BA in Statistics

Degree Program Description
Statistics is a modern science concerned with making decisions and inferences from empirical data subject to random variability and error. It deals with designing experiments, sample surveys, summarizing numerical information, building and analyzing statistical models, prediction and choosing between alternate actions. Statistics can tell us how much safer it is to fly than drive, the odds of winning the lottery, our life expectancy and who is likely to win the next election. The BA in Statistics allows students to pursue either a traditional track or an applied track. Students who are interested in graduate study are strongly encouraged to follow the traditional track. All students are encouraged to supplement their work in statistics with courses from areas such as economics, biology, accounting, finance, marketing, management, psychology, sociology, engineering, agriculture, and atmospheric science. Because of its importance as a scientific method, the demand for trained statisticians has grown in education, medicine, government, business and industry as well as in the biological, social and physical sciences. Students are trained to meet this demand and develop careers in teaching and research.

Major Program Requirements
Students must complete the university general education requirements (http://catalog.missouri.edu/academicdegerequirements/generaleducationrequirements), university graduation requirements (http://catalog.missouri.edu/academicdegerequirements/universityrequirements), and the Department Degree Requirements (http://catalog.missouri.edu/undergraduategraduate/collegeofartsandscience/statistics/#undergraduatetext), in addition to the degree requirements below.

Mathematics courses

Traditional track
- MATH 1500 Analytic Geometry and Calculus I
- MATH 1700 Calculus II
- MATH 2300 Calculus III
- MATH 4140 Matrix Theory

Applied track
- MATH 1500 Analytic Geometry and Calculus I
- or MATH 1300 Finite Mathematics
- & MATH 1400 and Calculus for Social and Life Sciences I

6 additional credits in statistics (beyond those used to fulfill the statistics requirements of the degree) or approved statistically-oriented courses; must be numbered 4000 or above and may not include STAT 4050: Connecting Statistics to Middle and Secondary Schools

Statistics Courses

Traditional Track
- STAT 4970 Junior/Senior Seminar
- STAT 4710 Introduction to Mathematical Statistics
- or STAT 4750 Introduction to Probability Theory
- STAT 3500 Introduction to Probability and Statistics II

12 additional credits offered by the department, at least 9 of which must be numbered 3000 or above and may not include STAT 4050: Connecting Statistics to Middle and Secondary Schools or more than 3 credits of STAT 4999: Departmental Honors in Statistics

Applied Track
- STAT 4970 Junior/Senior Seminar
- STAT 4710 Introduction to Mathematical Statistics
- or STAT 4760 Statistical Inference
- or STAT 3500 Introduction to Probability and Statistics II

21 additional credits offered by the department, at least 18 of which must be numbered 3000 or above and may not include STAT 4050: Connecting Statistics to Middle and Secondary Schools or more than 3 credits of STAT 4999: Departmental Honors in Statistics

Computing Courses

Both tracks
- INFOTC 1040 Introduction to Problem Solving and Programming

Semester Plan
Below is a sample plan of study, semester by semester. A student's actual plan may vary based on course choices where options are available.

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Total Credits: 120
* Courses used as area in lieu of foreign language
+ Course meets University General Education and/or campus requirements