

Secondary Mathematics Education Concentration Catalog Description

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 111G	Rhetoric and Composition	4
<i>English Composition - Level 2</i>		
Choose one from the following:		3
ENGL 203G	Business and Professional Communication	3
ENGL 211G	Writing in the Humanities and Social Sciences	3
ENGL 218G	Technical and Scientific Communication	3
ENGL 311G	Advanced Composition	3
ENGL 318G	Advanced Technical and Professional Communication	3
<i>Oral Communication</i>		
Choose one from the following:		3
AXED 201G	Effective Leadership and Communication in Agricultural Organizations	3
COMM 253G	Public Speaking	3
COMM 265G	Principles of Human Communication	3
HON 265G	Principles of Human Communication Honors	3
<i>Area II: Mathematics</i>		

Prefix	Title	Credits
MATH 191G	Calculus and Analytic Geometry I (Departmental/College Requirement also) ¹	4
<i>Area III/IV: Laboratory Sciences and Social/Behavioral Sciences</i>		10-11
PHYS 215 + L	Engineering Physics I + Lab (Area III)	4
Area IV: Social/Behavioral Science Course ²		3
Area III or IV: Laboratory Science Course or Social/Behavioral Science Course ²		3-4
<i>Area V: Humanities</i> ²		3
<i>Area VI: Creative and Fine Arts</i> ²		3
<i>General Education Elective</i>		
MATH 192G	Calculus and Analytic Geometry II (Departmental/College Requirement also)	4
Viewing a Wider World ³		3
Departmental/College Requirements		
MATH 279	Introduction to Higher Mathematics	3
MATH 280	Introduction to Linear Algebra	3
MATH 291G	Calculus and Analytic Geometry III	3
MATH 331 or MATH 332	Introduction to Modern Algebra 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 Electives</i> ⁴		
Select at least an additional 9 credits of approved upper-division courses prefixed MATH or STAT (at least 6 credits must be 400-level), excluding the following:		9
MATH 300	Readings	1-3

Prefix	Title	Credits
MATH 313	Fundamentals of Algebra and Geometry I	3
MATH 316	Calculus with Hands-on Applications	3
MATH 400	Undergraduate Research	1-3
MATH 459	Survey of Geometry	3
STAT 400	Undergraduate Research	1-3
Non-Departmental Requirements (in addition to Gen.Ed/VWW)		31
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 120 s		21-22
Total Credits		120

Course List

- ¹ [MATH 191G](#) Calculus and Analytic Geometry I is required for the degree but students may need to take any prerequisites needed to enter [MATH 191G](#) first.
**This could increase the total number of credits for the degree*
- ² See the [General Education](#) section of the catalog for a full list of courses.
- ³ 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 solidified using the 9-credit hour rule with the EDUC courses that are required for the degree.
- ⁴ [MATH 401](#) Special Topics must be approved by the department for credit towards the major.

- ⁵ 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 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 with a major in Mathematics with a Secondary Mathematics Education Concentration, there is no second language requirement for the degree.