

**Bachelor of Arts (BA)**

# Business Option

Chemistry is the branch of natural science that deals with the properties and classification of matter, the changes that matter undergoes, and the energy associated with these changes. Research by chemists increases our knowledge about chemicals and their roles in the natural world and has led to the discovery and development of new and improved products and advances in medicine, agriculture, food processing and other fields. Those interested in a rewarding career that identifies you as a professional, provides financial security, promotes self-respect and offers the opportunity to work on stimulating and breakthrough projects should consider a career in chemistry.

This degree option offers a broad exposure to chemistry and provides a basic education in business. Students interested in pursuing careers that require knowledge of both science and business, such as marketing, sales, finance and management within the chemical industry, should choose this major. Chemistry graduates who have business and communication skills as well as leadership ability are in increasing demand in the marketplace.

**Chemistry students will...**

- Gain a rigorous foundation in chemistry, science and math in the context of a broad university education.
- Interact closely with experienced faculty who are recognized for their writing, training, professional affiliations and expertise.
- Study in the state-of-the-art, first-rate learning environment provided by the newly renovated Magill Hall of Science.
- Have opportunities to pursue research and scholarship that help develop independent thinking and problem solving.
- Have employment opportunities within the department that provide chemistry-related work experience prior to graduation.

**Career Planning**

Career preparation is part of the mission of Southeast. In fact, more than 90% of Southeast students participate in internships, clinical opportunities, student teaching, research assistantships, and study abroad.

Approximately 35-40% of chemistry graduates pursue graduate or professional programs of study immediately upon graduation. The others pursue employment opportunities in chemistry or other fields. Employment opportunities for chemists exist in a variety of fields, such as biotechnology, chemical manufacturing, environmental monitoring and compliance, industrial hygiene, materials science, pharmaceutical manufacturing, product development, quality control, sales (pharmaceuticals, chemicals, instruments), and technical management.

Professional career counselors are available for all students. The Office of Career Services in Academic Hall 057 can provide students with professional career counseling, resume critiques, practice interviews, job search strategies, career events, networking opportunities, and more.

Demonstrated Career Proficiency is a Requirement of all Southeast Students		
CL001/CL002	First Semester	Complete the FOCUS2 assessment and develop a Career Action Plan.
CL003	Junior Year	Students gain information about career planning and job searching resources.
CL004	Senior Year	Students demonstrate advanced proficiency by identifying a position in their field, developing a cover letter, and tailoring a resume for the position. Materials are critiqued to ensure preparedness for a successful job search.

**Internship Opportunities, Employment Opportunities, Graduate Schools and Programs of Recent Graduates**

- Biokyowa
- Buzzi Unicem USA
- Eli Lilly
- Exxon Mobil
- Monsanto
- Pharmacia (currently part of Pfizer)
- PPG Industries
- Proctor and Gamble
- Sigma-Aldrich
- Missouri State Highway Patrol Crime laboratory
- Indiana University
- John Hopkins University
- Penn State University
- Purdue University
- Southern Illinois University (School of Medicine)
- Texas A & M
- University of Illinois (School of Medicine, Graduate School)
- University of Missouri – Columbia (School of Medicine, Graduate School)
- University of Notre Dame
- University of Wisconsin – Madison
- Washington University
- Numerous other graduate/professional programs of study and employers

**To learn more**  
Office of Admissions  
(573) 651-2590  
admissions@semo.edu  
www.semo.edu

**To explore the College of  
Science, Technology, and  
Agriculture online, visit**  
www.semo.edu/costa

**For advising**  
College of Science, Technology and Agriculture  
Advising Center (573) 651-5930  
costaadvising@semo.edu  
www.semo.edu/costa/advising

# Chemistry: Business Option

## Bachelor of Arts (BA)

This is a guide based on the 2015-2016 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 DegreeWorks to monitor their individual progress.

