FLORIDA ATLANTIC UNIVERSITY

NEW/CHANGE PROGRAM REQUEST
Graduate Programs

Department Computer and Electrical Eng. and Computer Science

College Engineering and Computer Sceince

UGPC Approval _____
UFS Approval _____
Banner Posted _____
Catalog _____

Program Name
Professional Doctor of Philosophy with Major in Electrical Engineering

☐ **New Program**
☑ **Change Program**

Effective Date
(TERM & YEAR)
Fall 2020

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

CEECS department is proposing a self-supporting program called Professional Doctor of Philosophy with Major in Electrical Engineering. This program is designed specifically for working professionals. They will be able to advance their career with an accelerated graduate program and obtain an advanced degree while continuing their professional career. The admission requirements and curriculum specifications are detailed in the attached document.

Faculty Contact/Email/Phone

Hanqi Zhuang/zhuang@fau.edu/561-297-3413

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

Approved by	***Date***
Department Chair	1/29/2020
College Curriculum Chair — Ramesh Teegavarapu (Digitally signed by Ramesh Teegavarapu, DN: cn=Ramesh Teegavarapu, o=Florida Atlantic University, ou=Civil, Environmental and Geomatics Engineering, email=rteegavs@fau.edu, c=US, Date: 2020.01.31 11:18:14 -05'00')	1/31/2020
College Dean — Mihaela Cardei (Digitally signed by Mihaela Cardei, DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou=, email=mcardei@fau.edu, c=US, Date: 2020.02.01 21:38:41 -05'00')	02/01/2020
UGPC Chair	
UGC Chair	
Graduate College Dean	
UFS President	
Provost	

Email this form and attachments to UGPC@fau.edu one week before the UGPC meeting so that materials may be viewed on the UGPC website prior to the meeting.

GRADUATE COLLEGE
FEB 04 2020

Professional Doctor of Philosophy with Major in Electrical Engineering

The Professional Doctor of Philosophy degree in Electrical Engineering is designed specifically for working professionals. They will be able to advance their career with an accelerated graduate program and obtain an advanced degree while continuing their professional career. This professional program is available only for students that have a master's degree in Engineering, Computer Science or a related discipline awarded by a recognized institution. A minimum of 72 graduate credits is required beyond a bachelor's degree. Since a master's degree in a related field is considered equivalent to 30 credits, the students in this program must complete at least 42 credits distributed as follows: 18 credits of graduate coursework and 24 credits of dissertation.

The course offering format includes evenings, weekends, and online material using Canvas. Each course duration is 4 weeks, or one of the FAU semester/mini-mester course duration. Students are expected to complete the program in 3 years.

Admission Requirements

To qualify for unconditional or full acceptance into the Professional Doctor of Philosophy in Electrical Engineering program, applicants are required to meet all the admission requirements for the Doctor of Philosophy in Electrical Engineering program.

Conditional admission may be available under extraordinary circumstances to applicants who show high promise to successfully complete the program and have received a bachelor's degree from a regionally accredited institution, but who fall short of the GPA and/or the GRE requirement. In these cases, the Professional Doctor of Philosophy in Electrical Engineering admissions committee will carefully review the application and account for aspects including but not limited to: grade trends, mature work experience, work accomplishment and promotion, type and rigor of undergraduate degree program, references and letters of recommendation.

Curriculum

Same requirements as specified in the degree requirements for the Doctor of Philosophy in Electrical Engineering program, the option where students have already completed the master's degree.

Residency Requirements

This is a low-residency program. Graduate students are required to enroll for at least 1 credit during at least two semesters (fall, spring or summer) of every academic year in order to remain eligible for the degree. Students must be enrolled in a minimum of 1 credit hour during the semester of graduation.

Program Fees

The Professional Doctor of Philosophy in Electrical Engineering is a full-service, all-inclusive program. Professional Doctor of Philosophy in Electrical Engineering Program fees cover all program costs, including tuition, text books, course materials and graduation activities.

Application Process and More Information

To apply to or receive more information about the Doctor of Philosophy in Electrical Engineering Program, visit the Computer & Electrical Engineering and Computer Science website or call 561-297-3855.

