Statistics (B.S.)
College of Sciences
Department of Statistics,
Computer Center II, Room: 212
http://statistics.cos.ucf.edu/
Email: statistics@ucf.edu
Dr. David Nickerson, 407-823-5528
Phone: 407-823-2289

Admission Requirements
■ None

Degree Requirements
■ Students who change degree programs and select this major must adopt the most current catalog.
■ Departmental Residency Requirement: at least 15 semester hours of regularly scheduled 3000-4000 level courses must be taken from the UCF Statistics Department.
■ Students must earn at least a “C” (2.0) in each course with a STA prefix.
■ Students must achieve a minimum 2.0 cumulative GPA in all computer science and mathematics courses satisfying major requirements.
■ Students must achieve a minimum cumulative GPA of 2.0 in all courses satisfying major requirements.
■ Co-op or internship credit cannot be used in this major.
■ Students should consult with a departmental advisor.
■ All prerequisites of courses taught within the College of Sciences will be enforced.
■ Courses designated in 1 (General Education Program) are generally spread over 4 years, and those designated in 2 (Common Program Prerequisites) are usually completed in the first 60 hours.
■ All statistics courses except the following, and those protected by Florida Common Course Numbering must be taken from, or approved by the Statistics Department at UCF.

1. UCF General Education Program (GEP) (39 hrs)
■ Certain courses must be selected in the GEP for this major bringing the total hours to more than 36.
A: Communication Foundations (9 hrs)
B: Cultural & Historical Foundations (9 hrs)
C: Mathematical Foundations (7 hrs)
   Required MAC 2311C Calculus with Analytic Geometry I 4 hrs
   Required STA 2023 Statistical Methods I 3 hrs
D: Social Foundations (6 hrs)
   Economics 3 hrs
   Prefer ECO 2103 Principles of Macroeconomics 3 hrs
   Social Sciences: Select one. 3 hrs
      Required ANT 2000 General Anthropology or 3 hrs
      Required PSY 2012 General Psychology or 3 hrs
      Required SYG 2000 Introduction to Sociology 3 hrs
E: Science Foundations (8 hrs)
   Life Science: 4 hrs
      Required BSC 2010C Biology I 4 hrs
   Physical Science: 4 hrs
      Required CHM 2045C Chemistry Fundamentals I or 4 hrs
      Required PHY 2053C College Physics I 4 hrs
2. Common Program Prerequisites (CPP) (11 hrs)
■ See “Common Prerequisites” in the Transfer and Transitions Services section for more information, including some possible substitutes.
   COP 3223C Introduction to Programming with C 3 hrs
   MAC 2311C Calculus with Analytic Geometry I GEP
   MAC 2312 Calculus with Analytic Geometry II 4 hrs
   MAC 2313 Calculus with Analytic Geometry III 4 hrs
   STA 2023 Statistical Methods I GEP
Complete two laboratory courses designed for science majors;
■ The state of Florida requires Statistics majors to take two laboratory-based science courses designed for science majors. Students must complete 8 credits of the following courses, and depending on what was taken in the GEP, this requirement may already be satisfied.
■ Note: both semesters do not have to be in the same subject area.
■ Note: depending on which courses were taken in the GEP, this requirement could require between 0 and 8 credits to complete.
Select two semesters within the following;
■ See Basic Core for details.
   Biology majors’ courses with labs or Chemistry majors’ courses with labs or Physics majors’ courses with labs
3. Core Requirements: Basic Level
■ All courses specifically identified in the preceding Common Program Prerequisites section of this catalog are also required in the Basic Core, and must be taken;
Core: Required, satisfies the CPP
   COP 3223C Introduction to Programming with C and CPP
   MAC 2311C Calculus with Analytic Geometry I and GEP/CPP
   MAC 2312 Calculus with Analytic Geometry II and CPP
   MAC 2313 Calculus with Analytic Geometry III and CPP
   STA 2023 Statistical Methods I and CPP
   - and two semesters equivalent within the following:
      These satisfy the requirement for two semesters equivalent of science courses with labs designed for majors.
      CHM 2045C Chemistry Fundamentals I GEP/CPP
      - or an alternate sequence.
      - These two semesters only count as one, and are considered as equivalent to the above course.
      CHM 2040 Chemistry Fundamentals IA and GEP/CPP
      CHM 2041 Chemistry Fundamentals IB GEP/CPP
   - or complete both
      - Lecture plus lab count as one semester.
      CHM 2046 Chemistry Fundamentals II and CPP
      CHM 2046L Chemistry Fundamentals Laboratory CPP
      - or
      BSC 2010C Biology I or GEP/CPP
      BSC 2011C Biology II or CPP
      PHY 2048C General Physics Using Calculus I or GEP/CPP
      PHY 2049C General Physics Using Calculus II CPP
4. Core Requirements: Advanced Level (40 hrs)
   STA 4102 Computer Processing of Statistical Data 3 hrs
   STA 4163 Statistical Methods II 3 hrs
   STA 4164 Statistical Methods III 3 hrs
   STA 4321 Statistical Theory I 3 hrs
   STA 4322 Statistical Theory II 3 hrs
   ENC 3241 Writing for the Technical Professional 3 hrs
   COT 4500 Numerical Calculus 3 hrs
Select from the following courses; 4 hrs
   MAS 3105 Matrix and Linear Algebra or 4 hrs
   MAS 3106 Linear Algebra 4 hrs
Select from the following courses; 3 hrs
   COT 3100C Introduction to Discrete Structures or 3 hrs
   MTH 3302 Logic and Proof in Mathematics 3 hrs
Select from the following courses; 12 hrs
   STA 3096 Statistical Graphics or 3 hrs
   STA 4173 Biostatistical Methods or 3 hrs
   STA 4183 Theory of Interest or 3 hrs
   STA 4184 Introduction to Derivative Markets or 3 hrs
   STA 4186 Theory of Derivative Pricing or 3 hrs
   STA 4222 Sample Survey Methods or 3 hrs
   STA 4502 Nonparametric Statistical Methods or 3 hrs
   STA 4504 Categorical Data Analysis or 3 hrs
   STA 4504 PC Statistical Quality Control or 3 hrs
   STA 4552 Applied Time Series 3 hrs
5. Restricted Electives (9 hrs)
- Select from upper division or graduate (5000 level), statistics, mathematics, or computer science courses.
- Selected courses in engineering or business may be used but must first be approved by the Statistics Department.
- The following courses cannot be used to satisfy this requirement:

