

B.S. in Middle Grades Education

Science 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	Life Span Human Development	3	C5SD	FA/SP/SU
<input type="checkbox"/>	WRTC 103	Rhetorical Reading and Writing	3	C1W	FA/SP/SU

Middle Grades Education Major 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 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"/>	VDOE: Literacy	LED 212	3	Found. of Lit. for Middle School Teachers	FA
<input type="checkbox"/>	MIED 211	Field Experience in Middle Education	3	C: LED 212	FA
<input type="checkbox"/>	MSSE 210 ¹	Diversity in Middle/Secondary Grades	3		FA/SP
<input type="checkbox"/>	MSSE 370 ¹³	Gen. Instructional Methods for Grades 6-12	3	P: LED 212, MIED 211; C: MSSE 371	FA/SP
<input type="checkbox"/>	MSSE 371 ¹³	Clinical Experience in Adolescent Education	1	P: LED 212, MIED 211; C: MSSE 370	FA/SP
<input type="checkbox"/>	Middle School Teaching Methods and Practicum	MSSE 414 ¹³⁴	3	Natural Sciences Teaching Methods, Grades 6-8	FA
<input type="checkbox"/>		MSSE 415 ¹³⁴	3	Field Exp. in Middle Grades Education	FA/SP
<input type="checkbox"/>	VDOE: Assessment	MSSE 425 ¹³⁴	3	Assessment in Middle & Secondary Educ.	FA/SP
<input type="checkbox"/>	VDOE: Content Area Lit.	LED 440 ¹³⁴	3	Disciplinary Literacy in Secondary Education	FA/SP/SU
<input type="checkbox"/>	VDOE: Behav. Manag.	MSSE 403 ¹³⁴	3	Behavior & Classroom Management..	FA/SP
<input type="checkbox"/>		MSSE 420 ¹³⁴	3	Differentiation for Adolescents	FA
<input type="checkbox"/>		MSSE 450 ¹³⁴	2	Internship Seminar	FA/SP
<input type="checkbox"/>	Student Teaching	MSSE 465 ¹³⁴	8	Internship in Middle School	FA/SP
<input type="checkbox"/>	Pedagogy/Literature	MSSE 455 ¹³	3	Special Topics in Pedagogical Content Knowledge	FA/SP

¹ Middle Grades Education major declared & approved

² Application to the Teacher Education Program required

³ Admission to the Teacher Education Program required

⁴ 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 junior year and apply to Student Teaching by October 31 of your junior year.
- Attempt your Praxis Subject Assessment no later than March 1 of your junior year and pass it no later than August 15 before your senior year. You will not be permitted to student teach until you have a passing score on your Praxis Subject Assessment.

College of Education Department of Middle, Secondary, and Mathematics Education

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This document is provided as an advising resource only. Official curriculum requirements are listed in the JMU Undergraduate 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.

B.S. Degree Requirements (6 credits)

Requirement	Course Number	Course Name	Credits	Pre/Co-Requisites/Notes	Semester Offered
<input type="checkbox"/> Scientific Literacy	GEOL 211	Introduction to Oceanography	3		FA/SP/SU
<input type="checkbox"/> Quantitative Reasoning			3	Recom. MATH 110 or MATH 210	

Science Content Knowledge Licensure Requirements...

...as they fit with the JMU Middle Grades Science minor.

