areas (Prerequisites - Admission to Education) ^{5, 6}		4
ED 412	Teaching Diverse Learners ^{4, 5}	3
ED 485	Capstone Seminar in Education	1
ED 488	Student Teaching Secondary	12
or ED 489	Student Teaching K-12	
Total Credits		37

¹ Music students may take PSYC 151 Human Development (GT-SS3) (3 c.h.) or PSYC 251 Childhood and Adolescence (3 c.h.).

² Music Education students may complete MUS 103 Music and Computer Technology I (1 c.h.) and MUS 306 Technology for Music Educators (2 c.h.) for ED 280 Educational Media and Technology (3 c.h.).

³ English/Language Arts student must also complete RDG 355 Linguistics for Educators (3 c.h.)

⁴ Physical Education students may complete EPER 465 Adapted Physical Education (3 c.h.) or ED 412 Teaching Diverse Learners (3 c.h.).

⁵ GPA of 2.6 required

⁶ English/Language Arts student must also complete ED 447 Teaching English in Secondary Schools (4 c.h.)

Planning Sheet

Disclaimer: The Planning Sheet is designed as a guide for student's planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should

become familiar with the catalog in effect at the time in which they entered the institution.

Note: Students completing a major with an emphasis in Middle School Education are required to complete a minor in Education and to meet all other requirements outlined by the School of Education.

Course	Title	Credits
Year 1		
Fall		
ED 202	Foundations of Education	3
ENG 101	Rhetoric & Writing I (GT-CO1)	3
MATH 126	Calculus & Analytic Geometry I (GT-MA1)	5
CHEM 121 or PHYS 221	General Chemistry I (GT-SC2) or General Physics I	4
CHEM 121L or PHYS 221L	General Chemistry Lab I (GT-SC1) or General Physics I Lab (GT-SC1)	1
Credits		16
Spring		
CID 103	Speaking & Listening	3
ENG 102	Rhetoric & Writing II (GT-CO2)	3
MATH 224	Calculus and Analytic Geometry II	5
CHEM 122 or PHYS 222	General Chemistry II (GT-SC2) or General Physics II	4
CHEM 122L or PHYS 222L	General Chemistry Lab II (GT-SC1) or General Physics II Lab (GT-SC1)	1
Credits		16
Year 2		
Fall		
ED 280	Educational Media and Technology	3
MATH 207	Matrix and Vector Algebra with Applications	3
MATH 360	Elementary Mathematics Concepts I	3
PSYC 151 or PSYC 251	Human Development (GT-SS3) or Childhood and Adolescence	3
General Education History Elective		3
Credits		15
Spring		
ED 301	Frameworks of Teaching	4
MATH 319	Number Theory	3
MATH 330	Introduction to Higher Geometry	3
MATH 361	Elementary Mathematics Concepts II	3
General Education Humanities Elective		3
Credits		16
Year 3		
Fall		
MATH 362	Problem Solving for K-6 Teachers	3
MATH 477	Methods for Teaching Secondary Math	4
General Education Humanities Elective		3
General Education Social Sciences Elective		3
Elective		3
Credits		16
Spring		
ED 412	Teaching Diverse Learners	3
MATH 156	Introduction to Statistics (GT-MA1)	3
Math/Math Ed Elective		3
Elective		4
Credits		13
Year 4		
Fall		
MATH 463	History of Mathematics	3
RDG 435	Disciplinary Literacy	4
Math/Math Ed Elective		4

Computer Programming		4
Credits		15
Spring		
ED 485	Capstone Seminar in Education	1
ED 488	Student Teaching Secondary	12
Credits		13
Total Credits		120