

# Mathematics Education

## Bachelor of Science in Education (BSED)

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The Bachelor of Science in Education – Mathematics (9 – 12) prepares our majors for a career in education with a Missouri mathematics (9 – 12) teaching certificate when they successfully complete our program.



This program offers a solid foundation in calculus, algebra, geometry, and statistics. A focus on meaningful applications of the mathematics is a strong part of our program.

### Secondary mathematics education students will...

- Interact with highly qualified, award winning mathematics education faculty in a technology rich environment.
- Be prepared for professional examinations for entrance to and exit from the College of Education.
- Have opportunities to attend conferences as participants or presenters.
- Be encouraged to join Math Club or Student Association of Mathematics Educators

### Becoming Career Ready...

/ Faculty-mentored guidance will help you develop the professional skills needed to become a successful teacher and/or advanced study in graduate and professional programs.

/ B.S. in Math Education graduates work in the education field. Examples of job titles include elementary and high school math teacher and college math instructor.

/ 100% of Southeast programs offer real-world experience. B.S. Ed. in Math Education students earn this experience through student teaching.

/ The path to a successful career starts with you! You can maximize your career development by working closely with Career Services and Southeast faculty – they are here to help you connect your passions, interests and skills to jobs and opportunities in the field. Career Services provides professional career counseling and coaching, resume critiques, practice interviews, job search strategies, career events, networking opportunities and more.

### Internship and Employment Opportunities of Recent Graduates:

- Junior high and high schools, public and private, throughout the state.

### Admission Requirements

- 42 credit hours completed
- 2.75 cumulative GPA
- One of the following: 1) Composite/Superscore of 20 or higher on the ACT exam; 2) Passing scores on all sections of the Missouri General Education Assessment (MoGEA); or 3) A 4-year degree from an accredited college/university
- The following course requirements met:
  - A grade of C or above in CF/PY120 The Child (Elementary, Early, and Exceptional) or PY222 Development of the Adolescent (5-9, 9-12, and PK-12)
  - A grade of B or above in ED280 Introduction to Education as a Profession or ME222 Principles of Teaching Music.

### Additional Information

The state of Missouri has high expectations for future educators. Students matriculating into education programs must meet the following standards to be recommended for licensure following degree completion.

Students must maintain a 2.75 cumulative GPA and a 3.0 GPA in both the area of content expertise and pedagogy courses. In addition, students must pass the MO Content Exam and the MO Educator Evaluation System for recommendation for licensure. Students must also fulfill other assessments such as a dispositions profile and be cleared through an FBI background check.

### Special Options with Secondary Education

Southeast offers a Master of Arts in Secondary Education: Educational Studies or Educational Technology.

### Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at [semo.edu/transfercredit](http://semo.edu/transfercredit).

**To learn more**  
Office of Admissions  
(573) 651-2590  
[admissions@semo.edu](mailto:admissions@semo.edu)  
[semo.edu](http://semo.edu)

**To explore the College of Education, Health and Human Studies online, visit**  
[semo.edu/education-health](http://semo.edu/education-health)

**For advising**  
Center for Academic Advising  
[semo.edu/advising](http://semo.edu/advising)

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This is a guide based on the 2019-2020 Undergraduate Bulletin and is subject to change. The time it takes to earn a degree will vary based on several factors such as dual enrollment, remediation, and summer enrollment. Students will meet with an academic advisor each semester and use Degree Works to monitor their individual progress.

### CURRICULUM CHECKLIST

(Curriculum pending state approval)

#### Education Courses – 47 Hours Required

A grade of 'C' or better is required in education courses, with the exception of ED280 which requires a grade of 'B' or better.

