

MATHEMATICS (SECONDARY MATHEMATICS EDUCATION) - BACHELOR OF SCIENCE

The concentration in Secondary Mathematics Education allows a flexible program providing a student with a path to graduate studies in mathematics or a career in industry, as well as all the mathematics and education courses required for certification as a secondary education teacher in mathematics.

Students must complete all University degree requirements, which include: General Education requirements, Viewing a Wider World requirements, and elective credits to total at least 120 credits with 48 credits in courses numbered 300 or above. Developmental coursework will not count towards the degree requirements and/or elective credits, but may be needed in order to take the necessary English and Mathematics coursework.

Prefix	Title	Credits
General Education		
<i>Area I: Communications</i>		
<i>English Composition - Level 1</i>		
ENGL 1110G	Composition I	4
<i>English Composition - Level 2</i>		
Choose one from the following:		3
ENGL 2210G	Professional & Technical Communication	
ENGL 2221G	Writing in the Humanities and Social Science	
<i>Oral Communication</i>		
Choose one from the following:		3
AXED 2120G	Effective Leadership and Communication in Agriculture	
COMM 1115G	Introduction to Communication	
COMM 1130G	Public Speaking	
HNRS 2175G	Introduction to Communications Honors	
<i>Area II: Mathematics</i>		
MATH 1511G	Calculus and Analytic Geometry I (Departmental/College Requirement) ¹	4
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences 10-11</i>		
PHYS 1310G & PHYS 1310L	Calculus -Based Physics I and Calculus -Based Physics I Lab	
<i>Area IV: Social/Behavioral Sciences Course (3 credits)²</i>		
Either an Area III/IV: Laboratory Sciences Course or Social/Behavioral Science Course (4 credits or 3 credits) ²		
<i>Area V: Humanities²</i>		
<i>Area VI: Creative and Fine Arts²</i>		
<i>General Education Elective</i>		
MATH 1521G	Calculus and Analytic Geometry II (Departmental/College Requirement)	4
Viewing a Wider World³		3
Departmental/College Requirements		
MATH 1531	Introduction to Higher Mathematics	3
MATH 2415	Introduction to Linear Algebra	3
MATH 2530G	Calculus III	3
MATH 331 or MATH 332	Introduction to Modern Algebra or Introduction to Analysis	3
MATH 411V	Great Theorems: The Art of Mathematics	3
MATH 452	Foundations of Geometry	3

STAT 371	Statistics for Engineers and Scientists I	3
<i>Departmental Electives⁴</i>		
Select at least 9 additional upper-division credits of approved courses prefixed MATH or STAT (at least 6 must be 400-level), excluding the following:		9
MATH 300	Readings	
MATH 313	Fundamentals of Algebra and Geometry I	
MATH 316	Calculus with Hands-on Applications	
MATH 400	Undergraduate Research	
MATH 459	Survey of Geometry	
STAT 400	Undergraduate Research	
Non-Departmental Requirements (in addition to Gen.Ed/VWW)⁵		
C S 172	Computer Science I	4
EDUC 315	Multicultural Education	3
EDUC 381	Secondary Field Experience	3
EDUC 462	Teaching Mathematics at the Middle and High School Level	3
EDUC 471	Secondary Student Teaching	9
EDUC 482	Middle and High School Student Teaching Seminar	3
RDG 414	Content Area Literacy	3
SPED 350	Introduction to Special Education in a Diverse Society	3
Second Language Requirement: (not required)		
Electives, to bring the total credits to 120⁶		22
3 hours must be upper division.		
Total Credits		120-121

- MATH 1511G Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter MATH 1511G first.
- See the [General Education](#) section of the catalog for a full list of courses
- See the [Viewing a Wider World](#) section of the catalog for a full list of courses. Note that one of the VWW requirements will be satisfied using the 9 hour rule with the EDUC courses that are required for the degree.
- MATH 401 Special Topics must be approved by the department for credit towards the major.
- A grade of C- or better must be earned.
- Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.

Notes for Minor in Education

Students must apply to the Teacher Education Program (TEP) before they can progress in the 400 level education courses. EDUC 315, EDUC 381, and SPED 350 are pre-requisites for TEP entrance. Students can apply for TEP during the semester in which they are completing the last of these pre-requisites. Students will also need to have declared the Minor in Secondary Education before applying to TEP.

Second Language Requirement

For the Bachelor of Science in Mathematics with a Concentration in General Mathematics there is no second language requirement.