FLORIDA ATLANTIC UNIVERSITY

Proposal for For-Credit Self-Supporting Program

This form must be completed and submitted to Continuing Education/Office of the Provost. New degrees, or an existing degree with a different curriculum tied to Self-Supporting delivery, must be approved through the normal faculty governance process.

College or Academic Unit: College of Engineering and Computer Science

Department/School of Academic Unit: Computer & Electrical Engineering & Computer Science

Name of Degree: Doctor of Philosophy with Major in Electrical Engineering

Specialized track (if applicable): Professional

CIP Code: 14.1001

Proposed Implementation Date: Fall 2020

Describe the operation and delivery format of the program. Include information of the uniqueness of the program, the target audience, and enrollment projections.

The Department of Computer and Electrical Engineering and Computer Science (CEECS) in the College of Engineering and Computer Science (COECS) at FAU is proposing a Professional Doctor of Philosophy with Major in Electrical Engineering (PhDEE).

This is a low-residency program. Graduate students are required to enroll for at least 1 credit during at least two semesters (fall, spring or summer) of every academic year in order to remain eligible for the degree. Students must be enrolled in a minimum of 1 credit hour during the semester of graduation.

The course offering format includes evenings, weekends, and online material. The Professional PhDEE has 72 credits, and the curriculum structure is similar to the existing PhDEE degree. The admission requirements are similar to those of the existing PhDEE program. The applicant must have a master's degree in Engineering, Computer Science or a related discipline awarded by a recognized institution.

A master's degree in a related field is considered equivalent to 30 credits, therefor the students will have to complete a minimum of 42 credits structured as follows: a minimum of 18 credits coursework and a minimum of 24 credits of dissertation.

Each course duration is 4 weeks, or one of the FAU semester/mini-mester course duration. The expected completion time is 3 years, even though exceptional candidates can graduate as fast as 2 years. Students will participate in the program in cohort. Students will start the program at the beginning of Fall/Spring/ Summer semesters.

The targeted audience includes, but is not limited to, working professionals in South Florida. They will be able to advance their career with an accelerated graduate program and obtain an advanced degree while continuing their professional career. The program should enroll approximately 3 students the first year with an ongoing enrollment of about 19 students in year five and thereafter.

Implementation Timeframe **Projected Enrollment**

Year	Head Count	Credit Hours	FTE*
Year 1	3	54	2.25
Year 2	7	108	4.5
Year 3	12	174	7.25
Year 4	16	234	9.75
Year 5	19	270	11.25

*FTE calculation is based on the standard national definition, which divides graduate credit hours by 24.

State the tuition for the program and explain the process used to determine the proposed Self-Supporting tuition rate. Include information on similar programs being offered elsewhere and their self-supporting tuition rates.

The tuition for the proposed Professional PhDEE is the same for in-state and out-of-state students. This cost is based on competitive offerings across peer institutions and current SUS and FAU policies. The proposed cost per credit hour is $800; thus students will complete the 42 credit hours for a total tuition of $33,600.

Current tuition for comparable graduate programs in related areas, include:

University	Program	Tuition
Nova Southeastern University	PhD, Computer Science (64 credits)	$75,840
Florida Institute of Technology	Doctor of Aviation (42 credits)	$44,100
Northcentral University	PhD, Computer Science (60 credits)	$67,530
Florida International University	MS, Computer Engineering (30 credits)	$25,000
University of Central Florida	MS, Healthcare Systems Eng (30 credits)	$37,174
Florida Atlantic University	MS, Computer Science (30 credits)	$24,000

Describe how offering the proposed Self-Supporting program aligns with the mission of FAU (Race to Excellence 2015-2025). Please identify how this program assists the University in achieving its performance metrics. Include information on assessment of need and projected workforce demand.

The Professional PhD in Electrical Engineering program aligns well with the Mission Statement of Florida Atlantic University as "a multi-campus public research university that pursues excellence in its missions of research, scholarship, creative activity, teaching, and active engagement with its communities" as we pursue excellence in teaching and engagement with the technology community.

The proposed program is aligned with the strategic plan of the University to grow research activities and education in engineering and computer science. The Professional PhDEE contributes to the strategic goal of enriching the educational experience by strengthening and expanding graduate programs at FAU, as well as meeting professional and workforce needs. The program will be directly contributing to the increase of the number of PhD degrees awarded in areas of strategic emphasis (STEM).

