

University of Central Florida



Department of Statistics & Data Science

Department's webpage
www.sciences.ucf.edu/statistics/

What is Statistics?

Statistics is the scientific application of mathematical principles to the collection, analysis, interpretation and presentation of statistical data objectively in the presence of uncertainty. Statistical methods allow us to utilize survey and experimental data to draw valid conclusions about the overall population of interest. Statisticians contribute to scientific inquiry by applying their mathematical knowledge to the design of surveys and experiments, collection, processing and analysis of data, and interpretation of the results.

“**Statistics** is a **Science**, not a branch of mathematics, but uses mathematical models as essential tools”

-John Tukey

“Statistics is the science of learning from data, and of measuring, controlling, and communicating uncertainty”

UCF's Department of Statistics & Data Science offers a B.S. in Statistics, B.S. in Data Science, as well as a B.S. in Actuarial Science. Please look at the Actuarial Science and Data Science brochures and the UCF catalog for a quick review of these programs.

What do Statisticians do?

Statisticians use mathematical techniques to analyze and interpret data and draw conclusions about the population of interest. Statisticians work in a multitude of areas including:

- Insurance companies
- Consulting firms
- Local and federal governmental agencies
- Colleges and universities
- Banks and investment firms
- Pharmaceutical companies
- Healthcare agencies
- Businesses and Corporations

For a detailed description of careers in statistics, check out the links below

“Statistics as a Career” in
<http://www.worldofstatistics.org/>

Other Helpful Exploration Websites:
American Statistical Association
<http://www.amstat.org>

US Department of Labor -
Bureau of Labor Statistics
<https://www.bls.gov/ooh/math/mathematicians-and-statisticians.htm#tab-6>

Mathematical Sciences Career Information
<http://www.ams.org/careers>

Federal Government's official employment site
<http://www.usajobs.gov>

UCF's Experiential Learning
(Internship opportunities)
<https://guides.ucf.edu/careers/internships>

<p style="text-align: center;">What sets UCF's Statistics apart?</p> <p>UCF's Department of Statistics & Data Science offers courses which make it easier for students to earn a B.S. in Statistics with a minor in Actuarial Science, B.S. in Actuarial Science with a minor in Statistics, a Master of Science in with a track in Data Science., and a Ph.D. in Big Data Analytics.</p> <p>The Department has been very active in recruiting faculty with expertise in new and challenging areas in statistics. The Department also has several professors who have passed the first five preliminary SOA/CAS exams.</p> <p>UCF's Statistics & Data Science Department offers students the unique opportunity to continue for advanced degrees in Statistics & Data Science Data Mining, and Big Data Analytics. Our programs of study are designed in such a way that some of the core and elective courses can be used toward multiple degrees offered by the department.</p> <p>The Department of Statistics is currently considering creation of a new Bachelor of Science degree in Data Science jointly with Mathematics and Computer Science.</p>	<p style="text-align: center;">Courses Required for Bachelor Degree</p> <p>The Bachelor's degree in Statistics has many of its core requirements in common with those of Actuarial Science and Mathematics. The courses required for the B.S. in Statistics include:</p> <ul style="list-style-type: none"> · Three courses in Statistical Methods · Three courses in Calculus · Two courses in Statistical Theory · One course in Numerical Calculus · One statistical software course · One computer science course · One course in Matrix and Linear Algebra · One professional writing course · Seven elective courses of which at most three may be chosen from Mathematics or Computer Science. 	<p style="text-align: center;">Contact Person for Undergraduate Advising:</p> <p style="text-align: center;">Professor Nizam Uddin Undergraduate Coordinator (407) 823-2692 nizam.uddin@ucf.edu</p> <p style="text-align: center;">Professor Shunpu Zhang Department Chair shunpu.zhang@ucf.edu</p> <p style="text-align: center;">College of Sciences Academic Services (COSAS)) (407) 823-6131 cosas@ucf.edu</p>
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Advising Help at-a-Glance

Login to myucf. From the drop-down box under Academics, navigate to the Student Center and choose Degree Audit and expand all sections of your Degree Audit. Follow the instructions within each section to choose courses (from the course options displayed). For course selections by semesters, follow the suggested Plan of Study displayed in your catalog.

Tentative Course Schedule by Semester (This is one of numerous possible plans of study. Make adjustments as needed.)

<p>Freshman Year - Fall (13 Credit Hours) MAC 2311C - Calculus with Analytic Geometry I Credit Hours: 4 STA 2023 - Statistical Methods I Credit Hours: 3 ENC 1101 - Composition I Credit Hours: 3 GEP Credit Hours: 3</p> <p>Freshman Year - Spring (14 Credit Hours) MAC 2312 - Calculus with Analytic Geometry II Credit Hours: 4 BSC 2010C - Biology I Credit Hours: 4 STA 4163 - Statistical Methods II Credit Hours: 3 ENC 1102 - Composition II Credit Hours: 3</p> <p>Freshman Year - Summer (7 Credits) MAC 2313 - Calculus with Analytic Geometry III Credit Hours: 4 ECO 2013 - Principles of Macroeconomics Credit Hours: 3</p>	<p>Sophomore Year - Fall (13 Credit Hours) COP 3223C - Introduction to Programming with C Credit Hours: 3 STA 4321 - Statistical Theory I Credit Hours: 3 GEP Credit Hours: 3 GEP Credit Hours: 3</p> <p>Sophomore Year - Spring (12 Credit Hours) STA 4164 - Statistical Methods III Credit Hours: 3 STA 4322 - Statistical Theory II Credit Hours: 3 COT 3100C - Introduction to Discrete Structures Credit Hours: 3 or MHF 3302 - Logic and Proof in Mathematics Credit Hours: 3 Advanced Core Course Credit Hours: 3</p> <p>Sophomore Year - Summer (6 Credit Hours) GEP Credit Hours: 3 Elective Credit Hours: 3</p>
<p>Junior Year - Fall (13 Credit Hours) STA 4102 - Computer Processing of Statistical Data Credit Hours: 3 MAS 3105 - Matrix and Linear Algebra Credit Hours: 4 or MAS 3106 - Linear Algebra Credit Hours: 4 Advanced Core Course Credit Hours: 3 Restricted Elective Credit Hours: 3</p> <p>Junior Year - Spring (12 Credit Hours) COT 4500 - Numerical Calculus Credit Hours: 3 Advanced Core Course Credit Hours: 3 Restricted Elective Credit Hours: 3 Elective Credit Hours: 3</p>	<p>Senior Year - Fall (15 Credit Hours) ENC 3241 - Writing for the Technical Professional Credit Hours: 3 Advanced Core Course Credit Hours: 3 Restricted Elective Credit Hours: 3 GEP Credit Hours: 3 Elective Credit Hours: 3</p> <p>Senior Year - Spring (15 Credit Hours) GEP Credit Hours: 3 Elective Credit Hours: 3 Elective Credit Hours: 3 Elective Credit Hours: 3 Elective Credit Hours: 3</p>