# Student Achievements

Florida Polytechnic University regularly monitors and evaluates student achievement with respect to its mission as a STEM institution:

*to prepare 21st century learners in advanced fields of science, technology, engineering and mathematics (STEM) to become innovative problem-solvers and high-tech professionals through interdisciplinary teaching, leading-edge research, and collaborative local, regional and global partnerships.*

Toward this end, the University utilizes a variety of formative and summative measurements to both track and evaluate student achievement. These measures are as follows:

Formative (how students perform on their way to a degree):

1. Freshman in Top 10% of Graduating High School Class
2. University Access Rate (Percent of Undergraduates with a Pell Grant)
3. Semester Course Completions
4. Change in Major
5. Persistence (fall to spring)
6. Academic Progress Rate (2nd Year Retention with GPA above 2.0)
7. Overall Retention Rate

Summative (student achievement at graduation):

1. Bachelor's Degrees Awarded in Areas of Strategic Emphasis (includes STEM)
2. Graduate Degrees Awarded in Areas of Strategic Emphasis (includes STEM)
3. Total Degrees awarded
4. Six Year Graduation Rate (Full-time and Part-time FTIC)
5. Four Year Graduation Rate
6. Percent of Bachelor's Graduates Employed and/or Continuing Education
7. Average Wages of Employed Baccalaureate Graduates
8. Internship experiences
9. Time to degree
10. Qualitative Measures and selected Satisfaction Survey Results

These measurements both support the University's mission and align with the Florida Board of Governor's expectations for achievement for performance funding.

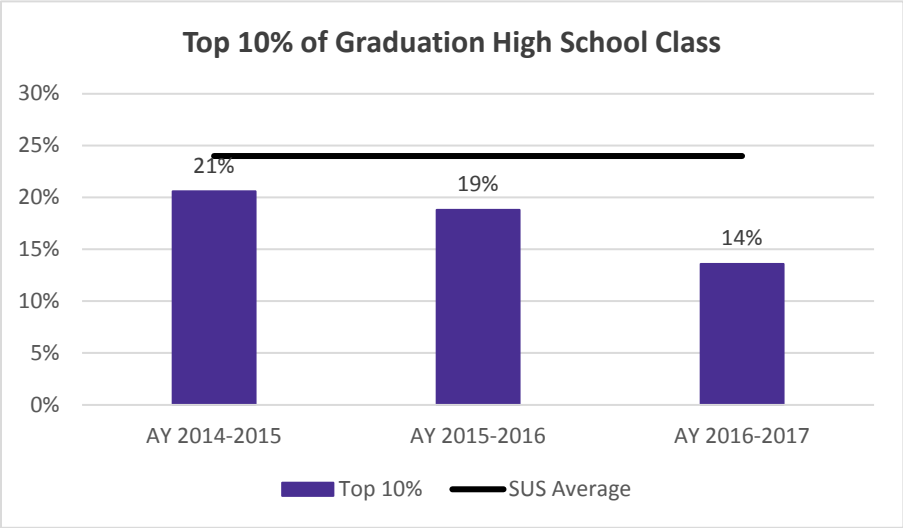
# Recent Results

As a new institution (having opened for its first class in fall 2014), Florida Polytechnic University is only at the beginning of developing a reliably body of data in support of these achievement measures.

## Formative Measurements

As noted above, the following formative measures are used to closely monitor student progress toward achievement.

