

# MATHEMATICS WITH SECONDARY SCHOOL TEACHING CERTIFICATION (BA)

## Program Mission

The mission of the Mathematics Program is to provide students with the necessary tools to enter a career in their field with a broad, robust knowledge of mathematics. In addition, our students acquire the conceptual knowledge and procedural skills needed to analyze and solve problems as mathematicians in our world.

## Program Outcomes

1. Graduates will demonstrate conceptual knowledge of mathematics within the framework of a liberal arts education.
2. Graduates will develop analytical and problem-solving skills.
3. Graduates will be able to read, understand, and construct a variety of mathematical proofs.
4. Graduates will speak and write about mathematics with precision, clarity, and organization.
5. Graduates will be prepared for a diverse world in a career utilizing their mathematical skills and knowledge, or for graduate study in the mathematical sciences.
6. Secondary mathematics education graduates will be prepared for teaching licensure by ensuring their content knowledge and fostering effective pedagogy.

## Program Requirements

### Prospective Mathematics Teachers

Those preparing to teach mathematics in elementary schools should choose:

- MATH-1110 Mathematics for Elem Teachers I
- MATH-1120 Mathematics for Elem Teachers II

In addition, those who choose mathematics as an area of concentration should take:

- MATH-1020 Mathematics As a Liberal Art
- MATH-1130 Math for Middle School Teachers
- MATH-1220 Introductory Statistics

Those preparing to teach mathematics in secondary schools must complete requirements for a major in mathematics that includes:

- MATH-3610 Modern Algebra II
- MATH-4600 Modern Geometries

In addition, they must take:

- MATH-2900 History of Mathematics
- MATH-4457 Secondary School Math Curr & Materials

The secondary teacher is required to complete a major in Secondary Education to receive certification and should consult with the chair(s) of the School of Education.

## Suggested Sequence of Courses for a Bachelor of Arts Degree in Mathematics with Secondary School Teaching Certification

Course	Title	Hours
<b>Freshman Year</b>		
<b>First Semester</b>		
ENGL-1010	English Composition	3
MATH-1300	Calculus I	4
Foreign Language		4
THEO-1100	Introduction to Theology	3
PSYC-1000	General Psychology	3
GNST-1000	BC Experience	1
<b>Hours</b>		<b>18</b>
<b>Second Semester</b>		
MATH-1350	Calculus II	4
Foreign Language		4
PHIL-1750	Principles of Nature	3
EXSC-1115	Wellness for Life	1
EDUC-2200	Introduction to Education	2
EDUC-2201	Intro Educational Research & Field Exper	1
HIST-1100 or HIST-1101	World Civilization to 1500 or World Civilization Since 1500	3
<b>Hours</b>		<b>18</b>
<b>Sophomore Year</b>		
<b>First Semester</b>		
MATH-2300	Calculus III	4
MATH-2550	Discrete Mathematical Structures I	3
CSCI-1140	Introduction to Computer Science I	4
EDUC-3358	General Secondary Method & Mater PractyGeneral Secondary Meth & Media Practicum	1
EDUC-3357	General Secondary Methods & Media	3
History Elective		3
<b>Hours</b>		<b>18</b>
<b>Second Semester</b>		
MATH-2500	Linear Algebra	3
EDUC-2222	Intro to K-12 Special Education (or Mathematics elective)	3
Aesthetic Foundation		3
Faith Foundation		3
Select one of the following:		3
SOCI-1000	Introduction to Sociology	
SOCI-2350	Cultural Anthropology	
NASC-2300	World Regional Geography	
SOCI-3250	Race & Ethnicity	
Philosophical Inquiry Foundation		3
<b>Hours</b>		<b>18</b>

**Junior Year****First Semester**

MATH-3600	Modern Algebra I	3
EDUC-2220	Psychoeducational Development	3
MATH-3200 or MATH-4600	Probability & Statistics or Modern Geometries	3
MATH-2900 or MATH-4457	History of Mathematics or Secondary School Math Curr & Materials	2
Natural World Foundation (with lab)		4
Aesthetic Foundation		3
<b>Hours</b>		<b>18</b>

**Second Semester**

MATH-3610	Modern Algebra II	3
EDUC-2222	Intro to K-12 Special Education (or Mathematics Elective)	3
SOCI-3250	Race & Ethnicity	3
EDUC-3332	Teaching Reading in the Content Areas	2
EDUC-4451	Philosophy of Education	3
Faith Foundation		3
EXSC Fitness Course		1
<b>Hours</b>		<b>18</b>

**Senior Year****First Semester**

MATH-4930	Directed Research	2
MATH-4600 or MATH-3200	Modern Geometries or Probability & Statistics	3
MATH-4457 or MATH-2900	Secondary School Math Curr & Materials or History of Mathematics	4
EDUC-3312	School As Community	3
EDUC-3313	School As Community Rsch & Field Exper	1
Electives		5
MATH-COMP	Senior Comprehensive Exam	0
<b>Hours</b>		<b>18</b>

**Second Semester**

EDUC-4455	Differentiated Instruction	3
EDUC-4462	Classroom Management	2
EDUC-4470	Student Teaching Seminar	2
EDUC-4496	Supervised Student Teach Secondar School	10
EDUC-COMP	Senior Comprehensive Exam	0
<b>Hours</b>		<b>17</b>
<b>Total Hours</b>		<b>143</b>