This option is offered to allow students to concentrate in mathematics in addition to majoring in the Elementary Education curriculum. It is primarily intended for students who plan to teach middle school mathematics. The program is also attractive to students who plan to teach upper intermediate grades and desire a stronger mathematics background. This option does not lead to a State Endorsement in mathematics in Montana. However, a notation will appear on the student’s transcript indicating an additional option in mathematics.

All mathematics option students should follow the Elementary Education K-8 Curriculum with the following additions:

**Take All of the following:**

<table>
<thead>
<tr>
<th>Rubric/#</th>
<th>Course Title</th>
<th>Semester (s) Offered</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDU 497R</td>
<td>Methods: 5-8 Mathematics</td>
<td>Spring</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>STAT 216Q</td>
<td>Introduction to Statistics</td>
<td>Fall/Spring/Summer</td>
<td>3</td>
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</table>

Choose one from:

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<thead>
<tr>
<th></th>
<th>Course Title</th>
<th>Semester (s) Offered</th>
<th>Credits</th>
<th>Grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>M 420</td>
<td>Geometry, Meas. and Data in the Middle Grades</td>
<td>Fall only, alternate even years</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>M 424</td>
<td>Algebraic Thinking &amp; Number Sense in Middle Grades</td>
<td>Fall, alt. odd yrs/Sum, alt. even yrs</td>
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</table>

**Restricted Electives in Mathematics – (6 credits) – Choose two courses from the following:**

*Cannot double count these courses with any other credits in Mathematics Option or Elementary Education Curriculum*

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<tr>
<th></th>
<th>Course Title</th>
<th>Semester (s) Offered</th>
<th>Credits</th>
<th>Grade</th>
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</thead>
<tbody>
<tr>
<td>M 149Q</td>
<td>Secrets of the Infinite</td>
<td>Fall/Spring</td>
<td>6</td>
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<tr>
<td>M 147Q</td>
<td>Language of Mathematics</td>
<td>Spring</td>
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<tr>
<td>M 151Q</td>
<td>Precalculus</td>
<td>Fall/Spring/Summer</td>
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<tr>
<td>M 161Q</td>
<td>Survey of Calculus</td>
<td>Fall/Spring/Summer</td>
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<tr>
<td>M 171Q</td>
<td>Calculus I</td>
<td>Fall/Spring/Summer</td>
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<tr>
<td>M 420</td>
<td>Geometry, Meas. and Data in the Middle Grades</td>
<td>Fall only, alternate even years</td>
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</tr>
<tr>
<td>M 424</td>
<td>Algebraic Thinking &amp; Number Sense in Middle Grades</td>
<td>Fall, alt. odd yrs/Sum, alt. even yrs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>STAT 217Q</td>
<td>Intermediate Statistical Concepts</td>
<td>Fall/Spring/Summer</td>
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</tbody>
</table>

Or another approved mathematics course

**Total Credits: 15**

A minimum of 120 credits is required for graduation; 42 of these credits must be in courses numbered 300 and above.

Students choosing this option voluntarily select a program that requires additional coursework above the 120 credits required for a standard four-year degree.

For additional information contact:
Dr. Fenqjen Luo
Department of Education
406.994.5950
fluo@montana.edu

Dr. Jennie Luebeck
Department of Mathematics
406.994.5341
luebeck@math.montana.edu

Students must declare this as an additional option by completing the appropriate form.
Elementary (K-8) Education Major - Plus Mathematics Option
Suggested Curriculum by Semester
2015-2016

All grades must be completed with a “C” or better and a 2.75 GPA in major, minor, option & cumulative.
A minor is encouraged but not required for this major.

Freshman Year (_______ credits) Summer courses are recommended (not required) to reduce credit load in Fall/Spring semesters and support degree completion in 4 years – especially if adding a minor or option.