## 1. Freshman in Top 10% of Graduating High School Class

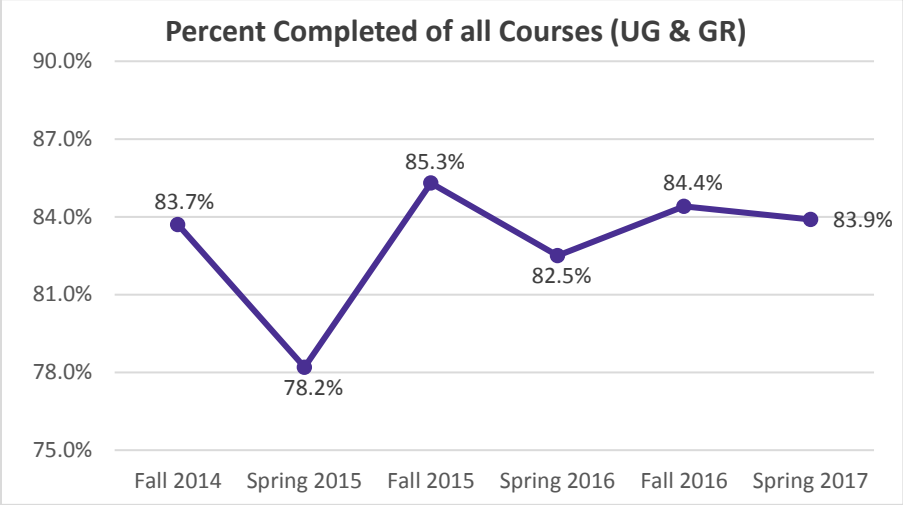



## 2. University Access Rate (Percent of Undergraduates with a Pell Grant)

The University has recently become eligible to distribute federal aid. Data for this metric will be available in the 2017-2018 academic year.

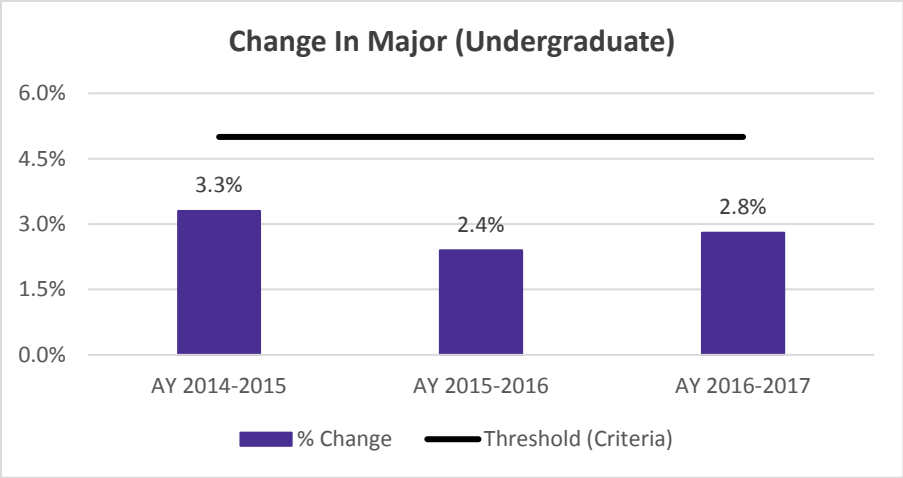
## 3. Semester Course Completions

Currently establishing a baseline/threshold. Percent completions are based on total registered students as of our census date minus withdrawals and fail grades.



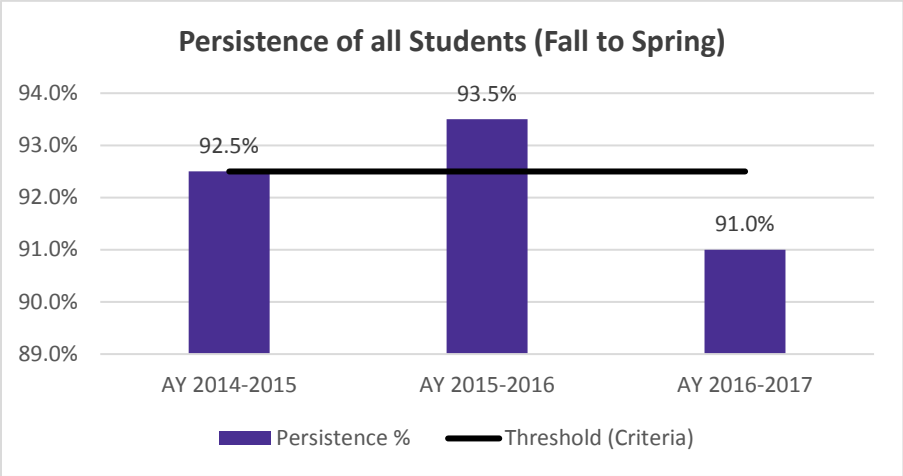

## 4. Change in Major

The ability for students to change majors at Florida Polytechnic University is minimal with only two colleges with all degrees in STEM. Therefore, it is important to measure students migrating from one major to another and the reason why, as change in majors impacts time to degree, one of the University's summative measures of achievement. A threshold greater than 5% was chosen as it relates to a meaningful change requiring further investigation.



