

# EDUCATION, BS: EARLY ADOLESCENCE - ADOLESCENCE LEVEL: MATH

The Mathematics Education Program is available for students who plan to teach mathematics in 6th through 12th grade. Mathematics Program students gain real world experience in the classroom through student teaching or on-the-job experiences at area schools. Students who satisfactorily complete the program requirements also meet the Wisconsin teacher certification requirements for teaching mathematics subject areas in those grades. Students at this level of certification may add the following licenses while pursuing or after obtaining their Mathematics licensure as their initial certification:

- Bilingual
- English as a Second Language

## Requirements

### General Education Requirements (GERs)

UW-Milwaukee has General Education Requirements (<http://catalog.uwm.edu/policies/undergraduate-policies/#generaleducationtext>) that must be met in order to earn a bachelor's degree. Some of the requirements of your program may fulfill the campus GERs. Please review the requirements and consult with your academic advisor.

### Program Admission Requirements (p. 2)

#### Program Core

Code	Title	Credits
COMMUN 103	Public Speaking (GER-HU, fulfilled prior to program admission)	3
CURRINS 300 or CURRINS 328	Introduction to Teaching: Colloquium and Fieldwork (fulfilled prior to program admission) Introduction to Teaching Science and Mathematics in Middle and High School	3
ED PSY 330	Introduction to Learning and Development	3
Choose one: <sup>1</sup>		3
ANTHRO 213	American Indian Peoples of Wisconsin (GER-CD, SS)	
ENGLISH 276	Introduction to American Indian Literature: (GER-CD, HU)	
AIS 203	Western Great Lakes American Indian Community Life of the Past (GER-CD, SS)	
HIST 263	North American Indian History Since 1887 (GER-CD, SS)	
<b>Total Credits</b>		<b>12</b>

<sup>1</sup> Non-Western History or Contemporary Culture and Minority Group Relations (Act 31) statutory requirements can both be met by taking one class. Program may allow fulfillment of Act 31 with a 1-day workshop.

### Content Area

Code	Title	Credits
Choose one of the following 2 courses:		
MATH 231	Calculus and Analytic Geometry I (QL-B, GER-NS)	4-5
MATH 221	Honors Calculus I (QL-B, GER-NS)	
MATH 232 or MATH 222	Calculus and Analytic Geometry II Honors Calculus II	4
MATH 233	Calculus and Analytic Geometry III (not required if MATH 221 and MATH 222 have been taken)	0-4
MATH 240 or MATH 234	Matrices and Applications Linear Algebra and Differential Equations	3
MATH 341	Seminar: Introduction to the Language and Practice of Mathematics	3
MATH 431	Modern Algebra with Applications	3
MATH 451 or MATH 453	Axiomatic Geometry Transformations in Geometry	3
MATH 575	High School Mathematics from an Advanced Viewpoint	3
Choose one of the following:		
MATH 305 or MATH 405	Introduction to Mathematical and Computational Modeling Mathematical Models and Applications	3
MATH 313 or MATH 315	Linear Programming and Optimization Mathematical Programming and Optimization	
MATH 320	Introduction to Differential Equations	
MATH 325	Vector Analysis	
MATH 405	Mathematical Models and Applications	
MATH 413	Introduction to Numerical Analysis	
MATH 417	Computational Linear Algebra	
MATH 451 or MATH 453	Axiomatic Geometry <sup>2</sup> Transformations in Geometry	
MATH 523	Advanced Calculus I	
MATH 535	Linear Algebra	
<b>Statistics (choose one of the following)</b>		<b>3-6</b>
IND ENG 367	Introductory Statistics for Physical Sciences and Engineering Students	
MTHSTAT 465	Introductory Mathematical Statistics for Social Sciences and Education	
MTHSTAT 361 & MTHSTAT 362	Introduction to Mathematical Statistics I and Introduction to Mathematical Statistics II	
<b>Computer Science and Physics Area</b>		
PHYSICS 209	Physics I (Calculus Treatment) (GER-NS)	4
PHYSICS 214	Lab Physics I (Calculus Treatment) (GER-NS+)	1
COMPSCI 250	Introductory Computer Programming	3
<b>Total Credits</b>		<b>37-45</b>

<sup>2</sup> May only choose the course that was not taken previously.

## Professional Education Requirements

**MACSTEP Sequence** - Milwaukee Area Collaborative Secondary Science (and Math) Teacher Education Program. Formal admission to the School of Education required. A grade of C or better must be met for all professional requirements, including student teaching.

Code	Title	Credits
<b>Summer</b>		
CURRINS 332	Teaching of Mathematics 3	3
CURRINS 510	Cooperative Strategies for Pre and Early Adolescents	2
CURRINS 545	Reading in the Content Areas: Middle, Junior, and Senior High School	3
CURRINS 629	Change and Change Strategies in Education	3
ED PSY 541	Assessment in Science and Math I	1
<b>Fall</b>		
CURRINS 510	Cooperative Strategies for Pre and Early Adolescents	1
CURRINS 516	Field Work in Middle School	3
CURRINS 532	Teaching of Mathematics: Secondary	3
ED PSY 542	Assessment in Science and Math II	1
EXCEDUC 536	Inclusion for Secondary Science and Math Educators	1
EXCEDUC 537	Math and Science Methods for All Learners	1
<b>Spring</b>		
ED PSY 543	Assessment in Science and Math III	1
EXCEDUC 538	Teaching Math and Science to All Learners	1
<b>Student Teaching (Spring)<sup>3</sup></b>		
CURRINS 431	Student Teaching in Mathematics	9
CURRINS 432	Student Teaching Mathematics Seminar	3
<b>Total Credits</b>		<b>36</b>

<sup>3</sup> Students must complete paperwork in order to be assigned a student teaching placement. To be approved for placement, additional criteria must be met. See Benchmarks (p. 2) for details.

