



ENGINEERING ACCREDITATION COMMISSION

Summary of Accreditation Actions

2018–2019 Accreditation Cycle

Florida Polytechnic University
Lakeland, FL, United States

Computer Engineering (Bachelor of Science) Electrical Engineering (Bachelor of Science)

Accredit to September 30, 2025. A request to ABET by January 31, 2024 will be required to initiate a reaccreditation evaluation visit. In preparation for the visit, a Self-Study Report must be submitted to ABET by July 1, 2024. The reaccreditation evaluation will be a comprehensive general review.

These are newly accredited programs. Please note that this accreditation action extends retroactively from October 1, 2017.

Mechanical Engineering (Bachelor of Science)

Accredit to September 30, 2021. A request to ABET by January 31, 2020 will be required to initiate a reaccreditation report evaluation. A report describing the actions taken to correct shortcomings identified in the attached final statement must be submitted to ABET by July 1, 2020. The reaccreditation evaluation will focus on these shortcomings. Please note that a visit is not required.

This is a newly accredited program. Please note that this accreditation action extends retroactively from October 1, 2017.



ABET

ENGINEERING ACCREDITATION COMMISSION

**FLORIDA POLYTECHNIC
UNIVERSITY**

LAKELAND, FL, UNITED STATES

FINAL STATEMENT OF ACCREDITATION
2018-19 ACCREDITATION CYCLE

FLORIDA POLYTECHNIC UNIVERSITY

Lakeland, FL, United States

ABET ENGINEERING ACCREDITATION COMMISSION

FINAL STATEMENT

VISIT DATES: OCTOBER 21-23, 2018

ACCREDITATION CYCLE CRITERIA: 2018-2019

INTRODUCTION & DISCUSSION OF STATEMENT CONSTRUCT

The Engineering Accreditation Commission (EAC) of ABET has evaluated the Computer Engineering (Bachelor of Science), Electrical Engineering (Bachelor of Science), and Mechanical Engineering (Bachelor of Science) programs at Florida Polytechnic University.

The statement that follows consists of two parts: the first addresses the institution and its overall educational unit, and the second addresses the individual programs.

A program's accreditation action is based upon the findings summarized in this statement. Actions depend on the program's range of compliance or non-compliance with the criteria. This range can be construed from the following terminology:

- **Deficiency** A deficiency indicates that a criterion, policy, or procedure is not satisfied. Therefore, the program is not in compliance with the criterion, policy, or procedure.
- **Weakness** A weakness indicates that a program lacks the strength of compliance with a criterion, policy, or procedure to ensure that the quality of the program will not be compromised. Therefore, remedial action is required to strengthen compliance with the criterion, policy, or procedure prior to the next review.
- **Concern** A concern indicates that a program currently satisfies a criterion, policy, or procedure; however, the potential exists for the situation to change such that the criterion, policy, or procedure may not be satisfied.
- **Observation** An observation is a comment or suggestion that does not relate directly to the current accreditation action but is offered to assist the institution in its continuing efforts to improve its programs.

INFORMATION RECEIVED AFTER THE REVIEW

- **Seven-Day Response** No information was received in the seven-day response period.
- **30-Day Due-Process Response** Information was received in the 30-day due-process response period relative to the Computer Engineering, Electrical Engineering, and Mechanical Engineering programs.

- **Post-30-Day Due-Process Response** Information was received in the post-30-day due-process response period relative to the Mechanical Engineering program.

INSTITUTIONAL SUMMARY

Florida Polytechnic University was established in 2012 and opened for instruction in 2014 as a public university within Florida's State University System. The university is unusual in that all its programs are STEM focused. The institution is comprised of six departments and divisions that report directly to the provost and offers six undergraduate degree programs, including three engineering programs. At the time of the visit, the university enrolled approximately 1,425 students who were served by 96 faculty members. This was the initial EAC accreditation review for the engineering programs.

The following units were reviewed and found to adequately support the engineering programs: computer science, natural sciences, arts, mathematics, library, registrar, admissions, information technology, finance and administration, academic support services, academic advising center, and career services.

Computer Engineering

Bachelor of Science Program

Evaluated under EAC Program Criteria for
Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Engineering
Programs

INTRODUCTION

The Computer Engineering (Bachelor of Science) program was launched in the 2014-15 academic year and is administered by the department of Electrical and Computer Engineering. The program has four full-time faculty members and two part-time faculty members. The Computer Engineering program and the Electrical Engineering program share a department chair and two professional staff members. In the fall of 2018, the program enrolled 223 undergraduates. The program produced 25 graduates in the 2017-18 academic year and one graduate in the 2016-17 academic year.