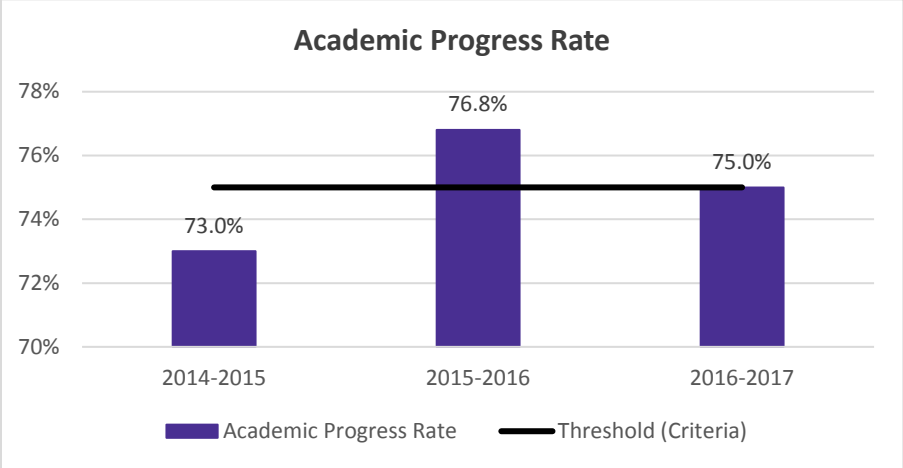

## 5. Persistence (Fall to Spring)

The threshold criteria is based on our first year (2014-2015) baseline.




## 6. Academic Progress Rate

Academic progress rate measures second year retention for FTIC (first time in college) students with a GPA above 2.00.



### 7. Overall Retention Rate (FTIC by year)

| | Second Year | | Third Year |
|---|---|---|---|
| **Cohort** | **Fall 2014** | **Fall 2015** | **Fall 2014** |
| **Overall Retention Rate** | **76%** | **83%** | **62%** |
| **Threshold (Criteria) – Peer & SUS Second Year** | **67%** | | |
| **By College** | | | |
| Engineering | 71% | 83% | 56% |
| Innovation & Technology | 67% | 81% | 55% |
| **By Program** | | | |
| Computer Engineering | 82% | 81% | 52% |
| Electrical Engineering | 71% | 70% | 59% |
| Mechanical & Industrial Engineering | 85% | 74% | 70% |
| Advanced Technology* | 75% | 71% | 38% |
| Computer Science & Information Technology | 88% | 78% | 70% |
| Science & Technology Management* | 67% | 63% | 50% |

**Programs with low student enrollment*

## Summative (student achievement at graduation)

The following summative measurements are used to assess student achievement of institutional educational priorities.

### 1. Bachelor's Degrees Awarded in Areas of Strategic Emphasis (includes STEM)

| Results | Threshold (Criteria) | Comments |
|---|---|---|
| 100% | 95% (Strategic Initiative Goal) | Total Graduates AY 2016-2017 = 18 |

### 2. Graduate Degrees Awarded in Areas of Strategic Emphasis (includes STEM)

| Results | Threshold (Criteria) | Comments |
|---|---|---|
| 100% | 95% (Strategic Initiative Goal) | Total Graduates AY 2016-2017 = 19 |

### 3. Total Degrees awarded

| Program | Number of Awards |
|---|---|
| BS Advanced Technology (Data Analytics) | 0 |
| BS Computer Science & Information Technology | 5 |
| BS Science and Technology Management | 4 |
| BS Mechanical Engineering | 4 |
| BS Computer Engineering | 1 |
| BS Electrical Engineering | 4 |
| MS Innovation & Technology | 15 |
| MS Engineering | 4 |
| **Grand Total** | **37** |

