

M.A.T. in Secondary Education

Mathematics Endorsement Course Checklist

Catalog Year 2024-2025

Pedagogical Knowledge & Pedagogical Content Knowledge Requirements**Courses Required for Teacher Education Admission:** Grade of "C" or higher required in each course.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
<input type="checkbox"/>	EDUC 200 ¹	Foundations of Education in the United States	3		FA/SP/SU
<input type="checkbox"/>	PSYC 160 ¹	Life Span Human Development	3	C5SD	FA/SP/SU
<input type="checkbox"/>	WRTC 103	Rhetorical Reading and Writing	3	C1W	FA/SP/SU

Secondary Education Undergraduate Coursework: Grades of "B-" or higher required in all courses unless otherwise indicated.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered	
<input type="checkbox"/>	Orientation to the Prof.	MSSE 101	Orientation to the Profession	1		FA/SP
<input type="checkbox"/>		EDUC 200 ¹	Foundations of Education in the United States	3	Required for Teacher Education admission; grade of "C" or higher	FA/SP/SU
<input type="checkbox"/>		MSSE 210	Diversity in Middle/Secondary Grades	3	1,2	FA/SP
<input type="checkbox"/>		MSSE 370	General Instr. Methods for Grades 6-12	3	1,3	FA/SP
<input type="checkbox"/>	Initial Field Placement	MSSE 371 <i>or</i>	Clinical Experience in Adolescent Education <i>or</i>	1	1,3	FA/SP
		MSSE 430	Introduction to Mentoring Valley Scholars	3		FA
<input type="checkbox"/>	Middle School Teaching Methods and Practicum	MSSE 413	Mathematics Teaching Methods, Grades 6-8	3	1,3,4; C: MSSE 415	SP
<input type="checkbox"/>		MSSE 415	Content Area Field Experience in Middle Schools	3	1,3,4; C: MSSE 413	FA/SP
<input type="checkbox"/>		LED 440	Disciplinary Literacy in Secondary Educ.	3	1,3,4	FA/SP/SU

¹ Pre-professional Secondary Education minor declared & approved² Application to the Teacher Education Program required³ Admission to the Teacher Education Program required⁴ Completion of MSSE 370**Mandatory Tasks:**

- Be admitted to the Teacher Education Program before you enroll in MSSE 370 and MSSE 371.
- Attend a Student Teaching Information Meeting in the Fall of your senior year and apply to Student Teaching by October 31 of your senior year.
- Apply to The Graduate School no later than November 15 of your senior year for Spring admission or no later than April 1 of your senior year for Summer admission. Earlier is better to have a transcript review prior to your final undergraduate semester.
- Attempt your Praxis Subject Assessment no later than March 1 of your senior year and pass it no later than August 15.

College of Education Department of Middle, Secondary, and Mathematics EducationMemorial Hall, 395 S. High Street, Room 3200, MSC 6912 Harrisonburg, VA 22807 | (540) 568-6486 | <https://www.jmu.edu/coe/msme/>

This document is provided as an advising resource only. Official curriculum requirements are listed in the JMU Undergraduate Catalog and the JMU Graduate Catalog. In the case of discrepancies, the University Catalog is the official curriculum students must follow. This document was reviewed by the Middle, Secondary, and Mathematics Education Academic Unit Head on June 1, 2024.

Secondary Education Graduate Coursework: Grades of "B-" or higher required in all courses unless otherwise indicated.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
<input type="checkbox"/>	EDUC 540	Educational Technology	3	1,2	SP/SU
<input type="checkbox"/>	EXED 512	Behavior Management in the Classroom	3	1,2	SP/SU
<input type="checkbox"/>	MSSE 607	Curriculum Theory in a Diverse Society	3	1,2	FA/SU
<input type="checkbox"/>	MSSE 625	Assessment of and for Learning	3	1,2	SP/SU
<input type="checkbox"/>	MSSE 620	Differentiation of Instruction and Assessment to Meet the Needs of Adolescent Learners	3	1,2	FA/SP
<input type="checkbox"/> High School Teaching	MSSE 543	Mathematics Teaching Methods, Grades 9-12	3	2,3; C: MSSE 548	FA
<input type="checkbox"/> Methods and Practicum	MSSE 548	Field Experience in High School Mathematics, Practicum III	3	2,3; C: MSSE 543	FA
<input type="checkbox"/>	MSSE 630	Research for Practitioners	3	2,3	FA
<input type="checkbox"/>	MSSE 650	Internship Seminar	3	2,3,4; C: MSSE 675	SP
<input type="checkbox"/> Student Teaching #1	MSSE 675	Internship in Middle and Secondary Educ.	3	2,3,4; C: MSSE 650	SP
<input type="checkbox"/> Student Teaching #2	MSSE 675	Internship in Middle and Secondary Educ.	3	2,3,4; C: MSSE 650	SP

¹Conditionally admitted to the graduate program

²Admission to the Teacher Education Program required

³Unconditionally admitted to the graduate program

⁴Passing score on Praxis Subject Assessment

B.S. Degree Requirements (6 credits)

For guidance on courses to satisfy your degree requirements: https://www.jmu.edu/registrar/ba_and_bs_degree_courses.shtml.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
<input type="checkbox"/> Scientific Literacy			3		
<input type="checkbox"/> Quantitative Reasoning	MATH 236	Calculus II	4	P: "C-" or higher in MATH 235	FA/SP/SU

OR

B.A. Degree Requirements (6 to 17 credit hours)

For guidance on courses to satisfy your degree requirements: https://www.jmu.edu/registrar/ba_and_bs_degree_courses.shtml.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
<input type="checkbox"/> Intermediate Foreign Language ¹	231 &	Intermediate [foreign language] I &	3	231 P: 102 or 109 or 111 or FLP	FA ²
	232 or	Intermediate [foreign language] II or	3	232 P: 231 or FLP	SP ²
	212	Intensive [foreign language] II	6	P: 102 or 109 or 111 or FLP	SU ²
<input type="checkbox"/> Philosophy			3	Any philosophy course except PHIL 120 or PHIL 150	FA/SP/SU

¹May need to complete elementary levels of foreign language first based on your Foreign Language Placement Exam Score.