## Additional Requirements for Graduation

- A minimum cumulative GPA of 2.5.
- A minimum GPA of 2.75 in all your mathematics content area courses and a minimum 2.75 GPA in all your professional education courses.
- Satisfactory completion of a minimum 128 credits.
- Completion of the last year of coursework (30 credits) in residence at UW-Milwaukee.
- Completion of edTPA (Teacher Performance Assessment) required for certification.

## Advance to Major

### Program Admission Requirements

Application to the Mathematics Education program requires satisfactory completion of the requirements listed below. For more information about the application process, visit our website at <http://uwm.edu/education/academics/mathematics/>.

- Basic skills test: Passing scores on one of the following exams: Praxis I, CORE, ACT, SAT, or GRE. ACT, SAT, or GRE score must be within ten years of admission term to academic program. Please see your academic advisor for additional information.
- Oral and Written Communication (OWC) Part A: Achieve a placement level of 4 or higher on the English Placement Test, or complete ENGLISH 102 or equivalent with a grade of C or better.
- Quantitative Literacy (QL) Part A: Achieve a placement level of 30 or higher on the Math Placement Text, or complete MATH 102, MATH 103, MATH 105, MATH 108, MATH 175, or an equivalent with a grade of C or better.
- Completion of CURRINS 300, Introduction to Teaching, or CURRINS 328, Introduction to Teaching Science in Middle and High School, with a grade of C or better.
- Completion of Commun 103 with a grade of C or better.
- A 2.5 minimum cumulative GPA in all UWM and transfer courses at the time of admission application.
- Completion of the following at the time of admission application: [MATH 231, MATH 232, and MATH 233, or an equivalent sequence of calculus and analytical geometry] plus [MATH 234 or MATH 240 or equivalent courses] with a 2.75 GPA in these and all faculty-approved Math courses 300 level and above.
- A minimum of 58 credits (UWM and transfer credits) at the time of admission application. It is not required to have all the Core Curriculum courses completed at the time of application.
- Meeting with faculty advisor to review admission application. Faculty signature required on application.

## Benchmarks

### Student Teaching

Students must complete paperwork in order to be assigned a student teaching placement. To determine your deadline (February or April), visit the Office of Clinical Experiences website at [uwm.edu/education/academics/clinical-experiences/](http://uwm.edu/education/academics/clinical-experiences/) (<http://uwm.edu/education/academics/clinical-experiences/>).

To be approved for placement, you must meet the following criteria:

- Be admitted to the School of Education;
- Completion of all required coursework;
- Cumulative GPA of a minimum 2.5;
- A minimum of 2.75 in all your content area and professional education courses;
- Passing scores reflected on your transcript for the Praxis II exam: Mathematics: Content Knowledge #5161;
- Removal of all F or I (incompletes) grades;
- TB test results submitted to the Office of Clinical Experiences; and
- Criminal Background Check submitted to the Office of Clinical Experiences

## Undergraduate Advising

Our purpose is to provide collaborative, mentoring relationships which promote educational, career, and professional development. We value a student-centered, holistic, and ethical approach to advising based on strong partnerships with students, faculty and staff, and the larger campus community. We are committed to creating a respectful and supportive environment. We encourage students to be self-reliant through informed decisions and choices based upon dissemination of accurate

information. We value our own continuous professional development to enhance the quality of the advising experience.

### ***How to Prepare for an Advising Meeting***

- Review your Advisement Report in PAWS (<http://uwm.edu/registrar/academic-unit-services/paws-academic-advisement/>).
- Come prepared with questions or topics for discussion.
- Make a list of courses you think you should take.
- Investigate opportunities to prepare for the job you want.
- Keep a record of your academic progress.
- Understand you are ultimately responsible for creating your educational, life, and career plans.
- Maintain honest and open communication with your advisor.
- Take responsibility for choices you make as a student and member of the UW-Milwaukee community.

### ***Scheduling an Appointment***

Office of Student Services  
Enderis Hall, Room 209  
(414) 229-4721  
[soeinfo@uwm.edu](mailto:soeinfo@uwm.edu)

### **Graduate Advising**

If you are a School of Education graduate student, you may schedule an appointment with your faculty advisor by contacting your faculty advisor directly. Faculty contact information can be found in the People Directory (<https://uwm.edu/education/people/>). Your faculty advisor will be listed in your PAWS account.

## **Honors in the Department of Teaching and Learning**

Departmental Honors are granted to students who have achieved a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester.

## **Honors in the School of Education**

### **Dean's Honor List**

GPA of 3.750 or above, earned on a full-time student's GPA on 12 or more graded credits in a given semester.

### **Honors College Degree and Honors College Degree with Distinction**

Granted to graduating seniors who complete Honors College requirements, as listed in the Honors College (<http://catalog.uwm.edu/honors-college/>) section of this site.

### **Commencement Honors**

Students with a cumulative GPA of 3.500 or above, based on a minimum of 40 graded UWM credits earned prior to the final semester, will receive all-university commencement honors and be awarded the traditional gold cord at the December or May Honors Convocation. Please note that for honors calculation, the GPA is **not** rounded and is truncated at the third decimal (e.g., 3.499).

### **Final Honors**

Earned on a minimum of 60 graded UWM credits: Cum Laude - 3.500 or above; Magna Cum Laude - 3.650 or above; Summa Cum Laude - 3.800 or above.