

# Bachelor of Science in Middle Grades Math/Science Education

## Bachelor of Science in Middle Grades Math/Science Education LOWER DIVISION (ASSOCIATE DEGREE) COURSES

The following program of study is designed to prepare students not only for the AA degree, but also for the general knowledge and middle grades math and middle grades science subject area exams in the Florida Teacher Certification Exam (FTCE) Program. If you plan to be a middle grades math or science teacher and are just beginning your AA degree, this program of study will best prepare you for that career choice. If you have already completed your AA degree and some of your general education courses differ from those listed below, your AA degree will still meet that component of the admission process; however, you may need to complete additional coursework, independent study, or workshops to be well prepared for the middle grades education FTCE exams.

There are three options in the Math/Science Education degree: Math, Science, and Math and Science. While there is no single certification exam for both Math and Science, these three options allow students to prepare to take the Math subject area exam, the Science subject area exam, or both.

Lab/field experiences are elements of classes with a C or L suffix.

## Middle Grades Math/Science Education: Math Option

| General Education Course Requirements |  | Credit Hours |
|---------------------------------------|--|--------------|
| ENC 1101                              | English Composition I                                      | 3            |
| ENC 1102                              | English Composition II                                     | 3            |
| MAC 1105                              | College Algebra  | 3            |
| MAC 1140                              | Pre-calculus Algebra                                       | 3            |
| _____                                 | Two General Education Humanities courses                   | 6            |
| _____                                 | _____  | _____        |
| _____                                 | General Education Social Science/History/Government course | 3            |
| PSY 2012                              | Psychology   | 3            |
| GLY 2010C                             | Physical Geology <sup>1,2</sup>                            | 4            |
| _____                                 | General Education Biological Science <sup>1</sup>          | 4            |
| _____                                 | General Education Science <sup>1,2</sup>                   | 4            |

<sup>1</sup> At least one physical or biological science must include a lab.

<sup>2</sup> Other general education natural science courses may meet program requirement; see your advisor.

**Total General Education Credits 36**

| Common Pre-requisites |  | Credit Hours |
|-----------------------|--|--------------|
| EDF 1005              | Introduction to Education              | 3            |
| EDG 2701              | Teaching Diverse Populations           | 3            |
| EME 2040              | Introduction to Educational Technology | 3            |

**Total Common Pre-requisites Credits 9**

## Bachelor of Science in Middle Grades Math/Science Education

| <b>Lower Division Electives</b> |   | <b>Credit Hours</b> |
|---------------------------------|---|---------------------|
| MGF 1106                        | Math for Liberal Arts I                                   | 3                   |
| STA 2023                        | Statistics (or another approved transferable math course) | 3                   |
| SPC 1600                        | Speech  | 3                   |
| AMH 2010/ 2020                  | American History I or II                                  | 3                   |
| POS 1041                        | American Government                                       | 3                   |

**Total Lower Division Elective Credits** **15**

**TOTAL LOWER DIVISION (ASSOCIATE DEGREE) REQUIREMENTS<sup>3</sup>** **60**

<sup>3</sup> Students who do not have foreign language requirement at the high school level will need to complete eight (8) credits of foreign language.

### UPPER DIVISION COURSES<sup>4</sup>

| <b>Core Professional Education Courses</b> |   | <b>Credit Hours</b> |
|--|---|---------------------|
| EDF 3131C                                  | Learning and the Developing Adolescent            | 3                   |
| EDF 3430                                   | Measurement, Evaluation & Assessment in Education | 3                   |
| EEX 3070                                   | Methods of Inclusion & Collaboration              | 3                   |
| EDG 3410C                                  | Classroom Management, School Safety, Law & Ethics | 3                   |
| EDG 3343                                   | Instructional Strategies                          | 3                   |
| EME 3410C                                  | Integrating Technology in the Classroom           | 3                   |
| TSL 4081C                                  | TESOL Issues and Practice                         | 3                   |
| RED 3335C                                  | Teaching Reading in the Content Areas             | 3                   |
| RED 3324C                                  | Teaching in the Middle School Curriculum          | 3                   |

**Total Core Professional Education Credits** **27**

| <b>Additional Courses Required</b> |  | <b>Credit Hours</b> |
|------------------------------------|--|---------------------|
| MAE 4312C                          | How Children Learn Math                          | 3                   |
| MAE 4320C                          | Teaching Methods in Middle School Math           | 3                   |
| MAE 4940C                          | Teaching Methods in Middle School Math Practicum | 1                   |
| MTG 2206                           | College Geometry                                 | 3                   |
| MAC 1114                           | Trigonometry                                     | 3                   |
| MAC 2311                           | Calculus I                                       | 4                   |
| MHF 4404                           | The History of Math                              | 3                   |
| _____                              | Math elective                                    | 3                   |

**Total Additional Required Credits** **23**

| <b>Student Teaching</b> |                           | <b>Credit Hours</b> |
|-------------------------|---------------------------|---------------------|
| MAE 4945                | Student Teaching in Math  | 9                   |
| MAE 4930C               | Seminar in Math Education | 1                   |

**Total Student Teaching Credits** **10**

**TOTAL UPPER DIVISION CREDITS** **60**  
**TOTAL CREDITS FOR THE DEGREE** **120**

<sup>4</sup> Courses with the “C” or “L” designation include an extra number of “lab” hours to accommodate field experiences.

