

Education (BA) Secondary Mathematics

This program is offered by the School of Education/Department of Teacher Education, and is only available at the St. Louis home campus.

Learning Outcomes

- Education candidates will demonstrate knowledge of the subject matter, knowledge of the learner and knowledge of pedagogy based on inquiry and scholarship. This includes knowing content that supports conceptual understanding, applying tools of inquiry to construct meaningful learning experiences, identifying developmental factors in student learning and understanding theoretical principles of effective instruction to plan learning experiences.
- Education candidates will incorporate multiple assessment and instructional strategies to support effective educational practices based on research and theory. This involves designing curriculum based on students' prior knowledge, learning styles, strengths and needs, understanding and uses a range of instructional strategies, using a variety of communication modes, media and technology to support student learning and employing a variety of formal and informal assessments to monitor learning and modify instruction.
- Education candidates will reflect on the roles educators take as leaders of change through collaboration with colleagues, students and families in schools and communities. This is demonstrated through valuing and integrating reflection to grow as a professional, promoting communication and collaboration with colleagues, families and community leaders, seeking relationships with families and students to support student learning and initiating change that benefits students and their families.
- Education candidates will demonstrate respect for diversity through responsive teaching and learning that values individual differences. This includes understanding and responding appropriately to issues of diversity, acknowledging social and cultural context to create effective teaching and learning environments, adapting instruction to the learner's knowledge, ability and background experience, and identifying resources for specialized services when needed.

Degree Requirements

A minimum of 128 credit hours consisting of the following:

- 33 Required credit hours
- Applicable University Global Citizenship Program hours*
- Additional required certification coursework and electives to total 128 credit hours

*Students should consult with their advisor to determine Global Citizenship Program (GCP) coded courses that meet required certification competencies.

Required Major Courses

- EDUC 2000 Early Practicum in Education (*B or better required*) (1 hour)
- EDUC 2300 Child and Adolescent Development (3 hours)
- EDUC 2800 Foundations of Education (*B or better required*) (3 hours)
- EDUC 2900 Education of Students with Exceptionalities (3 hours)
- EDUC 3100 Learning, Teaching, and Assessment (3 hours)
- EDUC 3375 Behavior Management (3 hours)
- EDUC 3006 Practicum: Secondary Mathematics (3 hours)
- EDUC 4000 Apprentice Teaching Seminar (1 hour)
- EDUC 4971 Apprentice Teaching: Secondary Mathematics (13 hours)

Additional Education and Content Courses for Certification

- COSC 1550 Computer Programming I (3 hours)
- EDUC 2110 Communication in Education (3 hours)
- EDUC 2140 Writing for Teachers (*B- or better required*) (3 hours)
- A second course with GCP coding for Written Communication (3 hours)
- EDUC 3500 Methods of Teaching Secondary School (3 hours)
- EDUC 3900 Teaching Reading and Writing in the Content Areas (3 hours)
- EDUC 4435 Inclusive Practices for General Educators (3 hours)
- EDUC 4695 Differentiated Reading Assessment and Intervention (3 hours)
- MATH 1610 Calculus I (5 hours)
- MATH 1620 Calculus II (5 hours)
- MATH 3000 Calculus III (5 hours)
- MTHH 4460 Methods of Teaching Secondary Mathematics (3 hours)
- 1 credit of Education Technology (EDUC 3126, EDUC 3127, EDUC 3128 **or** INDZ 3500)
- **ONE** of the following:
 - MATH 3010 Discrete Mathematics
 - MATH 3030 Theory of Equations
 - MATH 3500 Introductions to Algebraic Structures
- **ONE** of the following:
 - MATH 3510 Vector Geometry (3 hours)
 - MATH 3530 Modern Geometry (3 hours)
- **12 credit hours from three areas listed:**
 - MATH 3050 History of Mathematics (3 hours)
 - MATH 3130 Real Number System (3 hours)
 - MATH 3300 Introduction to Number Theory (3 hours)
 - MATH 3040 Differential Equations (3 hours) **and/or** MATH 3070 Calculus IV (3 hours)
 - MATH 3200 Statistics **and/or** MATH 3210 **and/or** MATH 3610 Probability **and/or** STAT 3100 Inferential Statistics (3 hours)
 - COSC 1560 Computer Programming II (3 hours)
 - MATH 3160 Linear Algebra (3 hours)
- Additional required certification coursework and electives to total 128 credit hours

Students taking MATH 3040 as one of their electives as well as MATH 2450 Introduction to Abstract Mathematics (does not count as a certification elective) will have completed all the requirements for a BA in mathematics as well.

