

Accelerated Undergraduate-Graduate Programs

Computer Science - Accelerated Undergraduate-Graduate Program (B.S. / M.S.)

College of Engineering and Computer Science
Department of Computer Science,
Harris Corp. Engineering Center, Room: 437
<http://www.eecs.ucf.edu>

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Admission Requirements

- See Common Program Prerequisites.
- Qualified students may apply after completion of a minimum of 60 credit hours and successful completion of the Foundation Exam.
- Completion of no more than 90 credit hours.
- Completion of the GRE with a highly competitive score by the end of first semester of the senior year for continuation in the program.

■ Admission is not automatic. Interested students may need to be interviewed.

■ Admission to the Accelerated Program does not guarantee formal admission to the MS program.

Degree Requirements

- None

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

■ See Computer Science major in the catalog for track specific GEP requirements.

A: Communication Foundations

B: Cultural & Historical Foundations

C: Mathematical Foundations

D: Social Foundations

E: Science Foundations

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

■ See Computer Science major in the catalog for the CPP requirements.

3. Core Requirements: Basic Level (30 hrs)

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
COT 3100C	Introduction to Discrete Structures		3 hrs
CIS 3360	Security in Computing		3 hrs
COP 3402	Systems Software		3 hrs
COT 4210	Discrete Structures II		3 hrs
COP 4331C	Processes for Object-Oriented Software Development		3 hrs
COT 3960	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 (18 hrs)

■ At most 3 hours of independent study or research allowed. No internship or cooperative education credits are allowed.

■ It is recommended that students take at least 3 classes from a primary area to gain an in-depth knowledge in that area of Computer Science.

■ It is recommended that students take classes from at least 2 different secondary areas to gain a broad knowledge of Computer Science. These courses may also be listed in the student's primary area.

■ 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 all courses in this section.

■ Students participating in the Accelerated Undergraduate to Graduate Program in Computer Science should take up to 12 hours of 5000 and 6000 level courses from the areas listed below.

Systems Area

COP 4331C	Processes for Object-Oriented Software Development		3 hrs
COP 4520	Concepts of Parallel and Distributed Processing		3 hrs
COP 4600	Operating Systems		3 hrs
COP 4710	Database Systems		3 hrs
EEL 4768	Computer Architecture		3 hrs
CDA 5106	Advanced Computer Architecture		3 hrs
COP 5611	Operating Systems Design Principles		3 hrs
COP 5711	Parallel and Distributed Database Systems		3 hrs

AI and Machine Learning Area

CAP 4053	AI for Game Programming		3 hrs
CAP 4453	Robot Vision		3 hrs
CAP 4630	Artificial Intelligence		3 hrs
CAP 5415	Computer Vision		3 hrs
CAP 5512	Evolutionary Computation		3 hrs
CAP 5610	Machine Learning		3 hrs
CAP 5636	Advanced Artificial Intelligence		3 hrs

Graphics, Games, and HCI Area

CAP 4053	AI for Game Programming		3 hrs
CAP 3104	Foundations of HCI		3 hrs
CAP 4720	Computer Graphics		3 hrs
CNT 5008	Computer Communication Networks Architecture		3 hrs
CAP 5725	Computer Graphics I		3 hrs

Algorithms and Complexity Area

COT 4500	Numerical Calculus		3 hrs
CAP 5510	Bioinformatics		3 hrs
CAP 5512	Evolutionary Computation		3 hrs
COP 5021	Program Analysis		3 hrs
COP 5537	Network Optimization		3 hrs
COT 5405	Design and Analysis of Algorithms		3 hrs

Software Engineering Area

CIS 4615	Secure Software Development and Assurance		3 hrs
COP 4020	Programming Languages I		3 hrs
COP 4520	Concepts of Parallel and Distributed Processing		3 hrs
COP 4710	Database Systems		3 hrs
CEN 5016	Software Engineering		3 hrs
COP 5021	Program Analysis		3 hrs
COP 5711	Parallel and Distributed Database Systems		3 hrs