Requirement	Course	Course Title	Credits	Pre/Co-Requisites/Notes	Semester Offered
Option "A" recommended for all requirement categories. Other options are for students switching programs mid-program.					
<input type="checkbox"/> Introductory Earth and Planetary Science (choose one)	A: ISCI 171	Earth and Planetary Science for Teachers (C3NS)	3		FA/SP
	B: GEOL 102	Environment: Earth (C3NS)	3		FA/SP
	C: GEOL 110 & GEOL 110L	Physical Geology (C3NS) <i>and</i> Physical Geology Laboratory (C3L)	3 1	C: GEOL 110L C: GEOL 110	FA/SP FA/SP
<input type="checkbox"/> Introductory Physical Science (choose one set of courses)	A: ISCI 172	Physical Science for Teachers (C3PP)	3		FA/SP
	B: PHYS 140 <i>or</i> PHYS 240 & PHYS 140L <i>or</i> PHYS 240L &	College Physics I (C3PP) <i>or</i> University Physics I (C3PP) <i>and</i> General Physics Laboratory (C3L) <i>or</i> University Physics Laboratory I (C3L) &	3 1	P/C: PHYS 140 <i>or</i> PHYS 240	FA/SP/SU FA/SP/SU
	C: CHEM 131 & CHEM 131L	General Chemistry I (C3PP) <i>and</i> General Chemistry Laboratory (C3L)	3 1	C: CHEM 131L <i>or</i> CHEM 135L C: CHEM 131	FA/SP/SU FA/SP/SU
	A: ISCI 173	Life and Environmental Science for Teachers (C3L)	3		FA/SP
<input type="checkbox"/> Introductory Life Science (choose one set of courses)	B: BIO 140 & BIO 140L	Foundations of Biology I (C3NS) <i>and</i> Foundations of Biology I Lab. (C3L)	3 1	C: BIO 140L C: BIO 140	FA/SP FA/SP
	<input type="checkbox"/> Intermediate Earth and Planetary Science	GEOL 211	Introduction to Oceanography (C3NS)	3	
<input type="checkbox"/> Intermediate Physical Science (choose one set of courses)	A: CHEM 120	Concepts of Chemistry (C3PP)	3		SP
	B: PHYS 121	The Physical Nature of Light & Sound (C3PP)	4		
	C: CHEM 132 & CHEM 132L	General Chemistry II <i>and</i> General Chemistry Laboratory	3 1	P: "C-" or higher in CHEM 131 and CHEM 131L or CHEM 135L 132 C: CHEM 132L or CHEM 136L	FA/SP/SU FA/SP/SU
	D: PHYS 150 & PHYS 150L &	College Physics II <i>and</i> General Physics Laboratory <i>and</i>	3 1	P: "C-" or higher in PHYS 140 P: PHYS 140L & PHYS 140 or PHYS 150; C: PHYS 150	SP SP
	E: PHYS 250 & PHYS 250L	University Physics II <i>and</i> University Physics Laboratory II	3 1	P: "C-" or higher in PHYS 240; C: MATH 236 P: PHYS 140L, PHYS 140, PHYS 150; C: PHYS 250	
	<input type="checkbox"/> Intermediate Life Science	BIO 150 & BIO 150L	Foundations of Biology II <i>and</i> Foundations of Biology II Laboratory	3 1	P: "C-" or higher in BIO 140 & BIO 140L; 150 C: BIO 150L C: BIO 150
<input type="checkbox"/> Comprehensive Nature of Science	IDLS 395	Topics in IDLS	3	Contact your minor advisor for more details.	FA

The MSME Department recommends students meet with their Middle Grades Science minor 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 Middle Grades Education major and Middle Grades Science minor.

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	Recommend HIST 101 or HIST 102.	FA/SP/SU
<input type="checkbox"/> Visual and Performing Arts (C2VPA)			3	Choose any option from the General Education Planner.	FA/SP/SU
<input type="checkbox"/> Literature (C2L)			3	Recommend ENG 221 or ENG 222.	FA/SP/SU
THE NATURAL WORLD					
<input type="checkbox"/> Quantitative Reasoning (C3QR)			3	Recommend MATH 110.	FA/SP/SU
<input type="checkbox"/> Physical Principles (C3PP)	ISCI 172	Physical Science for Teachers	3		FA/SP/SU
<input type="checkbox"/> Natural Systems (C3NS)	ISCI 171	Earth and Planetary Science for Teachers	3		FA/SP/SU
<input type="checkbox"/> Lab Experience (C3Lab)	ISCI 173	Life and Environmental Science for Teachers	3		FA/SP/SU
AMERICAN AND GLOBAL PERSPECTIVES					
<input type="checkbox"/> The American Experience (C4AE)			4	Recommend HIST 225.	FA/SP/SU
<input type="checkbox"/> The Global Experience (C4GE)			3	Choose any option from the General Education Planner.	FA/SP/SU
SOCIOCULTURAL AND WELLNESS AREA					
<input type="checkbox"/> Wellness Domain (C5WD)			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