## UCF Degree Programs

### Computer Science (B.S.)

**College of Engineering and Computer Science**

Department of Computer Science,

Harris Corp. Engineering Center, Room: 346


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Foundation Examination: Prior to taking courses beyond basic core requirements, students must pass a foundation exam (COT 3960) which covers problem solving techniques, algorithms, abstraction, proofs, and programming language skills. Tests will be administered each semester. Refer to the computer science website for more information about the foundation exam.

### Admission Requirements

- None

### Degree Requirements

- Students are required to consult with a departmental advisor and file a plan of study after passing the foundation exam.
- Students must meet a Residency Requirement of at least 24 semester hours of regularly scheduled 3000-5000 level courses taken from the Computer Science Division at UCF.
- 18 of the 24 Residency hours must be at the 4000-5000 level.
- Students must earn at least a 2.0 in each course 2-5.
- Students in the Computer Science major are expected to make consistent good progress toward their degrees to remain enrolled in, or eligible for, any major in the College of Engineering and Computer Science (CECS) or the College of Optics and Photonics (COP). Therefore, any student majoring in Computer Science who repeats any UCF course and does not earn a grade of "C" (2.0) or better on the second attempt will be placed on Lack of Progress Probation and remain on Lack of Progress Probation as long as the student is enrolled in a CECS or COP major. If a student on Lack of Progress Probation does not receive a grade of "C" (2.0) or better by the third attempt in the same UCF course, the student will be excluded from all CECS and COP majors. Any student majoring in Computer Science who has accumulated 7 or more unsuccessful attempts (i.e., grades below "C" (2.0) and withdrawals) over all courses taken at UCF will be placed on Lack of Progress Probation and remain on Lack of Progress Probation as long as the student is enrolled in a CECS or COP major. If a student on Lack of Progress Probation has a tenth unsuccessful attempt over all courses taken at UCF, the student will be excluded from all CECS and COP majors.
- A student who is excluded from CECS and COP majors may seek readmission to a major in CECS or COP after at least one full year has passed since exclusion. Readmission is not automatic and is dependent upon a high probability of success after readmission. Any student who is readmitted to the Computer Science major will be subject to all probation conditions that applied at the time of exclusion.

### 1. UCF General Education Program (GEP) (39 hrs)

| Required | ENC 1101 | Composition I | 3 hrs |
| Required | ENC 1102 | Composition II | 3 hrs |

**Select 1:** 3 hrs  
- Prefer SPC 1603C Fundamentals of Technical Presentations 3 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)

### E: Science Foundations (8 hrs)

**Prefer BSC 2010C Biology I** 4 hrs  
**Prefer PHY 2048C General Physics Using Calculus I** 4 hrs

### 2. Common Program Prerequisites (CPP) (17 hrs)

- A “C” (2.0) or better is required in all courses in this area.
- See “Common Prerequisites” in the Transfer and Transitions Services section for more information.

| 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 |
| PHY 2048C | General Physics Using Calculus I | GEP |
| PHY 2049C | General Physics Using Calculus II | 4 hrs |

**Select 2:** 6 hrs  
- 4 hours for this requirement assumes that BSC 2010C is taken since the hours for this course are also in the GEP.

| BSC 2010C | Biology I or | GEP |
| COP 3002C | Computer Science I | 3 hrs |
| COP 3003C | Computer Science II | 3 hrs |
| CDA 3103C | Computer Logic and Organization | 3 hrs |
| COP 3100C | Introduction to Discrete Structures | 3 hrs |
| CIS 3360 | Security in Computing | 3 hrs |
| COP 3402 | Systems Software | 3 hrs |
| COP 3503C | Computer Science II | 3 hrs |
| COP 4331C | Processes for Object-Oriented Software | 3 hrs |

### 3. Core Requirements: Basic Level (24 hrs)

- A “C” (2.0) or better is required in all courses in this area.

| STA 2023 | Statistical Methods I | GEP |
| COP 3330 | Object Oriented Programming | 3 hrs |
| COP 3502C | Computer Science I | 3 hrs |
| COP 3503C | Computer Science II | 3 hrs |
| CDA 3103C | Computer Logic and Organization | 3 hrs |
| COP 3500C | Introduction to Discrete Structures | 3 hrs |
| CIS 3360 | Security in Computing | 3 hrs |
| COP 3402 | Systems Software | 3 hrs |
| COP 3986 | CS Foundation Exam | 0 hrs |

**Select 1:** 3 hrs

- ENC 3241 Writing for the Technical Professional or 3 hrs
- ENC 3250 Professional Writing 3 hrs

### 4. Core Requirements: Advanced Level (21 hrs)

- A “C” (2.0) or better is required in all courses in this area.
- Students must maintain at least a 2.5 GPA in the following courses.

| COP 4331C | Processes for Object-Oriented Software | 3 hrs |
| EEL 4768 | Computer Architecture | 3 hrs |
| COP 4210 | Discrete Structures II | 3 hrs |
| COP 4020 | Programming Languages I | 3 hrs |
| COP 4600 | Operating Systems | 3 hrs |
| COP 4893 | Senior Design I | 3 hrs |
| COP 4895 | Senior Design II | 3 hrs |

### 5. Restricted Electives (15 hrs)

- A “C” (2.0) or better is required in all courses in this area.

