MS in Computer Science with Specialization in Bioinformatics

CURRICULUM

The Computer Science MS program with specialization in Bioinformatics requires a minimum of 30 credit hours beyond the bachelor's degree and 6 credit hours in independent study 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.

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 6XXX Algorithm in Computational Molecular Biology (3 credit hours) (Currently offering as a special topic)
- CAP 6645 Machine Learning in Bioinformatics (3 credit hours)

Restricted Electives—6 Credit Hours

Restricted electives must include six credits at the 6000-level from the following bioinformatics courses, which will be offered each year.

- CAP 5417 Biological Sequence and Structure Analysis (3 credit hours)
- CAP 6XXX Computational Genomics (3 credit hours) (Currently offering as a special topic)
- CAP 6XXX Data Mining in Bioinformatics (3 credit hours
- CAP 6XXX (PCB 6596) Bioinformation and Genomics (3 credit hours)
- CAP 6XXX Computational Biology Lab (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.

Independent Study—6 Credit Hours

XXX 6971 (6 credit hours)

The students are required to take 6 credit hours of independent study with the professor who directs or co-directs the student's research. The independent study is expected to span two semesters, not from the first semester.

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.
- 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:

- CDA 4150 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	Apr 15
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.