

# MATHEMATICS MINOR

A handout with detailed advice for Math minors, including suggested curricula, is available on the Math Department's home page.

## Minor - Mathematics

### College Humanities & Sciences

Degree Specific Credits: 23

Required Cumulative GPA: 2.0

Catalog Year: 2017-2018

### Summary

Calculus Requirement for a Minor in Mathematics

Elective Courses for a Minor in Mathematics	23
Total Hours	23

### Calculus Requirement for a Minor in Mathematics

**Note:** M 172 or M 182 are recommended since they are prerequisites for many upper-division mathematics courses.

Select one of the following:	4
M 162 Applied Calculus	
M 172 Calculus II (recommended)	
M 182 Honors Calculus II (recommended)	
Total Hours	4

Minimum Required Grade: C-

### Elective Courses for a Minor in Mathematics

**Rule:** Take 23 credits in M or STAT courses offered at UM-Missoula. M courses must be numbered M 115 or higher (excluding M 118). Courses must include at least three 3- or 4-credit courses at the 300 level or above (of which at least two must be taken at UM-Missoula).

**Note:**

- The required Calculus course (M 162, M 172, or M 182) counts toward the 23 credits, as well as its prerequisite courses at the 100-level (e.g., M 171 or M 121).
- Notice to Transfer Students: Mathematical Sciences courses that are not equivalent to courses taught at UM-Missoula can often be counted toward a Minor in Mathematics. This is determined on an individual basis; please contact the Department of Mathematical Sciences for details.

Minimum Required Grade: C-

23 Total Credits Required

### Mathematics Education Track

A teaching minor is an academic minor which may contain different course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete a teaching major in a content

area plus the teacher preparation program through the Department of Curriculum and Instruction. Additional teaching areas can be added through completion of either a teaching major or a teaching minor in that content area.

- Secondary Education Licensure Program (<http://www.coehs.umn.edu/departments/currinst/undergradprograms/seced/default.php>)
- Licensure Degree Requirements (<http://catalog.umn.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)

The term 'minor' for this teaching option refers to courses that need to be completed. To sign up for this option, you need to contact the Curriculum and Instruction Department. Do not fill out a minor form for graduation or the minor section of the major change form. Approvals for this option must come from the Curriculum and Instruction Department.

### Summary

Mathematical Science Courses	27
Mathematics Teaching Methods Course	4
Total Hours	31

### Mathematical Sciences Courses

**Rule:** Take all of the following courses.

M 171	Calculus I	4
or M 181	Honors Calculus I	
M 182	Honors Calculus II	4
or M 182	Honors Calculus II	
M 221	Introduction to Linear Algebra	4
M 301	Mathematics Technology for Teachers	3
M 307	Introduction to Abstract Mathematics	3
M 326	Number Theory	3
M 439	Euclidean and Non-Euclidean Geometry	3
STAT 341	Introduction to Probability and Statistics	3
or STAT 451	Statistical Methods I	
Total Hours		27

Minimum Required Grade: C-

### Mathematics Teaching Methods Course

**Rule:** Take the following course.

**Note:** The course number EDU 497 covers many different teaching method courses. The section of EDU 497 entitled "Methods: 5 - 12 Mathematics" is required for the Teaching Minor in Mathematics Education.

EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

### Secondary Teaching Licensure

**Note:** For licensure to teach mathematics, a student must also gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (see the College of Education and Human Sciences (<http://catalog.umn.edu/past-catalogs/2017-2018/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure>)).

catalogs/2017-2018/colleges-schools-programs/education-human-sciences).