- \_\_\_ **ED280** Introduction to Education as a Profession (3)
- \_\_\_ EF400 Seminar in Educational Issues (1)
- \_\_\_ EX390 Psychology and Education of the Exceptional Child (3)
- \_\_\_ **PY222** Development of the Adolescent (3)
- \_\_\_ SE307 Content Literacy Methods for Middle and High School (3)
- \_\_\_ SE311 Techniques of Teaching High School Mathematics (3)
- \_\_\_ SE350 Pedagogy 1: Principles of Effective Teaching in Middle & Secondary (3)
- \_\_\_ SE355 Field Experience 2 (3)
- \_\_\_ SE365 Pedagogy 2: Principles of Effective Teaching in Middle & Secondary (4)
- \_\_\_ SE380 Advance Field Experience (3)
- \_\_\_ SE385 Pedagogy 3: Principles of Effective Teaching in Middle & Secondary (3)
- \_\_\_ SE390 Instructional Interventions for Middle and High School Students with Special Literacy Needs (3)
- \_\_\_ SE465 Middle and Secondary Student Teaching Field Experience (12)

#### Mathematics Education Courses – 43 Hours Required – No minor required

- \_\_\_ MA140 Analytic Geometry & Calculus I (5)
- \_\_\_ MA145 Analytic Geometry & Calculus II (4)
- \_\_\_ MA223 Elementary Probability & Statistics (3)  
OR
- \_\_\_ MA523 Probability & Statistics I (3)
- \_\_\_ MA244 Analytic Geometry & Calculus III (4)
- \_\_\_ MA250 Foundations of Mathematics (3)
- \_\_\_ MA334 Computer Programming (3)
- \_\_\_ MA340 Concepts of Geometry (3)
- \_\_\_ MA345 Linear Algebra (3)
- \_\_\_ MA443 Elementary Number Theory (3)
- \_\_\_ MA445 Modern Algebra (3)
- \_\_\_ MA449 Mathematical Problem Solving (3)

#### Additional requirements:

- \_\_\_ MA003 Major Math Field Achievement Test (0)
- \_\_\_ MA138 Discrete Mathematics I (3)
- \_\_\_ UI438 Nature & Growth of Mathematical Thought (3)

**General Education Requirements** – some requirements may be fulfilled by coursework in major program

- Social and Behavioral Sciences – 3 hours
- Constitution requirement – 3 hours
- US History requirement – 3 hours
- Written Communication – 6 hours
- Oral Communication – 3 hours
- Natural Sciences – 7 hours (from two disciplines, one to include a lab)
- Mathematics – 3 hours
- Humanities & Fine Arts – 9 hours (from at least two disciplines)
- Additional requirements – 5 hours (to include UI100 for native students)

### SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
<b>FIRST YEAR</b>	UI100	3	MA138	3
	EN100	3	MA145	4
	MA140	5	General Education	3
	General Education	3	General Education	3
	General Education	3	General Education	3
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>16</b>
Milestone: Maintain 2.75 cumulative GPA, Complete MEP				

<b>SECOND YEAR</b>	ED280	3	MA345	3
	MA244	4	MA443	3
	MA250	3	General Education	3
	<b>PY222</b>	3	General Education	3
	General Education	3	General Education	3
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>18</b>
Milestone: Maintain 2.75 cumulative GPA, Passing score MoGEA				

<b>THIRD YEAR</b>	EX390	3	MA334	3
	MA223/MA523	3	MA340	3
	MA445	3	SE307	3
	SE350	3	SE355	3
	UI438	3	SE365	4
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>16</b>

<b>FOURTH YEAR</b>	MA003	0	EF400	1
	MA449	3	SE465	12
	SE311	3		
	SE380	3		
	SE385	3		
	SE390	3		
<b>Total</b>	<b>15</b>	<b>Total</b>	<b>13</b>	
Milestone: Passing score Mo Content Exam, MoPTA, 2.75 cumulative GPA, 3.0 GPA in Education courses				

A "Milestone" signifies a significant stage for a student in the completion of a degree.

**Degree requirements for all students:** a minimum of 120 credit hours, completion of the General Education program, completion of 39 senior division hours (300-599), and the Writing Proficiency Exam (WP003).

Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.