Provide a declaratory statement that the policy will not increase the state's fiscal liability or obligation and that the Self-Supporting program cohort will not supplant an existing E&G funded degree program in the same discipline:

This self-supporting program will not increase the state's fiscal liability or obligation. The Self-supporting program cohort will not supplant an existing E&G funded degree program in the same discipline.

Identify any proposed restrictions or conditions of the program:

There are no proposed restrictions or conditions of this program.

Indicate how the unit will monitor the quality and success of the Self-Supporting program. Provide specific metrics that will be used:

The Professional PhDEE will use a cohort structure, which will promote timely graduation. In the cohort structure, the same group of students is expected to take the same sequence of courses in the program.

- Time to complete the program. The cohort structure reinforces timely graduation rates. In the cohort arrangement the same group of students takes the same courses throughout the duration of their time in the program. This arrangement is different from an alternative flexible structure, in which students self-select the course(s) they take in any given semester. In the proposed Professional PhDEE, students are expected to complete the program in 3 years.
- Number of students enrolled. The number of students enrolled in each semester will vary. Students can start the program at the beginning of Fall/Spring/ Summer semesters. Enrollment is a function of economic conditions in the state, as well as a prospective student's self-assessment of their time and availability to commit to a program. An appropriate range of students in each semester is important to sustain a high level of student interaction and ensure sufficient contributions from each student.
- Student satisfaction. An overall satisfaction score will be reported for each program. The score will be a composite of items intended to measure student assessment of the program content, pedagogical effectiveness of the professor, and administrative services provided to the student.

Discuss the impact of the program on existing FAU programs. Explain how the unit will ensure that sufficient courses are available to meet student demand and facilitate completion of each program submitted for consideration. Will any similar E&G courses be eliminated or scaled back if this program is implemented.

The Professional PhDEE program will be managed in a cohort format, which will ensure that sufficient courses are available to meet student demand and facilitate completion of each program in a timely manner. The current PhDEE program is non-cohort and it will not be impacted by the Professional PhDEE program. The two programs will run side-by-side.

Provide the economic impact that this Self-Supporting program will have on the university and the student, anticipated revenue collection, how the revenue will be spent, whether any private vendors will be used and which budget entity the funds will be budgeted. Please attach a detailed budget for the program, including operation and costs for faculty, staff, contracts, admission, registration, marketing, recruitment, and scheduling. The budget needs to acknowledge the revenue from tuition and local fees collected by FAU and deductions for overhead fees such as Auxiliary Overhead (currently 11.19%) and Provost Fee (currently at 3%).

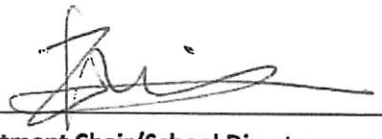
A detailed budget for the Professional PhDEE is provided. Tuition revenues from this self-supporting program will be sufficient to cover operation and costs for faculty, staff, marketing, and student services (admission, registration, and scheduling); and expect to spend 80% of the yearly cash balance, adding additional overhead revenues to the University. We are requesting that the gross revenue fee of 5.5% be waived during the first 3 years.

Once fully operational, we anticipate the program will generate $235,200 annually from 3 cohorts of 7 students each. Tuition revenue will be used to cover instructional costs, program administration, student services, recruitment, maintenance and repair of facilities and equipment, and to support College and University initiatives. We expect net revenues between $110,500 and $136,000 after the three-year start period.

Private approved university vendors will be used for food catering, and to purchase textbooks and materials to support the program. The funds will be budgeted through an auxiliary account within the College of Engineering and Computer Science.

Provide any additional information if necessary. Indicate how the unit will assist the students with employment or career advancement:

It is anticipated that the students in the Professional PhDEE will be primarily working professionals in South Florida. We expect minimal to no need for career advancement assistance. Nevertheless, these students will have access to the career services in the College of Engineering and Computer Science.

