MATHEMATICS MINOR

A handout with detailed advice for Math minors, including suggested curricula, is available on the Math Department's home page (http://hs.umt.edu/math).

Minor - Mathematics

College of Humanities & Sciences

Degree Specific Credits: 23

Required Cumulative GPA: 2.0

Catalog Year: 2018-2019

Summary

Code	Title	Hours
Calculus Requirement for a Minor in Mathematics		4
Elective Courses for a Minor in Mathematics		19
Total Hours		23

Calculus Requirements for a Minor in Mathematics

Notes:

1. M 172 or M 182are recommended since they are prerequisites for many upper-division mathematics courses.
2. 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.

Code	Title	Hours
Complete one of the following courses:		4
M 162	Applied Calculus	
M 172	Calculus II	
M 182	Honors Calculus II	
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:

1. 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).
2. 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

Teaching Mathematics Track

Notes:

- This teaching track contains different/additional course requirements designed to meet state standards. Those interested in teaching in K-12 schools must complete the teaching track of a major in a teaching content area plus the Teacher Education Program through the Department of Teaching and Learning. Additional teaching areas can be added through completion of the teaching track of a major or minor in that content area.
    - Secondary Education Licensure Program (http://www.coehs.umt.edu/departments/currinst/undergradprograms/seced/default.php)
    - Licensure Degree Requirements (http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure)
- To complete this teaching track, you need to contact the Teaching and Learning Department. You do not fill out a major/minor form for graduation or the major/minor/concentration section of the major change form. Approvals for this track must come from the Teaching and Learning Department.
- Tracks will not appear on your UM transcript, diploma, university lists, student data system, or university publications. They are used for advising purposes only. You do not fill out a major change for a track.
- Individuals completing the teaching track of this minor must also complete the teaching track of a major in another teaching content area.
- **Additional Mathematical Sciences Courses for the Teaching Mathematics Track**

Code	Title	Hours
Complete all of the following courses:		
M 171	Calculus I	4
or M 181	Honors Calculus I	
M 172	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 NonEuclidean 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

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.

Code	Title	Hours
Complete the following course:		
EDU 497	Teaching and Assessing	4
Total Hours		4

Minimum Required Grade: C-

Secondary Teaching Licensure

Note: For endorsement to teach mathematics, a student also must gain admission to the Teacher Education Program and meet all the requirements for secondary teaching licensure (http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning/lic-secondary-licensure). For more information, see the Teaching and Learning Department (http://catalog.umt.edu/colleges-schools-programs/education-human-sciences/teaching-learning).

M 172orM 182are recommended since they are prerequisites for many upper-division mathematics courses.