

CURRICULUM

The Computer Science MS program with specialization in Bioinformatics requires a minimum of 30 credit hours beyond the bachelor's degree and recommends 3 to 6 credit hours in directed research with one of the bioinformatics faculty. The students must take 15 credit hours of required core courses and 6 credit hours of restricted electives and complete a culminating experience as determined by the program's graduate committee. Students must receive a 3.0 GPA or higher in all courses.

A total of at least 30 semester hours of credit at the 5000 and 6000 level of Computer Science courses. At least half of these credits (15) must be at the 6000 level, and under no circumstances can they contain CXX 7919 (Doctoral Research) credit, undergraduate credit, or 5000 level CGS courses.

Total Required Hours for MS—30 Credit Hours Minimum beyond the Bachelor's Degree

Required Courses—15 Credit Hours

- CDA 5106 Advanced Computer Architecture (3 credit hours)
- COT 5405 Design and Analysis of Algorithms (3 credit hours)
- CAP 5510 Introduction to Bioinformatics (3 credit hours)
- CAP 6515 Algorithms in Computational Biology (3 credit hours)
- CAP 6645 Machine Learning in Bioinformatics (3 credit hours)

Restricted Electives—6 Credit Hours

Restricted electives must include six credits at the 5000 and 6000 level from the following bioinformatics courses:

- COT 6417 Algorithms on Strings and Sequences (3 credit hours)
- CAP 6517 Computational Genomics (3 credit hours)
- CAP 6XXX Data Mining in Bioinformatics (3 credit hours)
- CAP 6XXX Computational Systems Biology (3 credit hours)
- PCB 5596 Biomedical Informatics: Sequence Analysis (3 credit hours)
- BSC 5436 Biomedical Informatics: Structure Analysis (3 credit hours)

Additional credits will normally be taken from 5000 and 6000 level Computer Science courses. Approval may be granted for 6 credit hours at the most to be taken from graduate courses outside Computer Science. Such approval needs to occur prior to taking these outside courses.

Directed Research—3 to 6 Credit Hours

XXX 6918 (3 to 6 credit hours)

The students are encouraged to take 3 to 6 credit hours of directed research with one of the bioinformatics faculty.

ADMISSIONS

For information on general UCF graduate admissions requirements that apply to all prospective students, please visit the [Admissions and Registration](#) section of the Graduate Catalog. Applicants must [apply online](#). All requested materials must be submitted by the established deadline(s).

The College of Engineering and Computer Science requires that you fill out a pre-application form (www.graduate.cecs.ucf.edu) before you complete the application for graduate admission. The deadlines for the pre-application form can be found on the [Prospective Student Page](#) on the College of Engineering and Computer Science website.

In addition to the [general UCF graduate admission requirements](#), applicants to this program must provide:

- One official transcript (in a sealed envelope) from each college/university attended.
- Official, competitive GRE score taken within the last five years.
- Résumé.
- Statement of educational, research, and professional career objectives.

Faculty members may choose to conduct face-to-face or telephone interviews before accepting an applicant into their research program.

An undergraduate degree in Computer Science is desirable but not required. Applicants without a strong undergraduate background in Computer Science must demonstrate an understanding of the material covered in the following upper-division undergraduate courses:

- **EEL 4768C Computer Architecture**
- **COP 4020 Programming Languages I**
- **COP 4600 Operating Systems**
- **COT 4210 Discrete Computational Structures**

Applicants may choose to demonstrate their knowledge of these courses by scoring well on the Subject (Advanced) GRE in Computer Science. It is estimated that more than 85 percent of the Computer Science Subject Test directly deals with the material covered in these courses.

Application Deadlines

All application materials must be submitted by the appropriate deadline listed below.

Computer Science MS	Fall Priority	Fall	Spring	Summer
Domestic Applicants	Jan 15	Jul 15	Dec 1	April 5
International Applicants	Jan 15	Jan 15	Jul 1	Nov 1
International Transfer Applicants	Jan 15	Mar 1	Sep 1	Dec 15

FINANCIALS

Graduate students may receive financial assistance through fellowships, assistantships, tuition support, or loans. For more information, see [Financing Grad School](#), which describes the types of financial assistance available at UCF and provides general guidance in planning your graduate finances. The [Financial Information](#) section of the Graduate Catalog is another key resource.

Fellowships

Fellowships are awarded based on academic merit to highly qualified students. They are paid to students through the Office of Student Financial Assistance, based on instructions provided by the College of Graduate Studies. Fellowships are given to support a student's graduate study and do not have a work obligation. For more information, see [Financing Grad School](#), which includes descriptions of UCF fellowships and what you should do to be considered for a fellowship.