ACTUARIAL SCIENCE, BSLAS

for the degree of Bachelor of Science in Liberal Arts and Sciences Major in Actuarial Science

This major is sponsored by the Department of Mathematics, and is an interdisciplinary subject involving mathematics, statistics, and financial economics. It is designed to prepare students to enter the actuarial profession, as well as to provide a background in quantitative finance and risk management.

Undergraduate programs in Mathematics

Actuarial Science, BSLAS (p. 1)

Mathematics, BSLAS (http://catalog.illinois.edu/undergraduate/las/mathematics-bslas/#text)

Mathematics & Computer Science, BSLAS (http://catalog.illinois.edu/undergraduate/eng_las/mathematics-computer-science-bslas/)

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Departmental distinction: To qualify for distinction, the student must have a grade point average in ASRM courses of at least 3.25, and pass at least two examinations offered by the professional actuarial societies. To qualify for high or highest distinction, the student must have passed at least three professional exams, with highest distinction going to those whose grade point averages in mathematics are at least 3.75. Finance courses and additional professional exams may also be given consideration in close decisions.

General education: Students must complete the Campus General Education requirements including the campus general education language requirement.

Minimum required major and supporting course work: normally equates to 57-61 hours including 32-33 hours of actuarial courses beyond calculus. Twelve hours of 300- or 400-level courses in the major must be taken on this campus.

Minimum hours required for graduation: 120 hours. Students will complete 40 hours of upper division coursework (these hours can be drawn from all elements of the degree).

Code	Title	Hours
Calculus through:		11-12
MATH 220	Calculus	
or MATH 221	Calculus I	
MATH 231	Calculus II	
MATH 241	Calculus III (or equivalent)	
Select one of the following:		3-4
ASRM 195	Foundations of Data Management	
CS 101	Intro Computing: Engrg & Sci	
CS 105	Intro Computing: Non-Tech	
CS 124	Introduction to Computer Science I	
CS 125	Introduction to Computer Science	
ASRM 210	Theory of Interest	3
Select one of the following sequences (ASRM preferred):		7-8
ASRM 401 & ASRM 402	Actuarial Statistics I and Actuarial Statistics II	
OR		
STAT 400 & STAT 410	Statistics and Probability I and Statistics and Probability II	
ASRM 406	Linear Algebra with Financial Applications	3
ASRM 450	Methods of Applied Statistics	3
Select four of the following:		12-13
ASRM 409	Stochastic Processes for Finance and Insurance	
ASRM 410	Investments and Financial Markets	
ASRM 451	Basics of Statistical Learning	
ASRM 461	Loss Models	
ASRM 469	Casualty Actuarial Mathematics	
ASRM 471	Life Contingencies I	
ASRM 472	Life Contingencies II	
Select an additional course from the above list or an approved section of ASRM 499		3
FIN 221	Corporate Finance	3
Three additional courses from:		9
ACCY 200	Fundamentals of Accounting	
ECON 302	Inter Microeconomic Theory	
ECON 303	Inter Macroeconomic Theory	
FIN 230	Introduction to Insurance	
FIN 300	Financial Markets	
FIN 321	Advanced Corporate Finance	
FIN 431	Property-Liability Insurance	
FIN 432	Managing Market Risks for Financial Institutions	
FIN 434	Employee Benefit Plans	
Total Hours		**57-61**

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Student Learning Outcomes

1. Have sufficient exposure to actuarial and financial mathematics to be familiar with at least 80% of the material on five of preliminary Society of Actuaries credentialing exams.
2. Be familiar with the role of insurance in society, basic economic theory, and the basics of how insurance and financial markets operate.
3. Have familiarity with several of the technical tools, computer languages or software packages used by actuaries.
4. Develop communication, leadership and teamwork skills, and understand their importance in the actuarial industry.
5. Be able to apply this knowledge and these skills in new combinations and to new problems.

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program website: Actuarial Science (https://math.illinois.edu/academics/actuarial-science/)
program faculty: Actuarial Science Faculty (https://math.illinois.edu/research/faculty-research/actuarial-science/)

department website:https://math.illinois.edu/
email: ASRM-advising@illinois.edu

overview of college admissions & requirements: Liberal Arts & Sciences (http://catalog.illinois.edu/schools/las/)
college website: https://las.illinois.edu/