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAC 2233</td>
<td>Concepts of Calculus</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MAC 2253</td>
<td>Applied Calculus</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MAC 2254</td>
<td>Applied Calculus II</td>
<td>3 hrs</td>
</tr>
<tr>
<td>MHF 4404</td>
<td>History of Mathematics</td>
<td>3 hrs</td>
</tr>
<tr>
<td>All MAE</td>
<td>courses</td>
<td></td>
</tr>
</tbody>
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6. Capstone Requirements
- None

7. Foreign Language Requirements

8. Electives
- Select primarily from upper level courses after meeting with a departmental advisor. Courses may be outside the department.
- The following courses from business may be used without prior approval by the Statistics Department.

<table>
<thead>
<tr>
<th>Course</th>
<th>Title</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACB 2021</td>
<td>Principles of Financial Accounting</td>
<td>3 hrs</td>
</tr>
<tr>
<td>ACB 2071</td>
<td>Principles of Managerial Accounting</td>
<td>3 hrs</td>
</tr>
<tr>
<td>ECO 2023</td>
<td>Principles of Microeconomics</td>
<td>3 hrs</td>
</tr>
<tr>
<td>FIN 3403</td>
<td>Business Finance</td>
<td>3 hrs</td>
</tr>
</tbody>
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9. Additional Requirements
- None

10. Required Minors
- None

11. Departmental Exit Requirements
- Students must earn at least a “C” (2.0) in each course with a STA prefix.
- Students must achieve a minimum 2.0 cumulative GPA in all computer science and mathematics courses satisfying major requirements.
- Students must achieve a minimum cumulative GPA of 2.0 in all courses satisfying major requirements.
- Take SOA Exam P (Probability) and report the score to the department.

