MATH STUDIES, MIDDLE LEVEL (B.S.)

https://cps.unh.edu/online/program/bs/math-studies-middle-level

Description

Individuals who complete this program will be eligible for the New Hampshire Department of Education teacher certification in Mathematics (Middle Level).

This is a field-based program for qualified participants working or volunteering in approved programs or education settings. The key components of this program include mentorship of the teacher candidates by highly skilled professionals in the field, the hands-on experience of working with children in educational settings, and the opportunity to build your teaching capacity over time. Graduates of this program will be eligible for certification and highly qualified in mathematics, middle level.

Requirements

Degree Requirements

Minimum Credit Requirement: 120 credits

Minimum Residency Requirement: 30 credits must be taken at UNH

Minimum Cumulative GPA: 2.0 is required for conferral*

Core Curriculum Required: General Education Program Major, Option and Elective Requirements as indicated.

*GPA: Major and any state certification GPA requirements may be higher and are indicated in program details.

A minimum grade of C- is required in all Major coursework. Some programs may have higher grade requirements for Major coursework as noted in the Major requirements section below. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major, Minor, and General Education requirements with only one overlap being utilized between the Major and Minor. Please note that Option requirements are considered part of the Major. Students must complete 16 upper-level credits in majors within the College of Professional Studies, Online.

General Education Program Requirements

A minimum grade of D- is required in all General Education coursework. Students are allowed a maximum of two course overlaps. Overlaps can be used between Major, Minor and General Education requirements with only one overlap being utilized between the Major and Minor.

All General Education requirements, including CRIT 602 Advanced Critical Analysis and Strategic Thinking and IDIS 601 Interdisciplinary Seminar, must be taken prior to the capstone.

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRIT 501</td>
<td>Introduction to Critical Inquiry</td>
<td>4</td>
</tr>
<tr>
<td>Select one of the following:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>MTH 402</td>
<td>Math for Our World</td>
<td>4</td>
</tr>
<tr>
<td>MTH 504</td>
<td>Statistics</td>
<td></td>
</tr>
<tr>
<td>MTH 510</td>
<td>Pre-Calculus</td>
<td></td>
</tr>
<tr>
<td>Knowledge of Human Behavior &amp; Social Systems: PSY 525</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Knowledge of the Physical &amp; Natural World</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Knowledge of Human Thought &amp; Expression</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>CRIT 602</td>
<td>Advanced Critical Analysis and Strategic Thinking</td>
<td>4</td>
</tr>
<tr>
<td>IDIS 601</td>
<td>Interdisciplinary Seminar</td>
<td>4</td>
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</table>

Total Credits: 40

Writing Program Requirements

All bachelor’s degree candidates are required to complete four writing intensive courses as part of the University Writing Program Requirements as follows:

<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>EDC 500</td>
<td>Foundations of Education</td>
<td>4</td>
</tr>
<tr>
<td>EDC 700</td>
<td>Introduction to Field Experience</td>
<td>4</td>
</tr>
<tr>
<td>EDC 717</td>
<td>Positive Behavior Guidance and Student Engagement</td>
<td>4</td>
</tr>
<tr>
<td>EDC 731</td>
<td>Aspects of Mathematics Learning</td>
<td>4</td>
</tr>
<tr>
<td>EDC 732</td>
<td>Reading and Writing in the Mathematics Content Area</td>
<td>4</td>
</tr>
<tr>
<td>EDC 708</td>
<td>Discrete Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>MTH 710</td>
<td>Algebra Theory for Middle School Teachers</td>
<td>4</td>
</tr>
<tr>
<td>EDC 733</td>
<td>Middle Level Mathematics Methods</td>
<td>4</td>
</tr>
<tr>
<td>EDC 798</td>
<td>Culminating Teaching Experience and Seminar</td>
<td>4</td>
</tr>
</tbody>
</table>

Writing Intensive courses are identified with the label “Writing Intensive Course” in the “Attributes” section of the course description and/or a W following the course number.

Major Requirements

A minimum GPA of 3.0 is required for state certification.

Prior to capstone enrollment, students are expected to complete the majority of their required major courses along with CRIT 602 Advanced Critical Analysis and Strategic Thinking and IDIS 601 Interdisciplinary Seminar. Students should consult with their advisor regarding specific major courses that may be completed with their capstone. Academic Advisor approval is required for registration to be processed.

