FAU 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		Effective Date *(TERM & YEAR)*
BS to PhD programs; PhD Computer Science; PhD Computer Engineering; PhD Electrical Engineering	☐ New Program* ✔ Change Program*	Summer 2024

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

EECS department is adding the course Advanced Research (EGN 6918) to the Ph.D. programs in Computer Science, Computer Engineering and Electrical Engineering. In addition, the Advanced Research course is added as an option for the BS to PhD programs.

Students taking the Advanced Research course will focus on research activities that are relevant to the student's course of study. This course requires oversight by the student's advisor who can assess the student's performance at the end of the semester. This course can only be taken prior to admission to candidacy for the doctoral degree and may be repeated in multiple semesters.

*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	Consult and list departments that may be affected by the change(s) and attach documentation
Hari Kalva/hkalva@fau.edu/561-297-0511	NA

Approved by		Date
Department Chair	*Hari Kesh*	11/17/2023
College Curriculum Chair	*Masoud Jahandar Lashaki*	11/28/2023
College Dean	*M Cardei*	11/28/2023
UGPC Chair	*Paul R. Peluso*	Dec 18, 2023
UGC Chair	*Paul R. Peluso*	Dec 18, 2023
Graduate College Dean	*Robert W Stackman*	Dec 18, 2023
UFS President		
Provost		

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

COMBINED DEGREE PROGRAM INFORMATION
B.S. to Ph.D. Programs

Degree Requirements

1. Successful completion of the department's doctoral qualifying/candidacy exam. This exam will normally be taken after the student has completed 24 credits of graduate coursework in the department.
2. A minimum of 72 credits beyond the B.S. degree, distributed according to the following conditions:

    a. A minimum of 42 credits of graduate coursework from which a minimum of 27 credits of coursework must be in the doctorate-granting department (excluding directed independent study credits) and a minimum of 18 credits of 6000-level courses must be completed;

    b. Except under unusual circumstances, no more than 6 credits are allowed for directed independent study and/or advanced research graduate courses;

    c. No 4000-level course is allowed toward the degree. Courses taken to make up for the deficiencies will not be counted toward the degree;

    d. A minimum of 30 dissertation credits.
3. Successful completion and defense of the dissertation.

COMPUTER ENGINEERING OR COMPUTER SCIENCE
DOCTOR OF PHILOSOPHY (PH.D.)

Degree Requirements

A minimum of 72 graduate credits is required beyond a bachelor's degree. A master's degree in a related field is considered equivalent to 30 credits. A minimum of 18 credits of coursework is required beyond a master's degree. All courses must be approved by the student's advisor. Students lacking proper background may have to take additional courses to make up for the deficiencies. In addition to meeting the course requirement, a doctoral student must pass the Qualifying Examination, complete the dissertation under the supervision of the student's advisor and dissertation committee and pass the oral dissertation examination. Also a written dissertation proposal must be accepted by the dissertation committee at least six months prior to the oral dissertation examination. A doctoral candidate is expected to have at least one research paper published or accepted for publication in a fully refereed conference or journal prior to graduation. The following rules apply to the courses taken (beyond the master's degree):

1. Of the 18 credit minimum of coursework, a minimum of 12 credits must be in Computer Science and Engineering courses (excluding directed independent study credits) and a minimum of 9 credits of 6000-level courses must be completed.
2. No more than 3 credits of directed independent study or advanced research may be used to satisfy the minimum of 18 credits. In that case, the subject matter may not overlap the student's dissertation.
3. A course that is more than 10 years old at the time the degree is awarded cannot be counted toward the degree. This rule does not apply to the courses transferred from the master's degree.
4. No 4000-level course may be counted toward the degree. Courses taken to make up for deficiencies will not be counted toward the degree.
5. Students must register for a minimum of 24 credits of dissertation.
6. Students must have a GPA of 3.0 (out of 4.0 maximum) or better.
7. All courses in the degree programs must be completed with a grade of "C" or better.
8. Must complete two semesters of CGS 5937, Graduate Seminar (0 credits) with grades of Satisfactory ("S").

Graduate Coursework - 18 credits (for students entering with a master's degree)

Minimum of 12 credits from Computer Science and Computer Engineering courses at the 5000, 6000 or 7000 levels (excluding DIS). Minimum of 9 credits at the 6000 level. Maximum of 3 credits of Directed Independent Study or Advanced Research..

Directed Independent Study-Computer Science	COT 6900 **or**
Directed Independent Study-Computer Engineering	COT 6905 or
Advanced Research	EGN 6918

Dissertation - 24 credits

Dissertation - Computer Science (taken over multiple terms)	COT 7980 **or**
Dissertation - Computer Engineering (taken over multiple terms)	ECM 7980

ELECTRICAL ENGINEERING
DOCTOR OF PHILOSOPHY (PH.D.)

Degree Requirements

1. A minimum total of 72 credits is required beyond the bachelor's degree level. A master's degree in a related field is considered equivalent to 30 credits. Students must take a minimum of 18 credits of graduate coursework beyond the master's degree and a minimum of 24 dissertation credits.

2. Of the 18-credit minimum of coursework, a minimum of 12 credits must be Electrical Engineering courses (excluding directed independent study credits) and a minimum of 9 credits of 6000-level must be completed.

3. No more than 3 credits of directed independent study or advanced research may be used to satisfy the minimum of 18 credits. In that case, the subject matter may not overlap the student's dissertation.

4. No 4000-level course may be counted toward the degree. Courses taken to make up for deficiencies will not be counted toward the degree.

5. Specific Focus Area coursework will be required.

6. At least 6 credits in courses with math prefix are required as part of coursework beyond the bachelor's degree. These may include EEL 5613, Modern Control; EEE 5502, Digital Processing of Signals; EEL 6482, Electromagnetic Theory 1; EOC 5172, Mathematical Methods in Ocean Engineering 1.

7. Must complete two semesters of CGS 5937, Graduate Seminar (0 credits) with grades of Satisfactory ("S").

8. A written dissertation proposal must be accepted by the dissertation committee, at least six months prior to defending the dissertation.

9. When the candidate submits the Application for Graduation, he/she must indicate the following as a check list: (a) Date of QE taken and candidacy filed; (b) Date of dissertation proposal presented and approved by the Ph.D. Committee and (c) Status of the Plan of Study.

10. Draft copy of the dissertation must be submitted for review by the Ph.D. Committee at least 15 days prior to the date of defending the dissertation. And the dissertation must be completed and orally defended.

Graduate Coursework - 18 credits (for students entering with a master's degree)	
Select 18 credits at the 5000, 6000 or 7000 levels. Minimum of 12 credits in Electrical Engineering (excluding DIS). Maximum of 3 credits of Directed Independent Study or Advanced Research.	
Directed Independent Study	EEL 6905
Advanced Research	EGN 6918
Dissertation - 24 credits	
Dissertation (taken over multiple terms)	EEL 7980

For students entering with a bachelor's degree, see <u>B.S. to Ph.D. programs</u> earlier in this College of Engineering and Computer Science section.

Math Requirement - 6 credits

Select one course from the following

Digital Processing of Signals	EEE 5502	3
Modern Control	EEL 5613	3
Control Systems 2	EEL 5654	3
Electromagnetic Theory 1	EEL 6482	3
Detection Theory	EEL 6537	3
Special Topics in Electrical Engineering	EEL 6935	1-4
Mathematical Methods in Ocean Engineering 1	EOC 5172	3
Queueing Theory	MAP 6264	3