12. University Minimum Exit Requirements
- A 2.0 UCF GPA
- 60 semester hours earned after CLEP awarded
- 48 semester hours of upper division credit completed
- 30 of the last 39 hours of course work must be completed in residency at UCF.
- A maximum of 45 hours of extension, correspondence, CLEP, Credit by Exam, and Armed Forces credits permitted.
- Complete the General Education Program, the Gordon Rule, and nine hours of Summer credit.

Total Semester Hours Required
- 120

Honors in Major
- None

Related Programs
- Mathematics - Applied Track
- Mathematics Education

Certificates
- None

Related Minors
- Statistics
- Mathematics

Advising Notes
- It is the student’s responsibility to ensure they have satisfied course prerequisites before registering for a class.

Transfer Notes
- Lower division courses do not substitute for upper division courses.
- Courses transferred from private and out-of-state schools must be evaluated for equivalency credit. The student must provide all supporting information.

Acceptable Substitutes for Transfer Courses
- The following substitutions are acceptable for Common Program Prerequisites if taken as part of the AA course work.
  - Computer Science: any COP programming language course will satisfy the CPP. However, the listed course is a prerequisite for Computer Sciences courses and still may need to be taken.
  - Biology: any 2 laboratory courses for majors with BSC, CHM, or PHY prefixes will satisfy the CPP. However, the listed biology courses are also a core requirement and will need to be taken.
  - Statistics: although any STA 2XXX course will satisfy the CPP, the listed course is required in the program’s core and will still need to be taken.

Plan of Study (120 hrs)
- This is one of numerous possible plans of study.
  See program description for all requirements. Consult a departmental advisor for alternate, new or more appropriate selections.
  - Prior to enrolling in Chemistry, take Chemistry Placement Test ~ http://knightsource.sdes.ucf.edu/placement
  - Prior to enrolling in Math, take Math Placement Test ~ http://utc.sdes.ucf.edu
  - Although all classes are listed as being taken during the academic year, you may be required to complete 8 hours of them during the Summer. Consult with an advisor to determine if you are exempt.

Freshman Year - Fall
- 13 hrs
- MAC 2311C Calculus with Analytic Geometry I
- STA 2023 Statistical Methods I
- ENC 1101 Composition I
- GEP

Freshman Year - Spring
- 15 hrs
- MAC 2312 Calculus with Analytic Geometry II
- BSC 2010C Biology I
- ENC 1102 Composition II

Select one course:
- 4 hrs
  - CHM 2045C Chemistry Fundamentals I or
  - PHY 2063C College Physics I

Sophomore Year - Fall
- 16 hrs
- MAC 2313 Calculus with Analytic Geometry III
- STA 4163 Statistical Methods II
- ECO 2013 Principles of Macroeconomics
- GEP

Sophomore Year - Spring
- 15 hrs
- STA 4164 Statistical Methods III
- COP 3223C Introduction to Programming with C
- Core Course
- Core Course

Junior Year - Fall
- 15 hrs
- STA 4321 Statistical Theory I
- Restricted Elective
- Restricted Elective
- Core Course
- Core Course

Junior Year - Spring
- 16 hrs
- STA 4322 Statistical Theory II
- Core Course
- Free Elective
- Elective / Minor
- Elective / Minor
### UCF Degree Programs

#### Senior Year - Fall
- STA 4102 Computer Processing of Statistical Data: 3 hrs
- COT 4500 Numerical Calculus: 3 hrs
- ENC 3241 Writing for the Technical Professional: 3 hrs
- Core Course: 3 hrs
- Elective / Minor: 3 hrs
- Take SOA EXAM P (Probability).  

#### Senior Year - Spring
- GEP: 3 hrs
- GEP: 3 hrs
- Elective / Minor: 3 hrs
- Elective / Minor: 3 hrs
- Elective / Minor: 3 hrs

### Program Academic Learning Compacts
- Program Academic Learning Compacts (student learning outcomes) for undergraduate programs are located at: [http://www.oeas.ucf.edu/alc/academic_learning_compacts.htm](http://www.oeas.ucf.edu/alc/academic_learning_compacts.htm)