STATISTICS

Statistics, the science of learning from data, has become increasingly important as scientists, businesses, and governments rely more and more on data-driven decision-making. Statisticians work in many areas, including business, economics, medicine, epidemiology, agriculture, environmental sciences, sports, and all aspects of government. With the increasing digitization and networking of society, data have become ever more ubiquitous, further expanding the demand for statisticians and their expertise in the collection and analysis of data.

About this Program

- **College:** Liberal Arts and Sciences (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/)
- **Degrees:** Bachelor of Arts (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/STA_BA_BS/STA_BA/) | Bachelor of Science (http://catalog.ufl.edu/UGRD/colleges-schools/UGLAS/STA_BA_BS/STA_BS/)
- **Credits for Degree:** 120
- **Contact:** Email (dathien@stat.ufl.edu?Subject=Statistics%20Major)
- **More Info**

To graduate with this major, students must complete all university, college, and major requirements.

Department Information

The mission of the Department of Statistics is to provide its students with a fundamental understanding of statistical reasoning and methodology, to train them to apply this knowledge to the collection and analysis of data, and to prepare them for careers in a highly technological society in which science and decision-making are increasingly driven by a rapid expansion in the quantity and availability of data.
Website (https://stat.ufl.edu/)

CONTACT

Email (staff@stat.ufl.edu) | 352.392.1941 (tel) | 352.392.5175 (fax)

P.O. Box 118545
102 GRIFFIN-FLOYD HALL
GAINESVILLE FL 32611-8545
Map (http://campusmap.ufl.edu/#/index/0010)

Curriculum

- Actuarial Science Minor
- Combination Degrees
- Data Analytics Certificate
- Data Science
- Statistics
- Statistics Minor

Statistics majors learn how to design studies that effectively address the purpose of a research project and how to properly analyze the data collected in such studies. Core courses cover statistical methods applicable in a wide variety of settings (e.g., regression and design of experiments) as well as the conceptual and mathematical foundations of statistics. Other courses explore specific data types often encountered in practical settings. Statistics majors have the option to minor in actuarial science, a profession involving the statistical and financial practices of insurance.

Students who wish to major in Statistics must consult a department advisor early in their programs.

Degrees

The College of Liberal Arts and Sciences offers the Bachelor of Science and the Bachelor of Arts in Statistics.

Bachelor of Arts

Intended for students who wish to pursue a career in the field of statistics or to teach statistics at the secondary-school level, but who do not currently contemplate graduate study in statistics.

Bachelor of Science

Intended for students who wish to pursue graduate study in statistics or a closely related area, and for other strong students with a deeper interest in the mathematical foundations of statistics.

Coursework for the Major

Required Coursework for Both Degrees

The BA in Statistics requires a minimum of 42 credits in statistics and related coursework. The BS in Statistics requires a minimum of 49 credits in statistics and related coursework. It is important that the prerequisites for each course are met before the course is attempted.

Students must receive minimum grades of C within two attempts (including withdrawals) in every required core course and in every course counted toward the 12 credit elective requirement, with the exception of MAC 2312 and MAC 2313 for the BS, where students must receive a minimum grade of B. Students cannot retake core or statistics elective courses after earning a minimum grade of C, with the exception of MAC 2312 and MAC 2313 for the BS, in which students must receive a minimum grade of B. A minimum GPA of 2.0 must be achieved on all attempts of core and major elective courses and, additionally for the BS, a minimum GPA of 3.0 on MAC 2312 and MAC 2313. The grades from all attempts to satisfy core requirements will be used to compute the minimum GPA. A minimum of 18 credits of major coursework must be taken at UF, including a minimum of 12 credits of core coursework.

Code	Title	Credits
Core		
Select one:		12
MAC 2311	Analytic Geometry and Calculus 1	
& MAC 2312	and Analytic Geometry and Calculus 2	
& MAC 2313	and Analytic Geometry and Calculus 3	
MAC 3472	Honors Calculus 1	
& MAC 3473	and Honors Calculus 2	
& MAC 3474	and Honors Calculus 3	
STA 3100	Programming With Data in R	3
STA 4210	Regression Analysis [1]	3
STA 4211	Design of Experiments [1,2,4]	3
STA 4321	Introduction to Probability [1]	3
STA 4322	Introduction to Statistics Theory [1,3]	3
STA 4504	Categorical Data Analysis	3
Total Credits		**30**

[1]   The course sequences, STA 4210-STA 4211 and STA 4321-STA 4322 should be completed by the end of the junior year.

[2]   Prerequisite: STA 4210.

[3]   Prerequisite: STA 4321.

[4]   Students pursuing the major must enroll in the restricted to STA majors only section of STA 4211.

Combination Degree Program

Superior students can earn both the bachelor's and master's degrees in a shorter time than typically would be possible by counting up to 12 credits of approved graduate courses toward both degrees. For information and application, contact the undergraduate or graduate coordinator.

Relevant Minors and Certificates

Statistics majors may want to consider a minor in actuarial science, which prepares students for careers as actuaries. Required courses cover the material for the beginning examinations and VEE credits leading to an associateship in the major national actuarial societies.

Academic Learning Compact

The Statistics major enables students to achieve proficiency in the fundamentals of statistical reasoning. Through study of both theoretical and applied statistics and through data analysis projects, students will gain knowledge in problem solving, statistical applications and data-based inferences. Emphasis is on developing the ability to approach real world problems and through the use of statistical methods to be able to analyze and to draw valid scientific inferences.

Before Graduating Students Must

- Complete an exam on the fundamentals of statistics, which will be 5% of the grade in STA 4211.
- Complete a data analysis project, which will be 10% of the grade in STA 4211.
- Complete requirements for the baccalaureate degree, as determined by faculty.

Students in the Major Will Learn to

Student Learning Outcomes | SLOs

Content

1. Identify, define, and describe concepts and issues in statistics, including those involved in designing a statistical study, in statistical estimation and in tests of hypotheses.

Critical Thinking

2. Identify sources of variability in a given problem setting and formulate an appropriate statistical analysis.

Communication

3. Clearly and effectively present ideas in speech and in writing concerning statistical issues and analyses of data.

Curriculum Map

I = Introduced; R = Reinforced; A = Assessed

Courses	SLO 1	SLO 2	SLO 3
STA 4210	I	I	I
STA 4211	A	A	A
STA 4222	R	R	R
STA 4321	I		
STA 4322	I		
STA 4502	R	R	R
STA 4504	R	R	R
STA 4702	R	R	R
STA 4712	R	R	R
STA 4853	R	R	R

Assessment Types

- Exams
- Projects
- Written and oral presentations