

Bachelor of Science (BS)

Actuarial Science Option

Actuarial science includes the study of areas such as mathematics, probability, statistics, finance, and economics. An actuary applies these areas of study to assess risk in business and industrial settings. The most common areas studied are insurance and finance.

Actuarial science students will...

- Interact with statistics and actuarial faculty with diverse backgrounds.
- Be exposed to practical projects in actuarial risk, financial time series, and regression modeling.
- Have a strong foundation in calculus and probability.
- Be prepared for professional examinations. Curriculum guidance and study sessions are part of the program core.
- Have access to modern computer labs with mathematical and statistical software.
- Be encouraged to join Math Club.
- Learn how to use software to model and predict risk behaviors.
- Enroll in business courses, which is a unique feature of this program.
- Have opportunities to intern with corporations in metropolitan areas such as St. Louis and Memphis.

Career Planning

A St. Louis Outreach Office, located in Chesterfield, Mo., provides career exploration assistance, resume critiques, interview tips, job search strategies 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.
Career Services , located in Academic Hall 057, provides professional career advising to guide students in their career development.		

Internship and Employment Opportunities of Recent Graduates

- New York Stock Exchange
- The Hartford
- State Farm
- Lockton Companies

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
<http://www.semo.edu/costal>

For advising
College of Science, Technology and Agriculture
Advising Center
 (573) 651-5090
costa@semo.edu
<http://www.semo.edu/costaladvising/index.htm>

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This is a guide based on the 2014-2015 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.

Degree Map

CURRICULUM CHECKLIST

Mathematics: Actuarial Science Option – 77 hours

- ___ AC221 Principles of Accounting I (3)
- ___ AC222 Principles of Accounting II (3)
- ___ EC215 Principles of Microeconomics (3)
- ___ EC225 Principles of Macroeconomics (3)
- ___ FI351 Principles of Insurance (3)
- ___ FI361 Financial Management (3)
- ___ FI362 Advanced Financial Management (3)
- ___ MA 003 Math Major Field Achievement Test (0)
- ___ MA138 Discrete Mathematics I (3)
- ___ MA140 Analytic Geometry & Calculus I (5) (*Logical systems*)
- ___ MA145 Analytic Geometry & Calculus II (4)
- ___ MA223 Elem Probability & Statistics (3)
- ___ MA240 Analytic Geometry & Calculus III (3)
- ___ MA250 Foundations of Mathematics (3)
- ___ MA345 Linear Algebra (3)
- ___ MA425 Applied Regression Analysis (3)
- ___ MA448 Mathematics Seminar (1)
- ___ MA523 Probability & Statistics I (3)
- ___ MA524 Probability & Statistics II (3)
- ___ MA525 Actuarial Modeling (3)
- ___ MA526 Actuaries Seminar I (1)
- ___ MA527 Actuaries Seminar II (1)
- ___ MA528 Actuaries Seminar III (1)

Choose one of the following: 3-4 Hours

- ___ CS155 Computer Science I (4)
- ___ CS177 Programming for Scientists and Engineers (3)

Choose 12 hours from the following:

- ___ EC351 Applied Economic Models (3)
- ___ EC490 Business Forecasting (3)
- ___ FI363 Entrepreneurial Finance (3)
- ___ FI368 Investments (3)
- ___ MA546 Advanced Calculus I (3)
- ___ MA350 Differential Equations I (3)
- ___ MA550 Differential Equations II (3)
- ___ MA580 Experimental Design and Analysis of Variance (3)

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, Physical Systems, Development of a Major Civilization, Political Systems, Social Systems, and two IU/UI3XXs and one UI4XX.

SAMPLE FOUR-YEAR PLAN

Mathematics: Actuarial Science Option

Requirements for the 2014-2015 Undergraduate Bulletin

	Fall Semester		Spring Semester	
	Course #	Hrs	Course #	Hrs
FIRST YEAR	UI100	3	AC222	3
	EN100	3	MA145	4
	AC221	3	MA223	3
	MA140	5	Living Systems	3
	Behavioral Systems	3	Written Expression	3
Total	17	Total	16	

SECOND YEAR	EC215	3	EC225	3
	MA138	3	MA250	3
	MA240	3	MA345	3
	MA425	3	Math Elective ²	3
	Artistic Expression	3	Oral Expression	3
	Literary Expression	3		
Total	18	Total	15	

(summer courses are encouraged to avoid 18 hour semesters)

THIRD YEAR	FI351	3	FI361	3
	MA523	3	MA524	3
	Computer Programming ¹	3	MA526	1
	Physical Systems	3	MA527	1
	IUUI3XX	3	Political Systems	3
Total	15	Total	14	

FOURTH YEAR	FI362	3	MA003	0
	MA525	3	MA448	1
	MA528	1	Math Elective ²	3
	Math Elective ²	3	Math Elective ²	3
	UI4XX	3	Develop of a Major Civ	3
Total	13	Total	13	

¹Select one: CS155 or CS177

²Math Electives include four of the following courses: MA546, MA350, MA550, MA580, EC351, EC490, FI363 or FI368.

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 freshman and senior levels.

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

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