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: 2018-2019

Summary

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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<tbody>
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</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Applied Calculus</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Calculus II (recommended)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Honors Calculus II (recommended)</td>
<td></td>
</tr>
</tbody>
</table>

Total Hours: 23

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

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.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)

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

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mathematical Science Courses</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>Mathematics Teaching Methods Course</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Hours: 31

Mathematical Sciences Courses

Rule: Take all of the following courses.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Honors Calculus I</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or M 181</td>
<td></td>
</tr>
<tr>
<td></td>
<td>or Honors Calculus II</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Introduction to Linear Algebra</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>Mathematics Technology for Teachers</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Abstract Mathematics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Number Theory</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Euclidean and NonEuclidean Geometry</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Introduction to Probability and Statistics</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>or Statistical Methods I</td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Teaching and Assessing</td>
<td>4</td>
</tr>
</tbody>
</table>

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.umt.edu/colleges-schools-programs/education-human-sciences](http://catalog.umt.edu/colleges-schools-programs/education-human-sciences)).