FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

UGPC Approval _____
UFS Approval _____
Banner _____
Catalog _____

Department Electrical Engineering and Computer Science

College Engineering and Computer Science

Program Name

PhD Computer Science
PhD Computer Engineering

☐ **New Program***

☑ **Change Program***

Effective Date
(TERM & YEAR)

Summer 2022

Please explain the requested change(s) and offer rationale below or on an attachment.

This proposal contains the following revisions: the prerequisites are written as a text rather than a table, and the number of reference letters is changed from 3 to 2.

*All new programs and changes to existing programs must be accompanied by a catalog entry showing the new or proposed changes.

Faculty Contact/Email/Phone

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Consult and list departments that may be affected by the change(s) and attach documentation

Approved by	***Date***
Department Chair	1/26/2022
College Curriculum Chair	01-26-2022
College Dean	1/26/22
UGPC Chair	
UGC Chair	
Graduate College Dean	
UFS President	
Provost	

Email this form and attachments to UGPC@fau.edu 10 days before the UGPC meeting.

DOCTORAL PROGRAMS

Doctor of Philosophy with Major in Computer Engineering or in Computer Science

The department offers a program of advanced graduate study leading to a Doctor of Philosophy degree in Computer Engineering and a Doctor of Philosophy degree in Computer Science. The graduate of this program will be able to meet the highest standards of preparation for leadership in the computer science or engineering profession, including research, teaching and leadership in high-technology industry and governmental agencies. A Ph.D. Applicant's Guide is available from the department. These degree programs as well as the concentration below are available in person and fully online.

The Ph.D. in Computer Science program also offers a concentration in Data Science and Analytics. Students in this concentration gain expertise through both coursework and research activity in theoretical and applied data science and analytics. Admission and Degree Requirements are detailed below.

For working professionals seeking to advance their careers, the department offers a Professional Doctor of Philosophy with Major in Computer Science.

Admission Requirements
Application for admission to doctoral study will be evaluated on an individual basis by the department's graduate programs committee. Usually, the following four criteria must be met:

1. The applicant must submit the Graduate Record Examination (GRE) score and must have a GPA of at least 3.3 (out of 4.0 maximum) in previous graduate work. GRE scores more than five years old are normally not acceptable. The GRE requirement is waived for any student who has an M.S. degree from FAU's Department of Electrical Engineering and Computer Science.

2. The applicant must have a master's degree in Engineering, Computer Science or a related discipline awarded by a recognized institution. Thesis option is preferred. This requirement may be waived under exceptional circumstances (see B.S. to Ph.D. programs earlier in the College of Engineering and Computer Science section of the catalog).

2a. Applicants to the Ph.D. with Major in Computer Science are expected to have taken calculus 2 and a statistics course, to be proficient in programming, and to be knowledgeable in the topics of data structures, algorithm design and analysis, operating systems, and computer architecture. The admission committee will evaluate the application holistically to determine applicant suitability using several factors such as academic performance, GPA, GRE scores, background and experience. The admission committee may assign remedial courses on a case-by-case basis. In some cases, prerequisite requirements may be satisfied after admission to the Ph.D. program. In such a case, proficiency in the prerequisite courses must be shown before the student takes dissertation credits.

2b. Applicants to the Ph.D. with Major in Computer Engineering are expected to have taken calculus 2 and a statistics course, to be proficient in programming, and to be knowledgeable in the topics of microprocessor systems, computer architecture or CAD-based computer design, electronics or VLSI, data structures and algorithm analysis.The admission committee will evaluate the application holistically to determine applicant suitability using several factors such as academic performance, GPA, GRE scores, background and experience. The admission committee may assign remedial courses on a case-by-case basis. In some cases, prerequisite requirements may be satisfied after admission to the Ph.D. program. In such a case, proficiency in the prerequisite courses must be shown before the student takes dissertation credits.

3. The applicant must provide ~~three~~ two reference letters ~~(at least two from academia)~~ that address the student's research potential, motivation, relative academic achievement and personality. ~~Forms are supplied with applications for admission.~~

4. International students from non-English-speaking countries must be proficient in written and spoken English as evidenced by a score of at least 500 (paper-based test) or 213 (computer-based test) or 79 (Internet-based test) on the Test of English as a Foreign Language (TOEFL) or a score of at least 6.0 on the International English Language Testing System (IELTS).

~~Applicants are expected to have taken the following prerequisite courses (or equivalents) before pursuing the Ph.D. degree. In some cases, prerequisite requirements may be satisfied after admission to the Ph.D. program. In such a case, proficiency in the prerequisite courses must be shown before the student takes dissertation credits.~~

Prerequisite courses for Ph.D. with Major in Computer Science:

Introduction to Microprocessor Systems	CDA 3331C	3 **or**
Computer Architecture	CDA 4102	3 **or**
CAD-Based Computer Design	CDA 4204	3
Data Structures and Algorithm Analysis	COP 3530	3
Computer Operating Systems	COP 4610	3
Design and Analysis of Algorithms	COT 4400	3
Calculus with Analytic Geometry 1	MAC 2311	4
Calculus with Analytic Geometry 2	MAC 2312	4
Stochastic Models for Computer Science	STA 4821	3 **or**
Stochastic Processes and Random Signals	EEE 4541	3

Prerequisite courses for Ph.D. with Major in Computer Engineering:

Introduction to Microprocessor Systems	CDA 3331C	3
Computer Architecture	CDA 4102	3 **or**
CAD-Based Computer Design	CDA 4204	3
Electronics 1	EEE 3300	3 **or**
Introduction to VLSI	CDA 4210	3
Data Structures and Algorithm Analysis	COP 3530	3
Calculus with Analytic Geometry 1	MAC 2311	4
Calculus with Analytic Geometry 2	MAC 2312	4
Stochastic Models for Computer Science	STA 4821	3 **or**
Stochastic Processes and Random Signals	EEE 4541	3