Degree: **Bachelor of Science**

Lower Division Preparation
To qualify for admission to the program, FIU undergraduates must have met all the lower division requirements including CLAST, completed sixty semester hours, and must be otherwise acceptable into the program.

As part of the 60 semester hours of lower division coursework necessary to enter this upper division major, note the following recommendations or course requirement, or both.

Required Courses: Computer Programming in COBOL at an acceptable level. Computer Programming in PASCAL at an acceptable level. Calculus through infinite series.

The equivalent courses at the University are:

COP 3120	COBOL and Data Processing	
COP 3210	Programming in PASCAL	
MAC 3311-2	Calculus I and II	

Upper Division Program
Required Courses

ENC 3210	Technical Writing	3
COP 3212	Intermediate Programming	3
COP 3400	Assembly Language Programming	3
MAD 3104	Discrete Mathematics	3
MAD 3512	Introduction to Theory of Algorithms	3
CDA 4101	Structured Computer Organization	3
COP 3530	Data Structures	3
CIS 4610	Introduction to Software Engineering	3
COP 4610	Operating Systems Principles	3
STA 3033	Introduction to Probability and Statistics for CS	3
or		
STA 3321-2	Mathematical Statistics I and II	3-3

Plus one course from each of the following two lists.

List 1

MAD 3305	Graph Theory	3
MAD 3401	Numerical Analysis	3
MHF 4302	Mathematical Logic	3
COT 5420	Theory of Computation I	3
MAD 4203	Introduction to Combinatorics	3

List 2

CDA 4400	Computer Hardware Analysis	3
CDA 4500	Data Communications	3
CDA 3700	Introduction to Computer Graphics	3
COP 4555	Survey of Programming Languages	3
COP 4540	Data Base Management	3
COP 5621	Compiler Construction	3

Electives: The balance of the 60 semester hours required for graduation may be chosen from any courses in the University approved by the student's advisor. A Computer Science major may not take a computer related course in another department for elective credit, unless specifically approved in advance in writing by the student's advisor.

Remarks: The following courses are not acceptable for credit toward graduation, unless a student has passed the course before declaring a Computer Science major: CGS 2060, CGS 3061, CIS 3000, COP 2172, MAC 3233, STA 3013, STA 3122-23, STA 3132, and QMB 3150 (College of Business Administration).

Minor in Computer Science
Required Courses

COP 3210	Programming in PASCAL	3
COP 3400	Assembly Language Programming	3
COP 3212	Intermediate Programming	3
COP 3120	Data Processing and COBOL	3
or		
CGS 3403	COBOL for Non-Computer Science Majors	

Plus one course selected from the following list: CDA 4101, CDA 4400, CDA 4500, CIS 4610, CAP 3700, COP 4555, MAD 3401. The student must verify that he or she has the prerequisite for the course selected. A grade of 'C' or higher in each of these courses is necessary for the minor.

Remarks: No mathematical sciences courses (Computer Science, Mathematics, or Statistics) can be applied to more than one minor, nor can courses used to satisfy major requirements be used towards minor requirements. In the case where a mathematical science course is required for a major in one area and a minor in another, the student should see his or her advisor for an appropriate substitution for the requirement of the minor.

Master of Science in Computer Science
Admission: The following are in addition to the University's graduate admission requirements.

1. A Bachelor's Degree in Computer Science or equivalent degree in a related field from an accredited university or college as judged by the School's Graduate Committee.
2. A 'B' average or better in all coursework attempted while registered as an upper-division student in the Bachelor's degree.
3. Acceptable courses in Calculus and Statistics;
4. GRE score of at least 650 quantitative and 500 verbal taken within the last five years;
5. Three letters of recommendation from persons in a position to judge the applicant's potential success in graduate study;
6. Approval of the Graduate Committee.

Graduate Program of Studies

CIS 5611	Software Engineering	3
COP 6611	Advanced Operating Systems	3
COT 5420	Theory of Computation I	3
COT 6400	Analysis of Algorithms	3

In addition, the student must choose four courses from the following list, subject to the approval of the Graduate Committee:

CAP 5701	Computer Graphics	3
CDA 6501	Distributed Processing	3
CIS 6327	Statistical Computer Performance Evaluation	3
COP 5540	Data Base and File Organization	3
COP 5621	Compiler Construction	3
COP 6321	Theory of Computation II	3
COP 6020	Survey of Programming Languages	3
COP 6545	Advanced Topics in Database Management	3
COT 6210	Theory of Formal Languages	3
CAP 5680	Expert Systems	3
CDA 5312	Micro Processing for Software Designers	3
COT 6556	Semantics of Programming Languages	3
MAD 5405	Numerical Methods	3
MAP 6127	Simulation and Modeling	3

In addition, the student must satisfy one of the following two options:

Thesis Option

CIS 6970	Thesis	6

After completion of the other required courses, the student must conduct a research thesis. The topic must first be approved by the faculty member who will supervise the research and then by the Graduate Committee. The thesis will be accepted only after being read and approved by a Reading Committee. An oral defense is required before the Reading Committee.

Non-Thesis Option:

Additional Coursework		6

The student is required to take at additional six semester hours of approved electives. The student then must pass a comprehensive examination which may have both written and oral parts and which is based on the student's coursework. This examination may not be taken more than two times, except by permission of the Graduate Committee.

Remarks: The program requires a 'B' average or higher and a grade of 'C' or higher in each course. A maximum of two courses may be transferred into the program from outside the University, subject to the approval of the Graduate Committee.

Doctor of Philosophy in Computer Science
The requirements for admission to the doctoral program in Computer Science are:

1. A baccalaureate or master degree in Computer Sciences, or equivalent degree in a related field as judged by the School's Graduate Committee.