Mathematics Concentration

The Bachelor of Science in Education in Middle Grades Education prepares undergraduate students for middle level teaching (fourth to eighth grades). Middle grades teachers are increasingly sought out and in high-demand in Pennsylvania as well as across the country.

The College of Education program in Middle Grades Education is designed to ensure not only that there are certified teachers to fill the growing vacancies, but that our students graduate highly knowledgeable about learning and teaching as well as committed to pre/adolescent learners from diverse ethnic, economic and geographic backgrounds. To that end, our program focuses on building deep content-specific pedagogical knowledge aligned to the breadth of academic standards and the wide-ranging developmental needs of middle grades students. To develop a strong link between learning theories and actual pedagogical practice, we also require that our students engage in early, often and strategic field/clinical education experiences in middle grades settings.

Our program stands out as cutting-edge because we prepare undergraduate students to teach in both the upper elementary and middle grades classrooms.

In addition to becoming certified to teach all elementary subjects in 4-6th, all Middle Grades Education: Mathematics Concentration students will pursue certification for 7-8th grades in the area of Mathematics.

GPA Requirements:

- In order to maintain good standing in Middle Grades Education, students must maintain a 3.0 cumulative grade point average and a 2.0 grade point average in the course work in their concentration area.

Summary of Requirements

University Requirements

All students are required to complete the university’s General Education (GenEd) curriculum.

All students must take a minimum of two writing-intensive (WI) courses at Temple University. Writing intensive course numbers end in 96, 97 and 98.

College Requirements

Students receive a Bachelor of Science in Education degree with a recommendation for Pennsylvania teacher certification upon the successful completion of their program requirements with a minimum cumulative GPA of 3.0 or must meet the Pennsylvania Department of Education’s qualifying Praxis score standards. All students seeking to graduate with the recommendation for certification must also meet the requirements for Candidacy.

The required total minimum credit hours for the Middle Grades Education concentration in Mathematics is 125. These credit hours are satisfied by taking courses in four categories:

1. University General Education requirements (General Education)
2. Education courses
3. Teacher Education Certification Courses (i.e. methods and student teaching)
4. Concentration courses

Suggested Academic Plan

B.S.ED. in Middle Grades Education: Mathematics Concentration

Requirements for New Students starting in the 2017-2018 Academic Year

To best prepare students in this major for the Praxis II exams, we strongly encourage taking the suggested GenEds listed.

(Certain courses require that a student secure clearances as per the College of Education policy; students should check the current list of courses that require clearances found on the College of Education Blackboard Undergraduate Community.)

<table>
<thead>
<tr>
<th>Year 1</th>
<th>Fall</th>
<th>Credit Hours</th>
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</thead>
<tbody>
<tr>
<td>BIOL 1011</td>
<td>General Biology I</td>
<td>4</td>
</tr>
<tr>
<td>ENGS 0802, 0812, or 0902</td>
<td>Analytical Reading and Writing [GW]</td>
<td>4</td>
</tr>
<tr>
<td>GenEd Breadth Course (Global/World Society)</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>MATH 1041</td>
<td>Calculus I</td>
<td>4</td>
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</tbody>
</table>

Term Credit Hours 15
### Year 2

#### Spring
- **MATH 1042** Calculus II 4
- **PHYS 1021** Introduction to General Physics I 4
- **IH 0851 or 0951** Intellectual Heritage I: The Good Life [GY] 3
- GenEd Breadth Course (Arts) 3
- GenEd Breadth Course (Race & Diversity) 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term Credit Hours</strong></td>
<td>17</td>
</tr>
</tbody>
</table>

#### Fall
- **MATH 2043** Calculus III 4
- **MATH 2101** Linear Algebra 3
- **EDUC 2103** Socio-cultural Foundations of Education in the United States 3
- **IH 0852 or 0952** Intellectual Heritage II: The Common Good [GZ] 3
- GenEd Breadth Course (U.S. Society) 3

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Term Credit Hours</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

### Year 3

#### Spring
- **MATH 2111** Basic Concepts of Math 3
- Select one of the following: 4
  - **BIOL 1012** General Biology II
  - **PHYS 1022** Introduction to General Physics II
  - **EDUC 2109** Adolescent Development for Educators 3
  - **SPED 2231** Introduction to Inclusive Education 3
- Select one of the following: 3
  - **ENG 2301** Survey of American Literature I
  - **ENG 2302** Survey of American Literature II
  - **ENG 2402** African-American Literature II

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term Credit Hours</strong></td>
<td>16</td>
</tr>
</tbody>
</table>

#### Fall
- Select one of the following: 3
  - **HIST 1101** U.S. History to 1877
  - **HIST 1102** U.S. History since 1877
  - **MGRE 3109** Cognitive Development in the Content Areas 3
  - **MGRE 3111** Applications of Learning Theory to Middle Grades Education 3
  - **MATH 3061** Modern Geometry I 3
- Select one of the following: 3
  - **MATH 1013** Elements of Statistics
  - **MATH 2031** Probability and Statistics

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Term Credit Hours</strong></td>
<td>15</td>
</tr>
</tbody>
</table>

### Year 4

#### Spring
- **MGRE 3145** Teaching and Learning Math in the Middle Grades 3
- **MGRE 4108** Teaching and Learning Science in the Middle Grades 3
- **SPED 4109** Educating Students with Disabilities in Inclusive Settings 3
- **MATH 1015** Introduction to Numbers Figures 4
- Select one of the following: 3
  - **MATH 2021** Functions and Modeling
  - **MATH 3003** Theory of Numbers

<table>
<thead>
<tr>
<th>Course</th>
<th>Credits</th>
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</thead>
<tbody>
<tr>
<td><strong>Term Credit Hours</strong></td>
<td>16</td>
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</tbody>
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#### Fall
- **MGRE 3196** Teaching and Learning Literacy in the Middle Grades [WI] 3
- **MGRE 3296** Cultures, Communities, and Families [WI] 3
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPED 3187</td>
<td>Integrated Literacy and Special Education Practicum</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 2306</td>
<td>Assessment and Evaluation</td>
<td>3</td>
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<tr>
<td>ENES 3338</td>
<td>Foundations of Language Teaching: Teaching English Language Learners in Grades 4 to 12</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td><strong>Term Credit Hours</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td><strong>Spring</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MGRE 4888</td>
<td>Student Teaching in the Middle Grades</td>
<td>9</td>
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<tr>
<td>MGRE 4801</td>
<td>Senior Seminar and Performance Assessment in Middle Grades Education</td>
<td>3</td>
</tr>
<tr>
<td>EDUC 4111</td>
<td>Classroom and Conflict Management in Grades 4 through 12</td>
<td>3</td>
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<tr>
<td></td>
<td><strong>Term Credit Hours</strong></td>
<td><strong>15</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Total Credit Hours:</strong></td>
<td><strong>125</strong></td>
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</table>

1. These two courses constitute the waiver for the GenEd Science category when the GPA requirement is met.
2. Course must be successfully completed to be eligible for Candidacy approval.
4. This course constitutes the waiver for the GenEd Quantitative Literacy category when the GPA requirement is met.
5. Suggested GenEd Race & Diversity courses: AAAS 0829, ANTH 0829, GUS 0829, HIST 0829, POLS 0829, SOC 0829 or SOC 0929.
7. These three courses constitute the waiver for the GenEd Human Behavior category when the GPA requirement is met.