Cybersecurity Area

CIS 3362	Cryptography and Information Security		3 hrs
CIS 4203C	Digital Forensics		3 hrs
CIS 4361	Secure Operating Systems and Administration		3 hrs
CIS 4615	Secure Software Development and Assurance		3 hrs
CIS 4940C	Topics in Cybersecurity		3 hrs
CAP 4145	Introduction to Malware Analysis		3 hrs
CNT 4403	Network Security and Privacy		3 hrs
EEE 4346C	Hardware Security and Trusted Circuit Design		3 hrs

Big Data Area

COP 4520	Concepts of Parallel and Distributed Processing		3 hrs
COP 4710	Database Systems		3 hrs
COT 4500	Numerical Calculus		3 hrs
EEL 4768	Computer Architecture		3 hrs
CNT 4425C	Cloud Computing Management		3 hrs
CDA 5106	Advanced Computer Architecture		3 hrs
CNT 5008	Computer Communication Networks Architecture		3 hrs
CDA 5110	Parallel Architecture and Algorithms		3 hrs
COP 5611	Operating Systems Design Principles		3 hrs
CAP 5610	Machine Learning		3 hrs
COP 5711	Parallel and Distributed Database Systems		3 hrs

Vision and Robotics Area

CAP 4453	Robot Vision		3 hrs
CAP 4720	Computer Graphics		3 hrs
CAP 5415	Computer Vision		3 hrs
CAP 5725	Computer Graphics I		3 hrs

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EGN 4060C	Introduction to Robotics	3 hrs
EEL 4660	Robotic Systems	3 hrs
EEL 5820	Image Processing	3 hrs

Computer Networks Area

CNT 4403	Network Security and Privacy	3 hrs
CNT 4704	Analysis of Computer Communication Networks	3 hrs
EEL 4781	Computer Communication Networks	3 hrs
CNT 5008	Computer Communication Networks Architecture	3 hrs
COP 5537	Network Optimization	3 hrs
CNT 5805	Network Science	3 hrs
EEL 5780	Wireless Networks	3 hrs

5. Restricted Electives (15 hrs)

4000-5000 level mathematics or statistics 6 hrs

■ courses from: STA, MAP, MAA, MAD, MAS prefixes and the following courses.

■ No independent study hours, internship, or cooperative education hours are allowed.

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 (6 hrs)

■ A "C" (2.0) or better is required in the two courses.

COP 4934	Senior Design I	3 hrs
COP 4935	Senior Design II	3 hrs

7. Foreign Language Requirements

Admissions

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

Graduation

■ None

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 Undergraduate Hours Required

■ 120

Total Combined Hours Required

■ 138

Honors In Major

■ None

Related Programs

- Computer Engineering
- Information Technology

Certificates

■ Cyber Operations

Related Minors

- Intelligent Robotic Systems (IRS) - Interdisciplinary
- Secure Computing and Networks

Advising Notes

■ The following will be waived for this joint degree program:

- The limit of nine hours to be shared between undergraduate and graduate programs.
- Undergraduate students taking graduate courses must be within nine hours of graduation
- Undergraduate students taking graduate courses must not register for more than a total of twelve hours in that semester

■ Undergraduate students are not eligible to take 6000-level courses

Transfer Notes

■ None

Acceptable Substitutes for Transfer Courses

■ None

Shared Courses (12 hrs)

■ Up to 12 credit hours of approved 5000 or 6000 level courses of grades B (3.0) or better may be counted towards the BS and Masters degrees. These 12 credit hours will meet either restricted elective or course requirements for the major. Contact the Graduate Coordinator in the Computer Science department for a list of acceptable courses.

Graduate Courses Link

■ None

Program Academic Learning Compacts

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

Equipment Fees

- Part-Time Student: \$9 per term
- Full-Time Student: \$18 per term