	1/29/2020
Department Chair/School Director	**Date**
Ramesh Teegavarapu Digitally signed by Ramesh Teegavarapu DN: cn=Ramesh Teegavarapu, o=Florida Atlantic University, ou=Civil, Environmental and Geomatics Engineering, email=rteegava@fau.edu, c=US Date: 2020.01.31 11:11:54 -05'00'	1/31/2020
College Curriculum Committee	**Date**
Mihaela Cardei Digitally signed by Mihaela Cardei DN: cn=Mihaela Cardei, o=Florida Atlantic University, ou, email=mcardei@fau.edu, c=US Date: 2020.02.01 21:20:54 -05'00'	02/01/2020
Dean	**Date**
University Curriculum Committee	**Date**
University Faculty Senate	**Date**
Provost or Designee	**Date**
Chief Financial Officer (CFO) or Designee	**Date**

College of Engineering and Computer Science - Professional PhD in Electrical Engineering

Year 1		3 Students
Total Course Revenues	$	43,200
Total Local Fees (athletics, financial aid, activity & service, health, capital imp., technology)	$	(3,570)
COECS Course Revenues	**$**	**39,630**
Total Direct Expenses	$	(20,885)
Total Indirect Expenses (Administrative and Marketing)	$	(17,400)
Total Auxiliary Overhead Fee and Provost Fee from Program	$	(5,433)
Program Result - Year 1	**$**	**(4,088)**

Year 2		7 Students
Total Course Revenues	$	86,400
Total Local Fees (athletics, financial aid, activity & service, health, capital imp., technology)	$	(7,140)
COECS Course Revenues	**$**	**79,260**
Total Direct Expenses	$	(22,235)
Total Indirect Expenses (Administrative and Marketing)	$	(17,400)
Total Auxiliary Overhead Fee and Provost Fee from Program	$	(5,624)
Program Result - Year 2	**$**	**34,001**

Year 3		12 Students
Total Course Revenues	$	139,200
Total Local Fees (athletics, financial aid, activity & service, health, capital imp., technology)	$	(11,503)
COECS Course Revenues	**$**	**127,697**
Total Direct Expenses	$	(23,585)
Total Indirect Expenses (Administrative and Marketing)	$	(17,400)
Total Auxiliary Overhead Fee and Provost Fee from Program	$	(5,816)
Program Result - Year 3	**$**	**80,896**

COECS Program Result - First 3 Years	**$**	**110,809**
FAU 3 Year Revenue from Rev Fees/Local Fees/Aux. Overhead/Provost Fee	**$**	**39,086**
Yearly Program Result Year 4 and thereafter	**$**	**111,550**

We expect the College of Engineering and Computer Science to spend 80% of the yearly cash balance adding additional overhead revenues to the University.

Stipulations:

Local fees per credit: athletics ($17.27), financial aid ($15.18), activity & service ($12.32), health ($9.42), capital improvement ($6.76), technology ($5.16)
Provost fee at 3%
Auxiliary expenditure fee at 11.19%
Faculty salary at $9,000 per class plus FICA
Food/Drink expense at $40 per day on weekends per student
Books and materials estimated at $100.00 per student per class
Gross revenue fee at 0% for first 3 years; 5.5% thereafter

UGPC

From: Mihaela Cardei
Sent: Friday, February 21, 2020 12:42 PM
To: UGPC
Subject: RE: Engineering Self-Supporting Proposals

Follow Up Flag: Follow up
Flag Status: Completed

Hello Brian,

please see below.

Thanks,
Mihaela

From: Russ Ivy <IVY@fau.edu>
Sent: Friday, February 21, 2020 12:28 PM
To: Robert Stackman <rstackma@fau.edu>
Cc: Anita Pennathur <PENNATHU@fau.edu>; Mihaela Cardei <mcardei@fau.edu>
Subject: Engineering Self-Supporting Proposals

Dr. Stackman:

As you are aware, all self-supporting for credit proposals must be cleared through Dr Julie Golden-Botti as the Executive Director of Online and Continuing Education who will then make the recommendation for approval or not to me as the representative from the Provost's Office. Prior to your recent meeting, Julie and I had the opportunity to review the proposals below and have confirmed that they are fine to move forward in the process. After your committee, the proposals should move to budget and planning of the Faculty Senate where greater scrutiny of the financial model of the proposal will occur and at that point will need eventual approval by VP Jeff Atwater, but I do not see any problems with what the College of Engineering has proposed. Thus the following self-supporting proposals have the approval of the Provost's Office to move forward as professional degree programs for the College of Engineering.

M.S. Artificial Intelligence
Ph.D. Computer Engineering
Ph.D. Computer Science
Ph.D. Electrical Engineering

If you have any further questions, please let me know.

Russ Ivy