

MIDDLE GRADES STEM, BED

The focus of the Middle Grades STEM Education program is on science and mathematics education and on integrating STEM throughout the curriculum. The program prepares students for licensure in both mathematics and science education in grades 5-8. Candidates for the degree and licensure in Middle Grades STEM Education are advised by the faculty of the Department of Education.

Degree Requirements

In addition to the requirements stated below, students must complete 34-35 hours of General Education (<https://catalog.washburn.edu/undergraduate/programs-degrees-graduation-requirements/general-education-requirements/>), all requirements for a Bachelor of Education degree, and any additional hours needed to reach the minimum 120 credit hours required for graduation. Some of the courses below may also fulfill general education or other degree requirements.

Code	Title	Hours
Required Courses Inside Department		
<i>Pre-Admission Professional Education Courses</i>		
ED 155	Teaching, Learning, Leadership	3
ED 285	Educational Psychology	3
<i>Post-Admission CORE Education Courses</i>		
ED 165	Ed. 1, Examining Teaching as a Profession: Diversity 1, Literacy 1, Technology 1 ¹	3
ED 275	Ed. 2 Exploring Teaching as a Profession (Classroom Management 1, Diversity 2, Technology 2) Ed. 2 ¹	3
ED 295	Ed. 3 Experiencing Teaching as a Profession (Classroom Management 2, Diversity 3, Literacy 2) ²	3
ED 302	Teaching Exceptional Learners	3
ED 354	Curriculum and Assessment	3
ED 395	Ed. 4 Extending Teaching as a Profession (Classroom Management 3, Literacy 3, Technology 3) ²	3
ED 415	5th-8th Grade Student Teaching	12
<i>Middle Grades STEM Courses</i>		
ED 217	Introduction to STEM and STEM Education	3
ED 314	Chemistry Methods for STEM Edu	3
ED 318	Earth/Space Science for STEM E	3
ED 319	STEM Practicum I	1
ED 321	STEM Practicum II	1
Subtotal		47
Required Courses Outside Department		
AS 104	Life in the Universe	3
BI 106	Everyday Biology	5
BI 319	Biology for STEM Educators	3
CH 121	General, Organic, and Biological Chemistry	5
CN 150	Public Speaking	3
MA 116	College Algebra	3
MA 117	Trigonometry	3
MA 140	Statistics	3

MA 200	Number & Operation for Elementary Teachers	3
MA 201	Geometry, Proportion & Data Analysis for Elementary Teachers	3
MA 204	Number Theory and Discrete Math for Middle School Teachers	3
MA 281	History of Early Mathematics	1
MA 320	Mathematics for Middle School Teachers	3
PS XXX	Physical Science Elective	3
	Physics or Engineering Elective	3
PY 100	Basic Concepts in Psychology	3
PY 211	Adolescent Psychology	3
SO 101	Social Problems	3
Subtotal		56
Total Hours		103

¹ Must be taken concurrently.

² Must be taken concurrently.