## Bachelor of Science in Middle Grades Math/Science Education

# Middle Grades Math/Science Education: Science Option

*\*All students in the Science Option must take a two-course science sequence with a lab. Substitutions for the biology sequence and for any other coursework in this program of study must be approved by the Teacher Education Advisor.*

| General Education Course Requirements |  | Credit Hours |
|---------------------------------------|--|--------------|
| ENC 1101                              | English Composition I                                      | 3            |
| ENC 1102                              | English Composition II                                     | 3            |
| MAC 1105                              | College Algebra  | 3            |
| MAC 1140                              | Pre-calculus Algebra                                       | 3            |
| _____                                 | Two General Education Humanities courses                   | 6            |
| _____                                 | General Education Social Science/History/Government course | 3            |
| PSY 2012                              | Psychology   | 3            |
| GLY 2010C                             | Physical Geology <sup>2</sup>                              | 4            |
| BSC 1010C                             | Principles of Biology I                                    | 4            |
| CHM 1025                              | Chemical Science   |              |
|                                       | OR   |              |
| PHY 1020                              | Physical Science   | 4            |

<sup>2</sup> Other general education natural science courses may meet program requirement; see your advisor.

**Total General Education Credits 36**

| Common Pre-requisites |  | Credit Hours |
|-----------------------|--|--------------|
| EDF 1005              | Introduction to Education              | 3            |
| EDG 2701              | Teaching Diverse Populations           | 3            |
| EME 2040              | Introduction to Educational Technology | 3            |

**Total Common Pre-requisites Credits 9**

| Lower Division Electives |                          | Credit Hours |
|--------------------------|--------------------------|--------------|
| SPC 1600                 | Speech                   | 3            |
| LIS 2004                 | Internet Research        | 1            |
| AMH 2010                 | American History I or II | 3            |
| POS 1041                 | American Government      | 3            |
| _____                    | A science lab            | 1            |
| _____                    | A science elective       | 4            |

**Total Lower Division Elective Credits 15**

**TOTAL LOWER DIVISION (ASSOCIATE DEGREE) REQUIREMENTS<sup>3</sup> 60**

<sup>3</sup> Students who do not have foreign language requirement at the high school level will need to complete eight (8) credits of foreign language.

# Bachelor of Science in Middle Grades Math/Science Education

## UPPER DIVISION COURSES<sup>4</sup>

| <b>Core Professional Education Courses</b> |   | <b>Credit Hours</b> |
|--|---|---------------------|
| EDF 3131C                                  | Learning and the Developing Adolescent            | 3                   |
| EDF 3430                                   | Measurement, Evaluation & Assessment in Education | 3                   |
| EEX 3070                                   | Methods of Inclusion & Collaboration              | 3                   |
| EDG 3410C                                  | Classroom Management, School Safety, Law & Ethics | 3                   |
| EDG 3343                                   | Instructional Strategies                          | 3                   |
| EME 3410C                                  | Integrating Technology in the Classroom           | 3                   |
| TSL 4081C                                  | TESOL Issues and Practice                         | 3                   |
| RED 3335C                                  | Teaching Reading in the Content Areas             | 3                   |
| RED 3324C                                  | Teaching in the Middle School Curriculum          | 3                   |

**Total Core Professional Education Credits** 27

| <b>Additional Courses Required</b> |   | <b>Credit Hours</b> |
|------------------------------------|---|---------------------|
| SCE 4320C                          | Teaching Methods in Middle School Science           | 3                   |
| SCE 4940C                          | Teaching Methods in Middle School Science Practicum | 1                   |
| _____                              | Upper division interdisciplinary science course     | 3                   |
| BSC 1011C                          | Principles of Biology II                            | 4                   |
| CHM 1025                           | Chemical Science                                    |                     |
|                                    | OR  |                     |
| PHY 1020                           | Physical Science                                    | 4                   |
| _____                              | Two science electives                               | 8                   |

**Total Additional Courses Required Credits** 23

| <b>Student Teaching</b> |                              | <b>Credit Hours</b> |
|-------------------------|------------------------------|---------------------|
| SCE 4945                | Student Teaching in Science  | 9                   |
| SCE 4930C               | Seminar in Science Education | 1                   |

**Total Student Teaching Credits** 10

**TOTAL UPPER DIVISION CREDITS** 60  
**TOTAL CREDITS FOR THE DEGREE** 120

<sup>4</sup> Courses with the “C” or “L” designation include an extra number of “lab” hours to accommodate field experiences.