Admission to the Major

Students may be fully admitted to the major when the following criteria have been met:

- A grade of B or better in EDUC 2800 Foundations of Education.
- A grade of B or better in EDUC 2000 Beginning Practicum in Education.
- A completed Candidate Responsibility Form.
- A departmental GPA of 3.0, based on all EDUC courses taken.

General Information

1. Students pursuing teacher certification will be dropped from EDUC methods courses if all sections of the MoGEA Exam have not been successfully completed upon earning 64 college-level credit hours. Transfer students must complete

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the MoGEA during the first semester following transfer to Webster.

2. Students must maintain a grade point average (GPA) of at least 3.0 in the education major. A cumulative GPA of 2.75 in all college-level coursework for students pursuing initial teacher certification is required.
3. Students must demonstrate satisfactory competency in regard to the knowledge, skills, and dispositions identified in the School of Education Conceptual Framework.
4. Courses completed with a grade of D do not count toward fulfilling specific course requirements of the major.

NOTE: Policies and procedures governing the education major and teacher certification are available on the School of Education website.

Teacher Certification

Because students enrolled in the Education major pursue initial teacher certification as part of their degree, a Program of Study (POS) is designed to meet the general education requirements of both the Missouri Department of Elementary and Secondary Education (DESE) and the degree requirements of Webster University.

Admission to Teacher Certification

Admission to teacher certification requires the following:

- Successful completion of all sections of the MoGEA Exam by 64 credit hours of college-level coursework (transfer students must pass all sections of the MoGEA during the first semester following transfer to Webster University).
- Completion of the Missouri Educator Profile (MEP).
- Written Program of Study (POS) outlining the degree and program requirements developed by completion of 64 credit hours.
- Completion of a college composition course with a grade of B- or better.
- Completion of a college mathematics course (appropriate to the area of emphasis) with a grade of B- or better.
- A minimum cumulative GPA of 2.75 in college-level coursework from all post-secondary institutions attended.

Practicum/Apprentice Teaching

A 3000-level or higher practicum is required as a prerequisite to apprentice teaching. To enroll in a practicum, Students must apply by September 15th for a spring placement and by February 15th for a fall placement. Applications for practicum and apprentice teaching are completed through TK20. Directions are located on the School of Education website.

Apprentice teaching is a requirement for all initial certifications. Students must apply by September 15th for a spring placement and by February 15th for a fall placement. Applications for practicum and apprentice teaching are completed through TK20. Directions are located on the School of Education website. Candidates must meet with the Coordinator of Field Placement prior to applying for practicum.

Note: The application for practicum and apprentice teaching will not be accepted if the student has not been formally accepted to teacher certification status.

Apprentice Teaching placements will be made in the St. Louis City, St. Louis County, St. Charles County and Jefferson County School Districts along with private and independent schools. All students enrolled in apprentice teaching must participate in a mandatory seminar.

All undergraduate candidates for certification must complete either their practicum or apprentice teaching in a diverse setting.

Application for Certification

All students seeking initial certification must successfully complete the Missouri Preservice Teacher Assessment (MoPTA). All students seeking Teacher Certification must achieve the Missouri minimum score on the State Required Content Area Exam, which is administered at least six times a year. Information on this test may be obtained online at www.mo.nesinc.com or in the Office of Teacher Certification. Students must have a passing score on the appropriate State Required Content Area Exam prior to the start of the Apprentice Teaching orientation.