Education (BA) with an Emphasis in Secondary Mathematics

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

Program Description

The bachelor of education program provides candidates with a strong knowledge base of content, child and adolescent development and current research that supports best practices in education. This program is centered around contemporary design-based research principles with a focus on how students learn within inquiry-based environments.

This undergraduate degree program is designed to provide the foundation for teacher preparation leading to initial Missouri teacher certification and is approved by the Missouri Department of Elementary and Secondary Education.

The bachelor of education program is accredited by the Council for the Accreditation of Educator Preparation (CAEP).

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

For information on the general requirements for a degree, see Baccalaureate Degree Requirements under the Academic Policies and Information section of this catalog.

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

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

Required Major Courses

- EDUC 2000 Beginning Practicum in Education *(B or better required)* (1 hour)
- EDUC 2800 Foundations in 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 3440 Digital Pedagogy and Assistive Learning Technologies (3 hours)
- EDUC 3006 Practicum: Secondary Mathematics (2 hours)
- EDUC 3099 Practicum Seminar (1 hour)
- 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 4360 STEM Methods (3 hours)
- EDUC 4380 Teaching Reading and Writing in the Content Areas (3 hours)
- EDUC 4390 Differentiated Reading Assessment and Intervention (3 hours)
- EDUC 4435 Inclusive Practices and Methods for Teaching English Learners (3 hours)
- MATH 1610 Calculus I (5 hours)
- MATH 1620 Calculus II (5 hours)
- MATH 2440 Calculus III (5 hours)
- MATH 3530 Modern Geometry (3 hours)
- **ONE** of the following:
  - MATH 2410 Discrete Mathematics (3 hours)
  - MATH 3500 Introductions to Algebraic Structures (3 hours)
-
- **12 credit hours from three areas listed:**
  - MATH 2850 History of Mathematics (3 hours)
  - MATH 3130 Real Number System (3 hours)
  - MATH 3300 Introduction to Number Theory (3 hours)
  - MATH 2800 Differential Equations (3 hours)
  - MATH 2200 Statistics (3 hours)
    and/or MATH 3210 Data Mining Foundations (3 hours)
    and/or MATH 3610 Probability (3 hours)
    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 minimum degree requirements

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 in Education.

Majors

Education (BA) with an Emphasis in Secondary Mathematics

- A grade of B or better in EDUC 2000 Beginning Practicum in Education.
- A departmental GPA of 3.0, based on all EDUC courses taken.

Admission to Teacher Certification

Students declaring Education as a degree major will pursue initial teacher certification as part of their degree. A Program of Study (POS) is designed to meet the Global Citizenship Program requirements, degree requirements, and certification requirements of both the Missouri Department of Elementary and Secondary Education (DESE) and Webster University.

Candidates must meet the following requirements for formal acceptance in the initial teacher certification program.

- Written Program of Study (POS) outlining the degree and program requirements.
- Completion of a college Composition course with a grade of B- or better.
- Completion of a college Mathematics course with a grade of B- or better.
- Completion of EDUC 2800 Foundations in Education with a grade of B or better.
- Completion of EDUC 2000 Beginning Practicum in Education with a grade of B or better.
- Successful completion of Passport Tasks 1-5.
- Minimum professional GPA of 3.0, and Content GPA (if applicable) of 2.5. This must be maintained throughout the program.

Note: Grades of C- or above are eligible for Certification requirements.

Candidates must be admitted to teacher certification in order to take specified EDUC or CMAT methods courses.

Transfer students will be assessed for admission to teacher certification when they first meet with an academic advisor in the department.

Background Checks

Students are required to obtain various annual background checks prior to field experiences and application for licensure.

State Assessment

To obtain teaching licensure in Missouri, students are required to complete a number of state assessments. State-required assessments are administered by designated agencies, and students are required to pay all associated fees. Students must pass the state-required content assessment examinations prior to eligibility for apprentice teaching.

Practicum

Students must complete a 3000-level practicum in a classroom setting appropriate to their intended content area and accompanying practicum seminar with a grade of B or better. Practicums require 45-135 hours involving observation, lesson planning and teaching during daytime school hours. To enroll in a practicum, students must submit an application by September 15 for a spring placement and by February 15 for a fall placement. No late applications will be accepted. Candidates must meet with the Coordinator of Field Placement prior to applying for practicum.

Apprentice Teaching

Apprentice teaching and the accompanying apprentice teacher seminar are required for all initial certifications. To enroll in apprentice teaching, students must submit an application by September 15 for a spring placement and by February 15 for a fall placement. No late applications will be accepted.

Prior to apprentice teaching students must have:

- Met all course and departmental assessment requirements, including formal acceptance to teacher certification status.
- Successfully completed practicum and practicum seminar with a grade of B or better.
- Passed the state-required content assessment examination.

Apprentice Teaching placements are made by the Field Experience Office. Placements will be arranged with the St. Louis City, St. Louis County, St. Charles County and Jefferson County School Districts along with private and independent schools. All candidates for certification must complete either their practicum or apprentice teaching in a diverse setting.