PROGRAM STRENGTH

Students and faculty members in the program have access to outstanding on-campus academic support facilities and modern laboratories that are not traditionally available. These facilities enable broad cross-disciplinary research. The available equipment promotes research quality in state-of-the-art topics in engineering.

PROGRAM WEAKNESS

Criterion 4. Continuous Improvement

This criterion requires that the program regularly use appropriate processes for assessing and evaluating the extent to which the student outcomes are being attained. While the program did provide some measures and data specific to the computer engineering cohort, the process does not guarantee disaggregation of assessment data across programs for evaluation of outcome attainment. Therefore, the program cannot determine the degree to which some of the program outcomes are attained. Without the ability to determine the degree of attainment of all student outcomes, the program's ability to evaluate outcomes attainment is compromised. Therefore, the program lacks the strength of compliance in this criterion.

30-Day Due-Process Response

The EAC acknowledges receipt of information documenting that the program: 1) retrospectively disaggregated spring 2017 to spring 2018 assessment data to obtain program specific data; 2) formally revised assessment methods to ensure separation of assessment data retroactive for select courses taught in fall 2018 and ongoing effective spring 2019; and 3) revised assessment of ABET student outcomes (a) to (k) using the new assessment methods. Thus, the program has demonstrated an ability to uniquely determine the degree of attainment of all student outcomes for the program.

Status

The program weakness has been resolved.

Electrical Engineering

Bachelor of Science Program

Evaluated under EAC Program Criteria for
Electrical, Computer, Communications, Telecommunication(s) and Similarly Named Engineering
Programs

INTRODUCTION

The Electrical Engineering (Bachelor of Science) program is administered by the Department of Electrical and Computer Engineering. The program enrolled 114 undergraduate students at the time of the review. The program has seven-full time and one part-time faculty members plus one department head that is shared with Computer Engineering. Two professional staff members are also shared with the Computer Engineering program. The program accepted its first cohort of students in 2014. The program produced 32 graduates in the 2017-18 academic year and two graduates in the 2016-17 academic year.

PROGRAM STRENGTH

Students and faculty members in the program have access to outstanding on-campus academic support facilities and modern laboratories that are not traditionally available. These facilities enable broad cross-disciplinary research. The available equipment promotes research quality in state-of-the-art topics in engineering.

PROGRAM WEAKNESS

Criterion 4. Continuous Improvement

This criterion requires that the program regularly use appropriate processes for assessing and evaluating the extent to which the student outcomes are being attained. While the program did provide some measures and data specific to the electrical engineering cohort, the process does not guarantee disaggregation of assessment data across programs for evaluation of outcome attainment. Therefore, the program cannot determine the degree to which some of the program outcomes are attained. Without the ability to determine the degree of attainment of all student outcomes, the program's ability to evaluate outcomes attainment is compromised. Therefore, the program lacks the strength of compliance in this criterion.

30-Day Due-Process Response

The EAC acknowledges receipt of information documenting that the program: 1) retrospectively disaggregated spring 2017 to spring 2018 assessment data to obtain program specific data; 2) formally revised assessment methods to ensure separation of assessment data retroactive for select courses taught in fall 2018 and ongoing effective spring 2019; and 3) revised assessment of ABET student outcomes (a) to (k) using the new assessment methods. Thus, the program has demonstrated an ability to uniquely determine the degree of attainment of all student outcomes for program.

Status

The program weakness has been resolved.

Mechanical Engineering

Bachelor of Science Program

Evaluated under EAC Program Criteria for
Mechanical and Similarly Named Engineering Programs

INTRODUCTION

The Mechanical Engineering (Bachelor of Science) program is administered by the Department of Mechanical Engineering. The program launched in 2017 following the discontinuation of a non-EAC-accredited Mechanical and Industrial Engineering program. All students in the discontinued program were transferred to the Mechanical Engineering program in August 2017. At the time of the visit, the program enrolled 294 students who were served by 10 faculty members. The program produced 47 bachelor's degree graduates in the 2017-18 academic year.

PROGRAM STRENGTH

The program offers an optional concentration in nanotechnology. This innovative program prepares students to perform advance analysis and design of micro-scale systems. This prepares students for careers and advanced study in nanotechnology and related fields.

PROGRAM WEAKNESSES

1. Criterion 4. Continuous Improvement

The criterion requires the program regularly use appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained. The criterion further states that the results of these evaluations must be systematically utilized as input for the continuous improvement of the program. While the program has documented processes for assessment of outcomes, methods used to assess outcome attainment do not segregate by specific outcome. In a number of situations, a single assessment instrument is used for multiple outcomes. For example, the score on a course final exam is used to assess multiple outcomes addressed in that course without any disaggregation by outcome. As a result, the program's ability to determine the level of attainment for individual outcomes is limited. Thus, strength of compliance is lacking.