²Varies by language

Math Content Knowledge Licensure Requirements...

...as they fit with the JMU Mathematics – BS major or Mathematics - BA major.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
Math Major Core					
<input type="checkbox"/>	VDOE: Calculus	MATH 236 Calculus II	4	P: "C-" or higher in MATH 232 or MATH 235	FA/SP/SU
<input type="checkbox"/>	VDOE: Calculus	MATH 237 Calculus III	4	P: "C-" or higher in MATH 236	FA/SP/SU
<input type="checkbox"/>	VDOE: Discrete Math.	MATH 245 Discrete Mathematics	3	P/C: MATH 236	FA/SP
<input type="checkbox"/>	VDOE: Computer Sci.	MATH 248 Computers and Numerical Algorithms	4	P/C: MATH 236 & inst. permis.	FA/SP
<input type="checkbox"/>	VDOE: Linear Algebra	MATH 300 Linear Algebra	3	P: MATH 232 or MATH 235	FA/SP
<input type="checkbox"/>	VDOE: Functions	MATH 336 Elementary Differential Equations	3	P: MATH 236	FA/SP
<input type="checkbox"/>	VDOE: Calculus	MATH 410 Advanced Calculus I	3	P: MATH 238 or MATH 300 and MATH 245 or instructor permission	FA/SP
<input type="checkbox"/>	VDOE: Abstract Algebra	MATH 430 Abstract Algebra I	3	P: MATH 300 and MATH 245 or instructor permission	FA/SP
		MATH 318 <i>or</i> Introduction to Probability and Statistics <i>or</i>	4	318 P: MATH 236	FA/SP/SU
<input type="checkbox"/>	VDOE: Prob. & Stat.	MATH 229 & Intro. to Applied Statistics Using R <i>and</i> MATH 329 Intro. to Prob. and Theoretical Statistics	3 3	229 P: ALEKS or C- or higher in MATH 231 329 P: MATH 236 and "C-" or higher in MATH 229 or "B-" or higher in MATH 220	FA/SP FA
Math Elective Courses – 12 credits					
<input type="checkbox"/>	VDOE: Number Systems & Theory	MATH 310 <i>or</i> Elementary Number Theory <i>or</i> MATH 315 Real Number System	3 3	310 P: MATH 245 or instructor permission MATH 353 may be substituted with permission.	One course (310/315/353) offered each semester FA/SP
<input type="checkbox"/>	VDOE: Math History	MATH 415 History of Mathematics	3	P: MATH 245 or inst. permis.	SP
<input type="checkbox"/>	VDOE: Pedagogy	MATH 470 Connections in Mathematics	3	P/C: MATH 318 or MATH 329, and MATH 410, MATH 430, & MATH 475	FA
<input type="checkbox"/>	VDOE: Geometry	MATH 475 Fundamental Concepts of Geometry	3	P: MATH 245 or inst. permis.	FA

The MSME Department recommends students meet with their Math major advisor each semester to review program sequencing and determine possible substitute courses to meet program and license requirements.

General Education Requirements

Be sure to follow the General Education course suggestions listed below for maximum overlap of the General Education Program with your Pre-professional Secondary Education minor and Math major.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
MADISON FOUNDATIONS					
<input type="checkbox"/>	Critical Thinking (C1CT)		3	Choose any option from the General Education Planner.	FA/SP/SU
<input type="checkbox"/>	Human Communication (C1HC)		3		
<input type="checkbox"/>	Writing (C1W)	WRTC 103 Rhetorical Reading and Writing	3		Must earn a C or higher.
ARTS AND HUMANITIES					
<input type="checkbox"/>	Human Questions and Contexts (C2HQC)		3	Choose any option from the General Education Planner.	FA/SP/SU
<input type="checkbox"/>	Visual and Performing Arts (C2VPA)		3		
<input type="checkbox"/>	Literature (C2L)		3		
THE NATURAL WORLD					
<input type="checkbox"/>	Quantitative Reasoning (C3QR)	MATH 231 <i>or</i> MATH 235	Calculus with Functions I <i>or</i> Calculus I	3 4	P: ALEKS FA/SP/SU
<input type="checkbox"/>	Physical Principles (C3PP)			3	Choose any option from the General Education Planner. FA/SP/SU
<input type="checkbox"/>	Natural Systems (C3NS)			3	FA/SP
<input type="checkbox"/>	Lab Experience (C3Lab)			1	Either ISCI 104 (1 credit hour) OR a co-requisite or included lab exp. with a C3PP or C3NS course. FA/SP
AMERICAN AND GLOBAL PERSPECTIVES					
<input type="checkbox"/>	The American Experience (C4AE)			4	Choose any option from the General Education Planner. FA/SP/SU
<input type="checkbox"/>	The Global Experience (C4GE)			3	
SOCIOCULTURAL AND WELLNESS AREA					
<input type="checkbox"/>	Wellness Domain (C5W)			3	Choose any option from the General Education Planner. FA/SP/SU
<input type="checkbox"/>	Sociocultural Domain (C5SD)	PSYC 160	Life Span Human Development	3	Must earn a C or higher. FA/SP/SU