

# MIDDLE SCHOOL MATHEMATICS EDUCATION, BACHELOR OF SCIENCE

The Middle School Mathematics major, which leads to a B.S. degree, is specifically designed to lead to a Colorado teaching license for Middle School Mathematics (grades 6-8). It requires the completion of an Education Minor as well, which will be added to students' programs once they are fully admitted to Education.

## Specific Program Requirements

| Course                                     | Title                                       | Credits    |
|--|---|------------|
| <b>General Education Requirements</b>      |   |            |
| General Education Skill Requirements:      |   |            |
| ENG 101                                    | Rhetoric & Writing I (GT-CO1)               | 3          |
| ENG 102                                    | Rhetoric & Writing II (GT-CO2)              | 3          |
| MATH 156                                   | Introduction to Statistics (GT-MA1)         | 3          |
| General Education Knowledge Requirements:  |   |            |
| <b>Humanities</b>                          |   |            |
| CID 103                                    | Speaking & Listening                        | 3          |
| Humanities Electives                       |   | 6          |
| <b>History</b>                             |   |            |
| History Elective                           |   | 3          |
| <b>Social Sciences</b>                     |   |            |
| PSYC 151                                   | Human Development (GT-SS3)                  | 3.0        |
| Social Sciences Elective                   |   | 3          |
| <b>Natural Sciences</b>                    |   |            |
| Laboratory Science Sequence                |   | 10         |
| <b>Major Requirements</b>                  |   |            |
| MATH 126                                   | Calculus & Analytic Geometry I (GT-MA1)     | 5          |
| MATH 207                                   | Matrix and Vector Algebra with Applications | 3          |
| MATH 224                                   | Calculus and Analytic Geometry II           | 5          |
| MATH 319                                   | Number Theory                               | 3          |
| MATH 330                                   | Introduction to Higher Geometry             | 3          |
| MATH 360                                   | Elementary Mathematics Concepts I           | 3          |
| MATH 361                                   | Elementary Mathematics Concepts II          | 3          |
| MATH 362                                   | Problem Solving for K-6 Teachers            | 3          |
| MATH 463                                   | History of Mathematics                      | 3          |
| Electives in Math/Math Ed                  |   | 7          |
| Computer Programming                       |   | 4          |
| Electives                                  |   | 7          |
| <b>Minor Requirements</b>                  |   |            |
| Education Minor requirements listed below. |   | 37         |
| <b>Total Credits</b>                       |   | <b>123</b> |

1. Credit hours for this course are counted in ED minor

## Specific Requirements for Secondary & K-12 Education/Minor

The student must complete an appropriate major and the following Education courses:

| Course   | Title  | Credits |
|--|--|---------|
| Select one of the following:   |  |         |
| PSYC 151<br>or PSYC 251<br>or PSYC 342   | Human Development (GT-SS3) <sup>1</sup><br>Childhood and Adolescence<br>Educational Psychology | 3       |
| ED 202   | Foundations of Education   | 3       |
| ED 280   | Educational Media and Technology <sup>2</sup>  | 3       |
| ED 301   | Frameworks of Teaching (Admission to Education is completed in this course)                    | 4       |
| RDG 435  | Disciplinary Literacy <sup>3,5</sup>   | 4       |
| Special Methods in Education Areas (Prerequisites - Admission to Education) <sup>5,6</sup> |  | 4       |
| ED 412   | Teaching Diverse Learners <sup>4,5</sup>   | 3       |
| ED 485   | Capstone Seminar in Education  | 1       |
| ED 488<br>or ED 489  | Student Teaching Secondary<br>Student Teaching K-12  | 12      |
| Total Credits <sup>3</sup>   |  | 37-40   |

<sup>1</sup> Music students may take PSYC 151 Human Development (GT-SS3) (3 c.h.) or PSYC 251 Childhood and Adolescence (3 c.h.).

<sup>2</sup> Music Education students may complete MUS 103 Music and Computer Technology I (1 c.h.) and MUS 306 Technology for Music Educators (2 c.h.) for ED 280 Educational Media and Technology (3 c.h.).

<sup>3</sup> English/Language Arts student must also complete RDG 355 Linguistics for Educators (3 c.h.)

<sup>4</sup> Physical Education students may complete EPER 465 Adapted Physical Education (3 c.h.) or ED 412 Teaching Diverse Learners (3 c.h.).

<sup>5</sup> GPA of 2.6 required

<sup>6</sup> English/Language Arts student must also complete ED 447 Teaching English in Secondary Schools (4 c.h.)