30-Day Due-Process Response

The EAC acknowledges receipt of documentation describing discussions of the assessment of student learning and plans for a retreat in May 2019 to consider assessment of outcomes and to create a continuous improvement plan for 2019-20. The program has yet to implement a revised assessment process that is utilized for continuous improvement. Thus, the strength of compliance remains lacking.

Status

The program weakness is unresolved.

Post-30-Day Due-Process Response

The EAC acknowledges receipt of additional documentation describing refinements to future assessment protocols, which may be refined again prior to the fall 2019 term based on faculty input. The program, however, has yet to implement this revised assessment process or utilize resulting data for continuous improvement. Thus, strength of compliance with this criterion remains lacking.

Status

The program weakness is unresolved. In preparation for the next review, the EAC anticipates documentation describing an appropriate, documented processes for assessing and evaluating the extent to which the student outcomes are being attained and evidence that the results are used to inform continuous improvement.

2. Criterion 5. Curriculum

This criterion requires the program culminate in a major design experience that incorporates the knowledge and skills acquired in earlier course work. While all graduates did complete a major design experience, only two of the 47 student who graduated in the 2017-18 academic year completed the major design experience in the final year. Thus, the major design experience did not fully satisfy the requirement of a culminating experience based on prior course work. The curriculum for future graduates has been altered so that the culminating design experience occurs in the final year, however no students have yet graduated from this revised curriculum. Thus, strength of compliance is lacking.

30-Day Due-Process Response

The EAC acknowledges documentation describing changes to the prerequisites for the two-course major design experience. Prerequisites for the first major design course changed in the 2018-19 catalog to specify four program core courses, and the first major design course is now a prerequisite for the second. Further, in the spring 2019 term, 33 of the 35 seniors were enrolled in the second major design course in what is anticipated to be the students' final term. While the program has altered its course prerequisites to ensure that the capstone is a culminating major design experience that incorporates the knowledge and skills acquired in earlier coursework, there are still students following earlier catalogs who have not completed this revised curriculum. Thus strength of compliance is lacking.

Status

The program weakness is unresolved.

Post-30-Day Due-Process Response

The EAC acknowledges receipt of additional documentation attesting that 26 of 27 spring 2019 graduates completed their culminating major design experience in the students' final term, as required by the program's current curriculum. The remaining student completed a culminating major design experience in spring 2018 and was scheduled to complete two remaining courses in fall 2018, but delayed graduation to participate in a full-time internship. This postponed degree completion to spring of 2019, when the student completed the remaining two courses and graduated.

Status

The program weakness has been resolved.

3. Criterion 7. Facilities

The criterion requires modern tools, equipment, computing resources, and laboratories appropriate to the program must be available and accessible, and that the students be provided appropriate guidance regarding the use of the tools, equipment, computing resources, and laboratories available to the program. Students are not trained in safe operation of equipment in the fabrication laboratory (one of five laboratories) and therefore do not have access to that laboratory. This restricted access impedes students' ability to complete their design and other projects. Therefore, strength of compliance is lacking.

30-Day Due-Process Response

The EAC acknowledges documentation that a graduate assistant has been assigned to supervise activities in the fabrication laboratory for 20 hours per week. In addition, all students enrolled in the major design course have taken and passed basic safety training required for use of the laboratory.

Status

The program weakness has been resolved.

PROGRAM CONCERN

Criterion 6. Faculty

The criterion requires the program faculty must be of sufficient number and have competencies necessary to cover all curricular areas of the program and provide adequate student-faculty interaction. While the current faculty numbers and competencies are adequate, program enrollment is expected to grow by as much as 50 percent over the next five years. Additional faculty members will be required to accommodate this growth. If the program is unable to hire additional faculty members, this anticipated enrollment growth may limit the program's ability to continue to provide adequate faculty-student interaction while covering all curricular areas. Therefore, the potential exists that this criterion may not be satisfied in the future.

30-Day Due-Process Response

The EAC acknowledges the receipt of documentation demonstrating that the program is interviewing to fill three additional faculty positions to begin in 2019-20. However, projected enrollment for 2023 ranges from 290 to 434 which would require additional faculty to maintain the current student-to-faculty ratio. The potential remains that the program will be unable to hire the additional faculty members necessary to continue to provide adequate faculty-student interaction while covering all curricular areas. Therefore, the potential exists that this criterion may not be satisfied in the future.

Status

The program concern is unresolved.

Post-30-Day Due-Process Response

The EAC acknowledges documentation describing the program's continued search for qualified faculty. However, as no hire has been made, there is still the potential for this criterion to not be satisfied in the future.

Status

The program concern is unresolved.