UNIT REPORT

Electrical & Computer Engineering (PhD) - Reviewer's Report - Academic Data

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Electrical & Computer Engineering (PhD)

Ph.D. in Electrical and Computer Engineering Mission

Mission:

The mission of the Department of Electrical and Computer Engineering is to "Offer undergraduate and graduate degree programs in electrical and computer engineering and to conduct research which serves the needs of Florida and the nation." The graduate program in Electrical and Computer Engineering supports the university and college mission to address critical needs to the nation and the state by contributing to a well-qualified and broadly diverse citizenry, leadership and workforce through graduate education and research. We seek to produce electrical and computer engineers who design products and systems that meet the needs for today and tomorrow's electrical, computer, and electronic systems.

Start: 07/01/2017

End: 06/30/2018

PG 1 Quality & Relevance of Program

Goal: To continuously improve the quality and relevance of our program.

Evaluation Method:

The evaluation method will consist of input from industrial, peer, alumni, and employer visits/panels as well as the evaluation of student performance on selected assignments in core graduate classes by course committees.

Results:

All students graduating with a PhD degree completed a departmental exit survey. Survey results indicate that students are satisfied with course offerings and research opportunities in the department.

XOn Campus: true

XProgram CIP: 14.1001

XOnline: false

XOther Site: false

XIf Other Site:

PG 2 Diversify International Program

Goal: To diversify our international program.

Evaluation Method:

Faculty Admissions and Recruiting Committee tracks international student numbers.

Results:

The number of PhD applications to the program dropped by 15% from the previous year but the number of matriculating PhD students increased by 20%. The number of matriculating international PhD students increased by 6%. The department successfully recruited and matriculated PhD students from Bangladesh, Korea, Egypt and Iran.

XOn Campus: true

XProgram CIP: 14.1001

XOnline: false

XOther Site: false

XIf Other Site:

PG 3 Increase Number of US PhD Students

Goal: To increase the number of US students in our PhD program.

Evaluation Method:

Faculty Admissions and Recruiting Committee tracks U.S. application numbers.

Results:

There were 61 applications from US students, an increase of 13% from the previous year. Of those who applied, 52 applicants were admitted. This is an increase of 33% from the previous year. Of those admitted, 17 applicants matriculated, an increase of 42% from the previous year.

XOn Campus: true

XProgram CIP: 14.1001

XOnline: false

XOther Site: false

XIf Other Site:

PG 4 Expand Size and Scope of Program

Goal: To expand the size and scope of our PhD program.

Evaluation Method:

Comparison to peer institutions, number and quality of publications, continuation and growth of research contracts and grants.

Results:

A team of ECE Florida graduate students has emerged as one of two finalists in the first ever Dell EMC AI challenge, a competition organized by Dell with the aim of supporting researchers in solving technical or business problems using AI technologies such machine learning and deep learning.

After over two years of development, across academic institutions and industry partners, the NSF Center for Big Learning (CBL) has been officially awarded, creating the first NSF center on deep learning. Launched as an NSF Industry & University Cooperative Research Center (I/UCRC), the CBL Center will be housed on the fourth floor of the New Engineering Building (NEB).Dr. Roozbeh Tabrizian has received an NSF CAREER Award for his project, “Active Nano-Acoustic Waveguide Matrix to Tackle Signal Processing Limits: Enabling Wideband and Nonreciprocal Integrated Communication Beyond the UHF.”

The ECE Florida GatorWings team, comprised of Dr. John Shea, Dr. Tan Wong, and their students, placed in the top ten at the DARPA Grand Challenge and received a check for $750,000 for their efforts.

The international society for optics and photonics, SPIE, has selected Dr. Alina Zare as a 2018 Rising Researcher for Defense & Commercial Sensing (DCS).

Huikai Xie, ECE Florida professor, just promoted to Fellow of the International Society for Optics and Photonics (SPIE) (link is external). Dr. Xie is recognized for his achievements in optical MEMS and optical endoscopic imaging.