## Planning Sheet

Disclaimer. The Planning Sheet is designed as a guide for student's planning their course selections. The information on this page provides only a suggested schedule. Actual course selections should be made with the advice and consent of an academic advisor. While accurately portraying the information contained in the college catalog, this form is not considered a legal substitute for that document. Students should become familiar with the catalog in effect at the time in which they entered the institution.

Note: Students completing a major with an emphasis in Secondary Education are required to complete a minor in Education and to meet all other requirements outlined by the Teacher Education Program.

| Course        | Title                                   | Credits |
|---------------|---|---------|
| <b>Year 1</b> |   |         |
| <b>Fall</b>   |   |         |
| ED 202        | Foundations of Education                | 3       |
| ENG 101       | Rhetoric & Writing I (GT-CO1)           | 3       |
| MATH 126      | Calculus & Analytic Geometry I (GT-MA1) | 5       |

2 Middle School Mathematics Education, Bachelor of Science

|  |   |            |
|--|---|------------|
| CHEM 121<br>or PHYS 221                    | General Chemistry I (GT-SC2)<br>or General Physics I                    | 4          |
| CHEM 121L<br>or PHYS 221L                  | General Chemistry Lab I (GT-SC1)<br>or General Physics I Lab            | 1          |
| <b>Credits</b>                             |   | <b>16</b>  |
| <b>Spring</b>                              |   |            |
| CID 103                                    | Speaking & Listening  | 3          |
| ENG 102                                    | Rhetoric & Writing II (GT-CO2)  | 3          |
| MATH 224                                   | Calculus and Analytic Geometry II                                       | 5          |
| CHEM 122<br>or PHYS 222                    | General Chemistry II (GT-SC2)<br>or General Physics II                  | 4          |
| CHEM 122L<br>or PHYS 222L                  | General Chemistry Lab II (GT-SC1)<br>or General Physics II Lab (GT-SC1) | 1          |
| <b>Credits</b>                             |   | <b>16</b>  |
| <b>Year 2</b>                              |   |            |
| <b>Fall</b>                                |   |            |
| ED 280                                     | Educational Media and Technology  | 3          |
| MATH 207                                   | Matrix and Vector Algebra with Applications                             | 3          |
| MATH 360                                   | Elementary Mathematics Concepts I                                       | 3          |
| PSYC 151<br>or PSYC 251                    | Human Development (GT-SS3)<br>or Childhood and Adolescence              | 3          |
| General Education History Elective         |   | 3          |
| <b>Credits</b>                             |   | <b>15</b>  |
| <b>Spring</b>                              |   |            |
| ED 301                                     | Frameworks of Teaching  | 4          |
| MATH 319                                   | Number Theory   | 3          |
| MATH 330                                   | Introduction to Higher Geometry   | 3          |
| MATH 361                                   | Elementary Mathematics Concepts II                                      | 3          |
| General Education Humanities Elective      |   | 3          |
| <b>Credits</b>                             |   | <b>16</b>  |
| <b>Year 3</b>                              |   |            |
| <b>Fall</b>                                |   |            |
| MATH 362                                   | Problem Solving for K-6 Teachers  | 3          |
| MATH 477                                   | Methods for Teaching Secondary Math                                     | 4          |
| General Education Humanities Elective      |   | 3          |
| General Education Social Sciences Elective |   | 3          |
| Elective                                   |   | 3          |
| <b>Credits</b>                             |   | <b>16</b>  |
| <b>Spring</b>                              |   |            |
| ED 412                                     | Teaching Diverse Learners   | 3          |
| MATH 156                                   | Introduction to Statistics (GT-MA1)                                     | 3          |
| Math/Math Ed Elective                      |   | 3          |
| Elective                                   |   | 4          |
| <b>Credits</b>                             |   | <b>13</b>  |
| <b>Year 4</b>                              |   |            |
| <b>Fall</b>                                |   |            |
| MATH 463                                   | History of Mathematics  | 3          |
| RDG 435                                    | Disciplinary Literacy   | 4          |
| Math/Math Ed Elective                      |   | 4          |
| Computer Programming                       |   | 4          |
| <b>Credits</b>                             |   | <b>15</b>  |
| <b>Spring</b>                              |   |            |
| ED 485                                     | Capstone Seminar in Education   | 1          |
| ED 488                                     | Student Teaching Secondary  | 12         |
| <b>Credits</b>                             |   | <b>13</b>  |
| <b>Total Credits</b>                       |   | <b>120</b> |