### CURRICULUM CHECKLIST

*"Critical Courses" are italicized and bolded. 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.*

#### Chemistry Core – 33 Hours Required

- \_\_\_ **CH185** *General Chemistry (5)*
- \_\_\_ **CH186** *Foundations of Inorganic Chemistry (3)*
- \_\_\_ CH187 Inorganic Chemistry and Qualitative Analysis Laboratory (2)
- \_\_\_ CH271 Foundations of Analytical Chemistry (5)
- \_\_\_ CH306 Survey of Physical Chemistry (3)
- \_\_\_ CH313 Physical Chemistry Laboratory (3)
- \_\_\_ **CH341** *Foundations of Organic Chemistry (4)*
- \_\_\_ CH342 Organic Chemistry Laboratory I (1)
- \_\_\_ CH498 Professional Presentation in Chemistry (1)
- \_\_\_ CH531 Foundations of Biochemistry (3)
- \_\_\_ OR
- \_\_\_ UI331 Foundations of Biochemistry (3)
- \_\_\_ UI443 Professional Experience in Chemistry (3)

#### Business Option – 30 Hours Required\*

- \_\_\_ AC221 Principles of Accounting I (3)
- \_\_\_ AC222 Principles of Accounting II (3)
- \_\_\_ EC215 Principles of Microeconomics (3)
- \_\_\_ EC225 Principles of Macroeconomics (3)
- \_\_\_ FI361 Financial Management (3)
- \_\_\_ IS175 Information Systems (3)
- \_\_\_ MA223 Elementary Probability and Statistics (3)
- \_\_\_ OR
- \_\_\_ QM257 Business Statistics (3)
- \_\_\_ MG301 Principles of Management (3)
- \_\_\_ MI375 Management Information Systems (3)
- \_\_\_ MK301 Principles of Marketing (3)

#### Additional Requirements – 13 Hours Required

- \_\_\_ **MA139** *Applied Calculus (3)*
- \_\_\_ PH120/020 Introductory Physics I (5)
- \_\_\_ PH121/021 Introductory Physics II (5)

\* Upon completion of the B.A. in Chemistry (Business Option), students may apply directly to the MBA program at Southeast. For more information about the MBA degree program, contact the MBA office in the Robert A. Dempster Hall at Southeast Missouri State University.

Note: Completion of an experiential learning project (undergraduate research or internship) in the major is required. The departmental advisor should be consulted for information about this requirement.

#### University Studies Requirements (not already listed above):

UI100 First Year Seminar, EN100 English Composition, Artistic Expression, Written Expression, Oral Expression, Literary Expression, Behavioral Systems, Living Systems, Development of a Major Civilization, Political Systems, Social Systems, and one IU/UI3XX\*\*.

\*\*Note: Two IU/UI3XX courses are required if CH531 Foundations of Biochemistry is taken rather than UI331 Foundations of Biochemistry.

### SAMPLE FOUR-YEAR PLAN

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
<b>FIRST YEAR</b>	UI100	3	<b>CH186</b>	3
	EN100	3	CH187	2
	<b>CH185/CH085/CH005</b>	5	IS175	3
	Social Systems	3	<b>MA139</b>	3
			Written Expression	3
	<b>Total</b>	<b>14</b>	<b>Total</b>	<b>14</b>
Milestone: maintain 2.0 cumulative GPA				
<b>SECOND YEAR</b>	<b>CH341</b>	4	EC225	3
	CH342	1	PH121/021	5
	EC215	3	MA223 OR QM257	3
	PH120/020	5	Artistic Expression	3
	Literary Expression	3		
	<b>Total</b>	<b>16</b>	<b>Total</b>	<b>14</b>
Milestone: maintain 2.0 cumulative GPA				
<i>(summer courses are encouraged to avoid 18 hour semesters)</i>				
<b>THIRD YEAR</b>	AC221	3	AC222	3
	CH271	5	MG301	3
	CH531 OR UI331	3	UI443	3
	Behavioral Systems	3	Oral Expression	3
	Living Systems	3	Political Systems	3
	<b>Total</b>	<b>17</b>	<b>Total</b>	<b>15</b>
Milestone: maintain 2.0 cumulative GPA				
<b>FOURTH YEAR</b>	CH306	3	CH313	3
	FI361	3	CH498	1
	MI375	3	MK301	3
	Develop. of a Major Civil.	3	IU/UI3XX	3
	Electives	3	Electives	5
	<b>Total</b>	<b>15</b>	<b>Total</b>	<b>15</b>
Milestone: maintain 2.0 cumulative GPA				

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 University Studies program, career proficiencies (CL001-004), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAPP) at the senior level.

A minimum 2.0 GPA in the major and overall are required to graduate with a BA in Chemistry degree.

Refer to the Undergraduate Bulletin or DegreeWorks for additional graduation requirements (i.e. minimum GPA and coursework) for your program of study.

Revised  
3/19/2015