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<tr>
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</thead>
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<tr>
<td>MTH 504</td>
<td>Statistics</td>
<td>4</td>
</tr>
<tr>
<td>MTH 510</td>
<td>Pre-Calculus</td>
<td>4</td>
</tr>
<tr>
<td>MTH 702</td>
<td>Mathematical Proof</td>
<td>4</td>
</tr>
<tr>
<td>MTH 703</td>
<td>Number Systems</td>
<td>4</td>
</tr>
<tr>
<td>MTH 704</td>
<td>Geometric Structures</td>
<td>4</td>
</tr>
<tr>
<td>MTH 705</td>
<td>Calculus I</td>
<td>4</td>
</tr>
<tr>
<td>MTH 706</td>
<td>History of Mathematics</td>
<td>4</td>
</tr>
<tr>
<td>CRIT 602</td>
<td>Advanced Critical Analysis and Strategic Thinking</td>
<td>4</td>
</tr>
<tr>
<td>IDIS 601</td>
<td>Interdisciplinary Seminar</td>
<td>4</td>
</tr>
</tbody>
</table>

Total Credits: 61

1. Required prior to beginning the last 60 credits of degree program.
Passing Praxis Core Exam scores must be submitted prior to taking EDC 700 Introduction to Field Experience

Electives
Open electives are courses students will need to take in addition to their general education and major requirements in order to satisfy the remaining credit totals for their programs. Open electives are defined as any credit course offered by the College not already included in the student’s general education, major, option or minor. Students will need 120 credits total to graduate with a bachelor’s degree from the Online Division of the College of Professional Studies.

State Certification Requirements
The following requirements must be completed in order to be recommended to the state for Teacher Certification:

• A minimum GPA of 3.0 is required for state certification
• Praxis Core Academic Skills For Educators Exam required. Passing Praxis Core Exam scores must be submitted prior to taking EDC 700 Introduction to Field Experience
• Praxis II-Middle School Math Exam Required. Students must attempt to pass a Praxis II exam prior to taking the Culminating Teaching Experience & Seminar. Passing exam scores are required for State Certification.

Degree Plan
This degree plan is a sample and does not reflect the impact of transfer credit or current course offerings. UNH CPS Online undergraduate students should develop individual academic plans with their academic advisor during their first year at UNH.

Sample Course Sequence

First Year
Fall
ENG 420 The Writing Process 4
COM 460 Interpersonal Communication and Group Dynamics 4
MTH 402 Math for Our World 4
General Education Course 4
Credits 16

Spring
COM 480 Visual Communication 4
CRIT 501 Introduction to Critical Inquiry 4
General Education Course 4
Elective 4
Credits 16

Second Year
Fall
CRIT 602 Advanced Critical Analysis and Strategic Thinking 4
MTH 504 Statistics 4
PSY 525 Human Development 4
Elective 4
Credits 16

Spring
IDIS 601 Interdisciplinary Seminar 4
MTH 510 Pre-Calculus 4
Elective 4
Elective 4
Credits 16

Third Year
Fall
EDC 500 Foundations of Education 4
EDC 700 Introduction to Field Experience 1
MTH 701 Probability and Statistics 4
MTH 702 Mathematical Proof 4
Credits 13

Spring
EDC 717 Positive Behavior Guidance and Student Engagement 4
EDC 731 Aspects of Mathematics Learning 4
MTH 703 Number Systems 4
MTH 704 Geometric Structures 4
Credits 16

Fourth Year
Fall
MTH 705 Calculus 4
MTH 706 History of Mathematics 4
EDC 732 Reading and Writing in the Mathematics Content Area 4
EDC 733 Middle Level Mathematics Methods 4
Credits 16

Spring
MTH 708 Discrete Mathematics 4
MTH 710 Algebra Theory for Middle School Teachers 4
EDC 798 Culminating Teaching Experience and Seminar 4
Credits 12

Total Credits 121

Note: Only 1 Clinical A course allowed per term

Student Learning Outcomes

• Develop a working understanding of current brain research and its implications for teaching and learning.
• Develop the skills to access and utilize technology as a tool to empower teaching and learning.
• Develop a solid understanding of the utilization of formative and summative assessment for program design, monitoring student progress and evaluating teaching effectiveness.
• Work with colleagues to observe, analyze and provide feedback on student progress and teaching effectiveness.
• Utilize research methods and materials, pedagogies and assessment strategies to teach for understanding and application specific to content area.