

**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

Career preparation is part of the mission of Southeast. 100% of programs offer our students an internship, study-abroad program, clinical opportunity, student teaching or research internship.

The Office of Career Services in Academic Hall 057 can provide students with 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

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

Special Options with Mathematics

Southeast offers a Master of Natural Science in Mathematics.

Transfer and Dual Credit Students

If you have dual credit or transfer credit, please visit our transfer course equivalencies guide at semo.edu/transfercredit.

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

To explore
the College of Science,
Technology, Engineering and
Mathematics online, visit
semo.edu/stem

For advising
Center for Academic Advising
semo.edu/advising



Bachelor of Science (BS)

This is a guide based on the 2018-2019 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

Mathematics: Actuarial Science Option – 76-77 hours – No minor 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)
 - ___ FI362 Advanced Financial Management (3)
 - ___ MA003 Math Major Field Achievement Test (0)
 - ___ MA138 Discrete Mathematics I (3)
 - ___ MA140 Analytic Geometry & Calculus I (5)
 - ___ MA145 Analytic Geometry & Calculus II (4)
 - ___ MA223 Elem Probability & Statistics (3)
 - ___ MA244 Analytic Geometry & Calculus III (4)
 - ___ MA250 Foundations of Math (3)
 - ___ MA345 Linear Algebra (3)
 - ___ MA375 Theory of Interest (3)
 - ___ MA385 Financial Mathematics (3)
 - ___ MA425 Applied Regression Analysis (3)
 - ___ MA523 Probability & Statistics I (3)
 - ___ MA524 Probability & Statistics II (3)
 - ___ MA526 Actuarial Seminar (3)
 - ___ MA575 Time Series and Forecasting (3)
 - ___ MA585 Introduction to Life Contingencies (3)
- Choose one of the following: 3-4 Hours**
- ___ CS155 Computer Science I (4)
 - ___ CS177 Programming for Scientists and Engineers (3)
 - ___ MA334 Mathematical Programming (3)
- Choose 6 hours from the following:**
- ___ EC351 Applied Economic Models (3)
 - ___ EC490 Business Forecasting (3)
 - ___ FI351 Principles of Insurance (3)
 - ___ FI368 Investments (3)
 - ___ MA350 Differential Equations I (3)
 - ___ MA546 Advanced Calculus I (3)
 - ___ MA550 Differential Equations II (3)
 - ___ MA580 Experimental Design and Analysis of Variance (3)

University Studies 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
FIRST YEAR	UI100	3	AC222	3
	EN100	3	MA145	4
	AC221	3	University Studies	3
	MA140	5	University Studies	3
	University Studies	3	Elective	3
	Total	17	Total	16
SECOND YEAR	EC215	3	EC225	3
	MA138	3	MA250	3
	MA244	4	MA345	3
	MA375	3	MA385	3
	University Studies	3	University Studies	3
	Total	16	Total	15
<i>(summer courses are encouraged to avoid 18 hour semesters)</i>				
THIRD YEAR	MA523	3	FI361	3
	Computer Programming ¹	3	MA524	3
	Major elective ²	3	MA526	3
	University Studies	3	MA585	3
	Elective	2	University Studies	3
	Total	14	Total	15
FOURTH YEAR	FI362	3	MA003	0
	MA425	3	MA575	3
	Major elective ²	3	University Studies	3
	University Studies	3	University Studies	3
	Elective	3	Elective	3
	Total	15	Total	12

¹Select one: CS155 or CS177 or MA334

²Major Electives include two of the following courses: MA350, MA546, MA550, MA580, EC351, EC490, FI351 or FI368.

Degree requirements for all students: a minimum of 120 credit hours, completion of University Studies program, completion of 39 senior division hours (300-599), Writing Proficiency Exam (WP003), and completion of the Measure of Academic Proficiency and Progress (MAP) at the senior level. Refer to the Undergraduate Bulletin or Degree Works for additional graduation requirements for your program.