## Bachelor of Science in Middle Grades Math/Science Education

# Middle Grades Math/Science Education: Math and Science Option

*\*All students in the Math/Science Option must take a two-course science sequence with a lab. Substitutions for the biology sequence and for any other coursework in this program of study must be approved by the Teacher Education Advisor.*

| <b>General Education Course Requirements</b> |  | <b>Credit Hours</b> |
|--|--|---------------------|
| ENC 1101                                     | English Composition I                                      | 3                   |
| ENC 1102                                     | English Composition II                                     | 3                   |
| MAC 1105                                     | College Algebra  | 3                   |
| MAC 1140                                     | Pre-calculus Algebra                                       | 3                   |
| _____  | Two General Education Humanities courses                   | 6                   |
| _____  | General Education Social Science/History/Government course | 3                   |
| PSY 2012                                     | Psychology   | 3                   |
| GLY 2010C                                    | Physical Geology <sup>2</sup>                              | 4                   |
| BSC 1010C                                    | Principles of Biology I*                                   | 4                   |
| CHM 1025                                     | Chemical Science   |                     |
|  | OR   |                     |
| PHY 1020                                     | Physical Science   | 4                   |
| <b>Total General Education Credits</b>       |  | <b>36</b>           |

| <b>Common Pre-requisites</b>               |  | <b>Credit Hours</b> |
|--|--|---------------------|
| EDF 1005                                   | Introduction to Education              | 3                   |
| EDG 2701                                   | Teaching Diverse Populations           | 3                   |
| EME 2040                                   | Introduction to Educational Technology | 3                   |
| <b>Total Common Pre-requisites Credits</b> |  | <b>9</b>            |

| <b>Lower Division Electives</b>  |  | <b>Credit Hours</b> |
|--|--|---------------------|
| <i>From the list below, fifteen lower division elective credit hours will be counted towards the B.S. in Middle Grades Math/Science:</i> |  |                     |
| MAC 1114   | Trigonometry   | 3                   |
| STA 2023   | Statistics   | 3                   |
| BSC 1011C  | Principles of Biology II*                              | 4                   |
| MGF 1106   | Math for Liberal Arts I                                | 3                   |
| _____  | Any lower division transferable math or science course | —                   |
| <b>Total Lower Division Elective Credits</b>   |  | <b>15</b>           |
| <b>TOTAL LOWER DIVISION (ASSOCIATE DEGREE) REQUIREMENTS<sup>3</sup></b>  |  | <b>60</b>           |

<sup>3</sup> Students who do not have foreign language requirement at the high school level will need to complete eight (8) credits of foreign language.

## Bachelor of Science in Middle Grades Math/Science Education

### UPPER DIVISION COURSES<sup>4</sup>

| <b>Core Professional Education Courses</b> |   | <b>Credit Hours</b> |
|--|---|---------------------|
| EDF 3131C                                  | Learning and the Developing Adolescent            | 3                   |
| EDF 3430                                   | Measurement, Evaluation & Assessment in Education | 3                   |
| EEX 3070                                   | Methods of Inclusion & Collaboration              | 3                   |
| EDG 3410C                                  | Classroom Management, School Safety, Law & Ethics | 3                   |
| EDG 3343                                   | Instructional Strategies                          | 3                   |
| EME 3410C                                  | Integrating Technology in the Classroom           | 3                   |
| TSL 4081C                                  | TESOL Issues and Practice                         | 3                   |
| RED 3335C                                  | Teaching Reading in the Content Areas             | 3                   |
| RED 3324C                                  | Teaching in the Middle School Curriculum          | 3                   |

**Total Core Professional Education Credits** **27**

| <b>Additional Courses Required</b> |   | <b>Credit Hours</b> |
|------------------------------------|---|---------------------|
| MAE 4320C                          | Teaching Methods in Middle School Math              | 3                   |
| MAE 4940C                          | Teaching Methods in Middle School Math Practicum    | 1                   |
| SCE 4320C                          | Teaching Methods in Middle School Science           | 3                   |
| SCE 4940C                          | Teaching Methods in Middle School Science Practicum | 1                   |
| MTG 2206                           | College Geometry                                    | 3                   |
| _____                              | Upper division interdisciplinary science course     | 3                   |
| CHM 1025                           | Chemical Science                                    |                     |
| <i>or</i>                          |   |                     |
| PHY 1020                           | Physical Science                                    | 4                   |
| _____                              | Math elective                                       | 4                   |

**Total Additional Courses Required Credits** **22**

| <b>Student Teaching</b> |                              | <b>Credit Hours</b> |
|-------------------------|------------------------------|---------------------|
| MAE 4945                | Student Teaching in Math     |                     |
|                         | OR                           |                     |
| SCE 4945                | Student Teaching in Science  | 9                   |
| SCE 4930C               | Seminar in Science Education | 1                   |
| MAE 4930C               | Seminar in Math Education    | 1                   |

**Total Student Teaching Credits** **11**

|                                     |            |
|-------------------------------------|------------|
| <b>TOTAL UPPER DIVISION CREDITS</b> | <b>60</b>  |
| <b>TOTAL CREDITS FOR THE DEGREE</b> | <b>120</b> |

<sup>4</sup> Courses with the “C” or “L” designation include an extra number of “lab” hours to accommodate field experiences.