<table>
<thead>
<tr>
<th>Fall</th>
<th>Cr</th>
<th>Grd</th>
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<tbody>
<tr>
<td>EDU 101US – Teaching and Learning</td>
<td>3</td>
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<tr>
<td>WRIT 101W – College Writing</td>
<td>3</td>
<td></td>
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<tr>
<td>EDU 222IS – Educ Psych and Child Development</td>
<td>3</td>
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<tr>
<td>Life Science – BIOB 100IN; BIOM 103IN; OR APPROVED ELECTIVE</td>
<td>3</td>
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</tr>
<tr>
<td>M 132 – Numbers &amp; Operations for K-8 Teachers* *(Must test into Math Level 3 via MPLEX or ACT/SAT to register)</td>
<td>3</td>
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<tr>
<th>Spring</th>
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<tbody>
<tr>
<td>EDU 204IA – Creative Arts &amp; Lifelong Learning</td>
<td>3</td>
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<tr>
<td>NASX Course – NASX 105D; NASX 205D; OR NASX 232D</td>
<td>3</td>
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<tr>
<td>Human Cultures – GPHY 121D; GPHY 141D; ANTY 101D; SOCI 101IS; OR AMST101D</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Restricted Math Elective</td>
<td>3-4</td>
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<tr>
<td>M 133Q – Geometry &amp; Measure for K-8 Teachers</td>
<td>3</td>
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</table>

Sophomore Year (_______ credits) Check course pre-requisites.

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<tr>
<th>Fall</th>
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<th>Grd</th>
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<tbody>
<tr>
<td>History Core – HSTA 101IH; HSTA 102IH; HSTR 101IH; OR HSTR102IH</td>
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<tr>
<td>EDU 331 – Literature and Literacy for Children</td>
<td>3</td>
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<tr>
<td>Physical Science – PHSX 103IN; PHSX 201IN; CHMY 102CS; OR APPROVED ELECTIVE</td>
<td>3</td>
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<tr>
<td>STAT 216Q – Introduction to Statistics</td>
<td>3-4</td>
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<tr>
<td>M 234 – Higher Math for K-8 Teachers</td>
<td>3</td>
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<tr>
<th>Spring</th>
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<tbody>
<tr>
<td>TE 250CS – Technology and Society</td>
<td>3</td>
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<tr>
<td>EDU 211D – Multicultural Education</td>
<td>3</td>
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<tr>
<td>Earth Science – ERTH 101IN; ERTH 212RN; GEO 103CS; GEO 105IN; GEO 111IN; GEO 140IN; OR APPROVED ELECTIVE</td>
<td>3-4</td>
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<tr>
<td>PSCI 210IS – Intro. to American Government</td>
<td>3</td>
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<tr>
<td>Restricted Math Elective</td>
<td>3-4</td>
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Junior Year (_______ credits) Must be at 93 credits at end of Spring semester to graduate in 4 years.

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<thead>
<tr>
<th>Fall</th>
<th>Cr</th>
<th>Grd</th>
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<tbody>
<tr>
<td>EDU 382 – Assessment, Curriculum &amp; Instruction</td>
<td>3</td>
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<tr>
<td>EDSP 306 – Exceptional Learners</td>
<td>3</td>
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<tr>
<td>EDU 330 – Emergent Literacy</td>
<td>3</td>
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<tr>
<td>EDU 397 – Methods: K-8 Health Enhancement</td>
<td>3</td>
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<tr>
<td>EDU 397 – Methods: K-8 Math</td>
<td>3</td>
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<tr>
<td>EDU 370 – Integrating Technology into Education</td>
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<tr>
<th>Spring</th>
<th>Cr</th>
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<tbody>
<tr>
<td>EDU 497R – Methods: 5-8 Mathematics</td>
<td>3</td>
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<tr>
<td>EDU 397 – Methods: K-8 Language Arts</td>
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<tr>
<td>EDU 397 – Methods: K-8 Science</td>
<td>3</td>
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<td>EDU 342 – Managing the Learn. Environment</td>
<td>3</td>
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<td>EDU 395 – Practicum I</td>
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Senior Year (_______ credits)

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<th>Fall</th>
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<tr>
<td>EDU 397 – Methods: K-8 Creative Arts</td>
<td>3</td>
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<tr>
<td>M 420 – Geo., Meas., &amp; Data in Middle Grades or M 424 – Algebraic Thinking &amp; Number Sense in Mid.G</td>
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<tr>
<td>EDU 397R – Methods: K-8 Social Studies</td>
<td>3</td>
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<td>EDU 438 – Lit. Assessment, Diagnosis &amp; Instruction</td>
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<td>EDU 395 – Practicum II (Classroom)</td>
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<th>Spring</th>
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<tbody>
<tr>
<td>EDU 495 – Student Teaching</td>
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Submit Application to Teacher Education Program
Attend Student Teaching Meeting
Submit Application for Student Teaching & Graduation

Total # of Credits: 120+
# Department of Education ● Semester Planning Sheet

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<tr>
<th>Autumn Semester</th>
<th>Spring Semester</th>
<th>Summer</th>
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<td>Rubric</td>
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Name: ___________________________   Student ID: ________________