MATHEMATICS EDUCATION - SECONDARY MAJOR, BACHELOR OF ARTS IN EDUCATION (BAE)

Completion of this major and the General Degree Completion Requirements for Education, Secondary, satisfies the state requirements for a state mathematics teaching endorsement (secondary, grade levels 5–12).

The Mathematics Education - Secondary BAE takes more than 12 quarters at 15–16 credits a quarter; all candidates for certification must pass the NES subject matter test to receive an endorsement for certification purposes.

Admission: This Program requires admission into the School of Education (https://catalog.ewu.edu/ps/se/#admissiontext).

Prerequisite Grade Policy: Students must have earned a grade ≥C in any course that is to be used to satisfy a prerequisite requirement for a subsequent mathematics course offered by the Eastern Washington University Department of Mathematics.

Grade Requirements: Students must receive a grade ≥C in each course used to satisfy the requirements of an undergraduate major or minor in mathematics. Education Grade Requirements (https://catalog.ewu.edu/ps/se/#graderequirementstext)

Required Mathematics Education - Secondary Courses		
MATH 161	CALCULUS I	5
MATH 162	CALCULUS II	5
MATH 163	CALCULUS III	5
MATH 225	FOUNDATIONS OF MATHEMATICS	5
MATH 231	LINEAR ALGEBRA	5
MATH 241	CALCULUS IV	5
MATH 370	SURVEY OF GEOMETRIES	5
or MATH 470	FOUNDATIONS OF GEOMETRY	
MATH 385	PROBABILITY AND STATISTICAL INFERENCE I	5
MATH 432	RINGS AND POLYNOMIALS	5
MATH 460	CONTINUOUS FUNCTIONS	5
Required MATH Elective–choose two from the following		**9-10**
MATH 331	DISCRETE MATHEMATICS WITH APPLICATIONS	
MATH 332	NUMBER THEORY	
MATH 347	INTRODUCTORY DIFFERENTIAL EQUATIONS	
MATH 431	APPLIED GROUP THEORY	
MATH 481	COMPLEX ANALYSIS	
MATH 485	PROBABILITY AND STATISTICAL INFERENCE II	
MATH 311	FUNCTIONS AND RELATIONS FOR K-8 TEACHERS	
MATH 312	GEOMETRY FOR THE K-8 TEACHER	
MATH 492	PROBLEM SOLVING SEMINAR	
Required MTED Courses		
MTED 425	ASSESSMENT IN THE MATHEMATICS CLASSROOM	3
MTED 476	MATHEMATICAL PROGRESSIONS	4
MTED 477	MATHEMATICAL DISCUSSIONS	4
Education Core Courses		
EDUC 231	FOUNDATIONS OF INSTRUCTION AND ASSESSMENT	3
EDUC 232	FOUNDATIONS OF CLASSROOM COMMUNITY AND CULTURE	3
EDUC 233	FOUNDATIONS OF TEACHING, LEARNING, AND MOTIVATION IN SCHOOL CONTEXTS	4
EDUC 234	UNDERSTANDING EDUCATION IN THE US	3
SOST 300	PEOPLES AND GOVERNANCE OF THE PACIFIC NORTHWEST	5
EDUC 331	SECONDARY APPLIED INSTRUCTION AND ASSESSMENT	4
EDUC 332	PRACTICES OF CLASSROOM COMMUNITY AND CULTURE IN SECONDARY CLASSROOMS	4
EDUC 431	DESIGNING EQUITABLE LEARNING IN SECONDARY CLASSROOMS	4
EDUC 434	PROFESSIONAL PRACTICE: COLLABORATION AND PARTNERSHIPS	3
EDUC 386A	FIELD EXPERIENCE 1	2

EDUC 386B	FIELD EXPERIENCE 2	2
EDUC 386C	FIELD EXPERIENCE 3	5
EDUC 423	FULL-TIME STUDENT TEACHING	15
Required Senior Capstone		
MTED 490B	SENIOR CAPSTONE: SECONDARY PRACTICUM	5
MTED 400	MATHEMATICS STUDENT TEACHING	1
Total Credits		**133-134**

Plan of Study

The following plan of study is for a student with zero credits. Individual students may have different factors such as: credit through transfer work, Advanced Placement, Running Start, or any other type of college-level coursework that requires an individual plan.

Courses could be offered in different terms, checking the academic schedule is paramount in keeping an individual plan current. **Students should connect with an advisor to ensure they are on track to graduate.**

All Undergraduate students are required to meet the Undergraduate Degree Requirements (https://catalog.ewu.edu/undergraduate-degree/).

First Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
ENGL 101	5	ENGL 201	5	MATH 163	5
MATH 161	5	MATH 162	5	MATH 225	5
Humanities & Arts BACR 1[1]	5	MATH 231	5	Humanities & Arts BACR 2[1]	5
	15		**15**		**15**
Second Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
MATH 241	5	EDUC 231	3	EDUC 232	3
MATH Elective[2]	5	MATH 370	5	MATH 432	5
Social Science BACR 1[1]	5	MATH 460	5	SOST 300 (Diversity - graduation requirement)	5
		Natural Science BACR 1[1]	5	MATH Elective[2]	5
	15		**18**		**18**
Third Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
EDUC 233 (Social Science BACR 2)	4	Natural Science BACR 2[1]	5	EDUC 331	4
EDUC 234	3	Global Studies - graduation requirement[1]	5	EDUC 332	4
MATH 385	5	Elective - minor or general elective	4	EDUC 386A	2
MTED 476	4			MTED 477	4
	16		**14**		**14**
Fourth Year					
Fall Quarter	**Credits**	**Winter Quarter**	**Credits**	**Spring Quarter**	**Credits**
EDUC 386B	2	EDUC 386C[3]	5	EDUC 423	15
EDUC 431	4	MTED 490B (Senior Capstone - graduation requirement)	5	MTED 400	1
EDUC 434	3	Elective - minor or general elective[3]	2		
MTED 425	3				
	12		**12**		**16**

Total Credits 180

1 University Graduation Requirements (UGR) and Breadth Area Course Requirements (BACR) courses may be less than 5 credits and additional credits may be required to reach the required 180 total credits needed to graduate. Students should connect with an advisor to ensure they are on track to graduate.

2 Required MATH Elective—choose two (9-10 credits) from the approved list.

3 EDUC 386C is a variable credit course and can be taken as 7 credits, instead of 5 credits in the winter quarter of the fourth year. If this EDUC 386C is taken for 7 credits, then there is no need for 2 credits elective in winter quarter of the fourth year.

General Education Requirements (https://catalog.ewu.edu/undergraduate-degree/#generaleducationrequirementstext) (GER)

- Minimum Quarter Credits—180 cumulative credit hours
  - 60 upper-division credits (300 level or above)
  - 45 credits in residence (attendance) at EWU, with at least 15 upper-division credits in major in residence at EWU
- Minimum Semester Credits—120 cumulative credit hours

- 40 upper-division credits (300 level or above)
- 30 credits in residence (attendance) at EWU, with at least 10 upper-division credits in major in residence at EWU

- Minimum Cumulative GPA ≥2.0

University Competencies and Proficiencies

Writing (https://catalog.ewu.edu/undergraduate-degree/#newitemtext)
Quantitative and Symbolic Reasoning (https://catalog.ewu.edu/undergraduate-degree/#mathcompproficienciestext)

Placement and Clearance (https://catalog.ewu.edu/placement/)
Prior Learning/Sources of Credit AP, CLEP, IB (https://catalog.ewu.edu/prior-learning/)

Breadth Area Core Requirements (BACR)

Humanities and Arts (https://catalog.ewu.edu/undergraduate-degree/#humanitiesandfineartsgecrtext)
Natural Sciences (https://catalog.ewu.edu/undergraduate-degree/#naturalsciencesgecrtext)
Social Sciences (https://catalog.ewu.edu/undergraduate-degree/#socialsciencesgecrtext)

University Graduation Requirements (https://catalog.ewu.edu/undergraduate-degree/#universitygraduationrequirementstext) (UGR)

Diversity Course List (https://catalog.ewu.edu/undergraduate-degree/#cultureandgenderdiversityintheuslisttext)
Global Studies Course List (https://catalog.ewu.edu/undergraduate-degree/#internationalstudiesrequirementtext)
Minor or Certificate (https://catalog.ewu.edu/undergraduate-degree/#majorminororcertificateugrtext)
Senior Capstone Course List (https://catalog.ewu.edu/undergraduate-degree/#capstonecourselisttext)
World Language (https://catalog.ewu.edu/undergraduate-degree/#worldlanguagetext) (for Bachelor of Arts)

Application for Graduation (use EagleNET (https://inside.ewu.edu/eaglenet/)) must be made at least two terms in advance of the term expected to graduate (undergraduate and post-baccalaureate).

Use the Catalog Archives (https://catalog.ewu.edu/archives/) to determine *two important catalog years*.

1. The catalog *in effect at the student's first term* of current matriculation is used to determine **BACR** (Breadth Area Core Requirements) **and UGR** (Undergraduate Graduation Requirements).
2. The catalog *in effect at the time the student declares a major or minor* is used to determine the program requirements.

Students who earn a BAE in Mathematics Education - Secondary from EWU should have:

- a sensitivity and ability to respond to the mathematical thinking of secondary students;
- a strong ability to reason mathematically and develop proofs with understanding;
- ability to critically read, analyze, evaluate, transform, and implement mathematics education literature;
- applications of pedagogical content knowledge for secondary mathematics in planning and teaching;
- habits of mind to continue improving teaching practices that support mathematics learning;
- the values, dispositions, and habits of mind of a community of mathematicians;
- understanding of foundational content of modern mathematics and its applications;
- understanding of mathematical learning progressions and connections within secondary mathematics.

Note: Review the School of Education section for additional PLOs.