The B.S. Ed. in Chemistry Education prepares highly qualified teachers of chemistry. Students are certified to teach high school chemistry once all degree requirements and assessments are passed. Students have an exceptional program of professional preparation including field experiences, theory and pedagogy courses. The major is well rounded, helping teachers develop a strong foundation of chemical knowledge. Once initial certification is obtained, additional areas of 22 Assessment exams, as of present.

Science teachers are in high demand across most of the United States and particularly in Missouri. Because of this there are forgiveness programs for different types of Federal loans in return for teaching science in a high needs school district (most in Missouri). In addition, students may be eligible to participate in the TEACH grant program which can pay up to $16,000 in college costs over four years and has a similar loan forgiveness program. Be sure to consult the financial aid office for details.

**Becoming Career Ready...**

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

- B.S. Ed. in Chemistry Education graduates work in the education field. Examples of job titles include high school chemistry teacher, college laboratory technician and college science professor (requires M.S. or Ph.D. degree).

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

- B.S. Ed. in Chemistry Education students will study in the state-of-the-art, first-rate learning environment provided by the recently renovated Magill Hall of Science while gaining hands-on experience and training using a variety of lab equipment, chemical instruments, and tools in laboratory courses. Undergraduate research is also an option.

- 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.

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### Graduate Schools of Recent Graduates:

- Southeast Missouri State – MNS in Applied Chemistry, Biology or Science Education; University of Missouri-Ph.D.; University of Miami, Ohio – Ph.D. in Chemistry Education

### Employment Opportunities of Recent Graduates:


### 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 CP/PHY120 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 EED280 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 Exams 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 equivalencies guide at semo.edu/transfercredit.

**This program could lead to licensure or certification.** However, Southeast's program either does not meet, or we cannot determine if it meets, the licensure or certification requirement in all states. Please consult our State Authorization page, Licensure tab, to determine information specific to your state: [https://semo.edu/online/student-resources/stateauth.html](https://semo.edu/online/student-resources/stateauth.html).
This is a guide based on the 2020-2021 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

“Critical Courses” are italicized and bold. Data shows that students who have completed this course in the first two years and have earned the noted grade are most likely to complete this program of study.

#### 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)
- **EX390** Psychology and Education of the Exceptional Child (3)
- **PY222** Development of the Adolescent (3)
- **SE307** Reading/Writing in the Content Area (3)
- **SE320** Techniques of Teaching Science (3)
- **SE350** Pedagogy 1: Principles of Effective Teaching (3)
- **SE365** Field Experience I (3)
- **SE366** Pedagogy 2: Secondary School (4)
- **SE368** Advanced Field Experience (3)
- **SE385** Pedagogy 3: Advanced Methods of Middle and Secondary Teaching (3)
- **SE390** Instructional Interventions for Middle and Secondary Students with Special Literacy Needs (3)
- **SE465** Student Teaching (12)

#### Chemistry Education – 53 Hour Major - No Minor Required

**Required Courses:**

- **CH186** Foundations of Inorganic Chemistry (3)
- **CH187** Inorganic Chemistry & Qualitative Analysis (2)
- **CH271** Foundations of Analytical Chemistry (5)
- **CH306** Foundations of Physical Chemistry (3)
- **CH341** Foundations of Organic Chemistry (4)
- **CH342** Organic Chemistry Lab I (1)
- **PH120** Introductory Physics I (5)
- **CH531/UI 331 Foundations of Biochemistry (3)
- **UI422** Scientific Reasoning (5)

**Choose 3 Hours From:**

- **BS108** Biology for Living (3)
- **BS218** Biological Science: A Process Approach (3)

**Choose one of the following:**

- **GO110** Physical Geology (3)
- **GO320** Oceanography (3)
- **GO418** Meteorology (4)
- **UI 318/018 Earth Science: Process Approach (3)

**Choose one of the following Environmental Science Electives:**

- **BI332** General Ecology (3)
- **BS105** Biological Environmental (3)
- **CH450/EV450 Environmental Chemistry (3)
- **GO150** Environmental Hazards (3)
- **GO355** Environmental Geoscience (3)
- **UI 360 Recycling & Waste Management (3)
- **UI372 Earthquakes & Society (3)

**Additional Requirements:**

- **CH185** General Chemistry (5)
- **CH405** Engineering in Science Education (1)
- **MA116** Precalculus A (3)
- **MA139** Applied Calculus (3)
- **UI 443 Professional Experience in Chemistry (3)

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

- Social and Behavioral Sciences – 6 hours
- Constitution 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)
- Civics examination

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### SAMPLE FOUR-YEAR PLAN

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Milestone: Maintain 2.75 cumulative GPA, Complete MEP

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Milestone: Maintain 2.75 cumulative GPA, Passing score MoGEOA

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Milestone: Passing score Mo Content Exam, GPA in major 3.0

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Milestone: all content and professional education coursework completed.

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, and completion of 39 senior division hours (300-599). Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.

Students have the option of adding another area of concentration or a minor to this degree.

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Revised 6/30/2020