Dr. Michael Fang was elected to serve on the Editorial Board of the Proceedings of the IEEE. He will serve a term from Jan. 1, 2018 through Dec. 31, 2020. Dr. Fang’s nomination was based upon his stature within the IEEE community and in recognition of his outstanding contributions.

XOn Campus: true

XProgram CIP: 14.1001

XOnline: false

XOther Site: false

XIf Other Site:

SLO 1 Knowledge

Outcome: Ability to identify, formulate and solve engineering problems. Ability to critically read and integrate engineering research literature

SLO Area (select one): Knowledge (Grad)

Assessment Method:

The thesis proposal is an important requirement for the Ph.D. degree. The thesis committee will assess this outcome based on oral and written components of the thesis proposal defense.

SLO Not Assessed This Year: false

Results:

Forty-six students completed the PhD written qualifying exam and thirty-six students passed. Thirty-three students completed the oral proposal during this assessment period. All students who completed their oral proposals received the required three or higher required for this student-learning outcome.

Start: 07/01/2017

End: 06/30/2018

Threshold of Acceptability:

How many students did you assess for this outcome?: 33

How many students met the outcome?: 33

What percentage of students met the outcome?: 100

Does this meet your threshold of acceptability?: Yes

SLO 2 Skills

Outcome:

Ability to use applied mathematical and/or modern experimental techniques. Ability to use modern engineering tools for practice at an advanced level.

SLO Area (select one): Skills (Grad)

Assessment Method:

The thesis committee will assess this outcome based on the oral and written components of the thesis proposal defense.

SLO Not Assessed This Year: false

Results:

Forty-six students completed the PhD written qualifying exam and thirty-six students passed. Thirty-three students completed the oral proposal during this assessment period. All students who completed their oral proposals received the required three or higher required for this student-learning outcome.

Start: 07/01/2017

End: 06/30/2018

Threshold of Acceptability:

How many students did you assess for this outcome?: 33

How many students met the outcome?: 33

What percentage of students met the outcome?: 100

Does this meet your threshold of acceptability?: Yes

SLO 3 Professional Behavior

Outcome: Ability to communicate effectively.

SLO Area (select one): Professional Behavior (Grad)

Assessment Method:

The thesis committee will assess this outcome based on the oral and written components of the thesis proposal defense.

SLO Not Assessed This Year: false

Results:

Forty-six students completed the PhD written qualifying exam and thirty-six students passed. Thirty-three students completed the oral proposal during this assessment period. All students who completed their oral proposals received the required three or higher required for this student-learning outcome.

Start: 07/01/2017

End: 06/30/2018

Threshold of Acceptability:

How many students did you assess for this outcome?: 33

How many students met the outcome?: 33

What percentage of students met the outcome?: 100

Does this meet your threshold of acceptability?: Yes

Programmatic Use of Results

Program: Electrical & Computer Engineering (PhD)

Programmatic Use of Results:

The data were reviewed by the Department Chair, the Associate Chair, and the Faculty Admission and Recruiting Committee. It was decided to work closely with new faculty members to continue to recruit highly qualified PhD students to the program. No curricular changes were needed.

Program Results Not Reported This Year:

Ph.D. in Electrical and Computer Engineering Detail

End: 06/30/2018

Start: 07/01/2017

Providing Department: Electrical & Computer Engineering (PhD)

Assessment Cycle (All AAPs):

Analysis and Interpretation: Fall and Spring terms annually

Program Modifications: Completed by June 30th of each year

Dissemination: Completed by June 30th of each year

Year SLOs	17-18	18-19	19-20	20-21	21-22	22-23
Content Knowledge						
Ability to identify, formulate and solve engineering problems	x	x	x	x	x	x
Ability to critically read and integrate engineering research literature	x	x	x	x	x	x
Skills						
Ability to communicate effectively	x	x	x	x	x	x
Ability to use modern engineering tools for practice at an advanced level	x	x	x	x	x	x
Professional Behavior						
Ability to communicate effectively	x	x	x	x	x	x

SLO Assessment Rubric (All AAPs):

Methods and Procedures (UG and Certificate AAPs):

Curriculum Map (UG AAPs only):