### 4000-5000 level Computer Science courses 9 hrs

- At most 3 hours of independent study allowed. No internship or cooperative education credits are allowed. Approved IT courses offered by Computer Science may also be used toward this requirement (3 credits).

### Advanced mathematics or statistics 6 hrs

- Choose at least two courses from the following list of approved choices to satisfy this requirement:

| MAC 2313 | Calculus with Analytic Geometry III | 4 hrs |
| MAP 2302 | Ordinary Differential Equations I | 3 hrs |
| MAS 3105 | Matrix and Linear Algebra | 4 hrs |
| MAS 3106 | Linear Algebra | 4 hrs |
6. Capstone Requirements

- None

7. Foreign Language Requirements

Admissions
- Two years high school, or one year college language (or equivalent proficiency exam) prior to graduation.

Graduation
- Proficiency exam in a second language, one semester of college level Foreign Language, or 3 credits of multicultural courses approved by Computer Science. This requirement is waived for second degree seeking students.

8. Electives (4 hrs)
- Select primarily from upper level courses after meeting with a departmental advisor. Courses may be outside the department.

9. Additional Requirements

- None

10. Required Minors

- None

11. Departmental Exit Requirements

- None.

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
- Computer Engineering
- Information Technology

Certificates
- None

Related Minors
- Information Technology
- Intelligent Robotic Systems (IRS) - Interdisciplinary
- Interdisciplinary Informatics Technology

Advising Notes
- The Computer Science program offers the Accelerated BS/MS Program to students of high academic standing. This program allows up to twelve hours to be shared between the BS and MS degrees. See your department or the Accelerated program section in the back of this catalog for more information.

Transfer Notes
- 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
- None

Plan of Study

**Freshman Year - Fall**
- ENC 1101 Composition I 3 hrs
- SPC 1603C Fundamentals of Technical Presentations 3 hrs
- COP 3223C Introduction to Programming with C 3 hrs
- MAC 2311C Calculus with Analytic Geometry I 4 hrs

**Freshman Year - Spring**
- ENC 1102 Composition II 3 hrs
- COT 3100C Introduction to Discrete Structures 3 hrs
- COP 3502C Computer Science I 3 hrs
- CDA 3103C Computer Logic and Organization 3 hrs
- COT 3960 CS Foundation Exam 0 hrs

**Freshman Year - Summer**
- MAC 2312 Calculus with Analytic Geometry II 4 hrs
- COP 3330 Object Oriented Programming 3 hrs

**Sophomore Year - Fall**
- COP 3402 Systems Software 3 hrs
- COP 3503 Computer Science II 3 hrs
- PHY 2048C General Physics Using Calculus I 4 hrs
- GEP 3 hrs

**Sophomore Year - Spring**
- COP 4331C Processes for Object-Oriented Software Development 3 hrs
- PHY 2049C General Physics Using Calculus II 4 hrs
- CIS 3360 Security in Computing 3 hrs

**Select 1:**
- ENC 3241 Writing for the Technical Professional 3 hrs
- ENC 3250 Professional Writing 3 hrs

**Sophomore Year - Summer**
- STA 2023 Statistical Methods I 3 hrs
- GEP 3 hrs

**Junior Year - Fall**
- EEL 4768 Computer Architecture 3 hrs
- COP 4020 Programming Languages I 3 hrs
- BSC 2010C Biology I 4 hrs
- GEP 3 hrs

**Junior Year - Spring**
- COP 4600 Operating Systems 3 hrs
- CHM 2045C Chemistry Fundamentals I 4 hrs
- Math/Stat Restricted Elective 3 hrs
- CS Restricted Elective 3 hrs

**Junior Year - Summer**
- COT 4210 Discrete Structures II 3 hrs

**Senior Year - Fall**
- CS Restricted Elective 3 hrs
- Free Elective 3 hrs
- COP 4934 Senior Design I 3 hrs
- Multicultural Elective 3 hrs

**Senior Year - Spring**
- CS Restricted Elective 3 hrs
- GEP 3 hrs
- Math/Stat Restricted Elective 3 hrs
- COP 4935 Senior Design II 3 hrs

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

Equipment Fees
- Part-Time Student: $28 per term
- Full-Time Student: $57 per term