A Suggested Plan of Study for Students

This roadmap assumes student placement in MATH 1511G Calculus and Analytic Geometry I and ENGL 1110G Composition I. The contents and order of this roadmap may vary depending on initial student placement in mathematics and english. It is only a suggested plan of study for students and is not intended as a contract. Course availability may vary from fall to spring semester and may be subject to modification or change.

Some students may be able to bypass one or more courses in the calculus sequence MATH 1511G - MATH 1521G - MATH 2530G. The calculus sequence, Introduction to Higher Mathematics, and Linear Algebra provide knowledge that is basic to further work, and students are advised to complete them or their equivalent as early as possible.

Course	Title	Credits
First Year		
Fall		
ENGL 1110G	Composition I (C- or better)	4
MATH 1511G	Calculus and Analytic Geometry I (C- or better) ¹	4
Elective Course ³		3
C S 172	Computer Science I (C- or better)	4
Credits		15
Spring		
Choose one from the following:		
ENGL 2210G	Professional & Technical Communication	3
ENGL 2221G	Writing in the Humanities and Social Science	3
Area VI: Creative and Fine Arts Course ²		
MATH 1521G	Calculus and Analytic Geometry II (C- or better)	4
PHYS 1310G	Calculus -Based Physics I	3
PHYS 1310L	Calculus -Based Physics I Lab	1
Elective Course ³		3-4
Credits		17-18
Second Year		
Fall		
Choose one from the following:		
AXED 2120G	Effective Leadership and Communication in Agriculture	3
COMM 1115G	Introduction to Communication	3
COMM 1130G	Public Speaking	3
HNRS 2175G	Introduction to Communications Honors	3
Area V: Humanities Course ²		
Area IV: Social/Behavioral Sciences Course ²		
MATH 2415	Introduction to Linear Algebra (C- or better)	3
MATH 2530G	Calculus III (C- or better)	3
Credits		15
Spring		
Either an Area III/IV: Laboratory Science Course or Social/Behavioral Sciences Course ²		
EDUC 315	Multicultural Education	3
MATH 1531	Introduction to Higher Mathematics	3
MATH/STAT Elective Course - 300-level of higher (C- or better) ⁴		3

Elective Course ³		3
Credits		15-16
Third Year		
Fall		
MATH 411V or MATH 452	Great Theorems: The Art of Mathematics or Foundations of Geometry	3
EDUC 381	Secondary Field Experience	3
MATH 331 or MATH 332	Introduction to Modern Algebra (C- or better) ⁷ or Introduction to Analysis	3
SPED 350	Introduction to Special Education in a Diverse Society	3
Elective Course ³		3
Credits		15
Spring		
Elective Course ³		4
RDG 414	Content Area Literacy	3
STAT 371	Statistics for Engineers and Scientists I	3
MATH/STAT Elective Course - 400-level (C- or better) ⁶		3
Elective Course ³		3
Credits		16
Fourth Year		
Fall		
MATH 452 or MATH 411V	Foundations of Geometry or Great Theorems: The Art of Mathematics	3
MATH/STAT Elective Course - 400-level (C- or better) ⁶		3
VWW - Viewing a Wider World ⁵		3
Elective Course - Upper Division ³		3
EDUC 462	Teaching Mathematics at the Middle and High School Level	3
Credits		15
Spring		
EDUC 471	Secondary Student Teaching	9
EDUC 482	Middle and High School Student Teaching Seminar	3
Credits		12
Total Credits		120-122

- 1 Math Placement: MATH 1511G Calculus and Analytic Geometry I is the starting Math course for the degree, however, students may need to complete any prerequisites prior to enrolling into this course.
- 2 See the [General Education](#) section of the catalog for a full list of courses.
- 3 Elective credit may vary based on prerequisites, dual credit, AP credit, double majors, and/or minor coursework. The amount indicated in the requirements list is the amount needed to bring the total to 120 credits and may appear in variable form based on the degree. However students may end up needing to complete more or less on a case-by-case basis and students should discuss elective requirements with their advisor.
- 4 MATH/STAT 300-level courses that cannot be taken to fulfill this requirement: MATH 300 Readings, MATH 313 Fundamentals of Algebra and Geometry I, MATH 316 Calculus with Hands-on Applications.
- 5 See the [Viewing a Wider World](#) section for a full list of courses.
- 6 MATH/STAT 400-level courses that cannot be taken to fulfill this requirement: MATH 400 Undergraduate Research, MATH 459 Survey of Geometry, STAT 400 Undergraduate Research.

⁷ MATH 331 Introduction to Modern Algebra is only offered in the Fall semesters. However, MATH 332 Introduction to Analysis is taught in the Spring and may be used as a substitute.