4. Six Year Graduation Rate (Full-time and Part-time FTIC)

| Results | Threshold (Criteria) |
|---|---|
| Too early to provider results. | Bachelor of Science: 72% (Peer and SUS Average) |

5. Four Year Graduation Rate

| Results | Threshold (Criteria) |
|---|---|
| Too early to provider results. | Bachelor of Science: 41% (Peer and SUS Average) |

6. Percent of Bachelor's Graduates Employed and/or Continuing Education

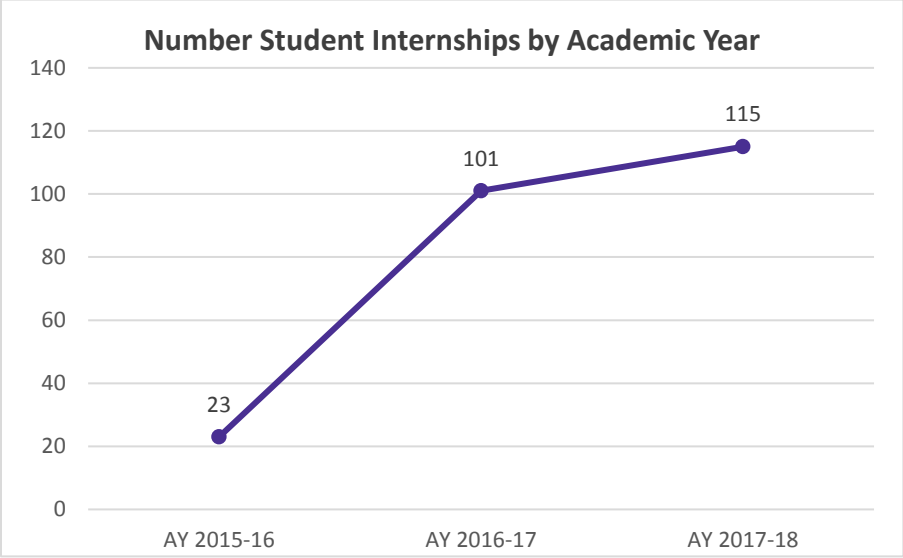
| Results | Threshold (Criteria) | Comments |
|---|---|---|
| 89% | 95% (Strategic Initiative Goal) | 16 out of 18 undergraduates employed or continuing education |

7. Average Wages of Employed Baccalaureate Graduates

| Results | Threshold (Criteria) | Comments |
|---|---|---|
| $50,000 and $60,000 | $40,700 | Based on graduates who have provided salary information. |

8. Internship experiences

a. Internship Participation History: Preliminary information collected for AY 2017-18. Data Source: SIS student registrations for EGN 4941 Internship course.




b. Internship Evaluations

Data presented is based on internship evaluations collected during AY 2016-17 (N=58). Students from all bachelor programs offered have participated in internships at 35 companies, 91% are located in-state, and an average internships time is 94 days. Student

interns were evaluation in six categories in a scale of one (1) to five (5), five (5) being the highest:

| Overall Performance | 3.71 |
|---|---|
| Quality of Work | 3.80 |
| Professionalism | 3.83 |
| Initiative | 3.78 |
| Able to Learn | 3.90 |
| Communications Skills | 3.66 |
| Academic Preparation | 3.68 |

## 9. Time to Degree

| Results |
|---|
| Too early to provider results. |

## 10. Qualitative Student Achievements

Students in undergraduate and graduate programs are also involved in publications, professional presentations, and award recipients:

a. Adam Schuster*, and Anas Salah Eddin‡, "Vintage VR: A Method of Processing 19th Century Stereoviews for Display on 21st Century VR Systems", SIGGRAPH 2016, Anaheim, CA, 24-28 July 2016.
b. Jorge Vargas, J.‡ and Ivan Rodriguez*, "Ferromagnetic "T" resonator on Si Substrate," 61st Annual Conference on Magnetism and Magnetic Materials, New Orleans, LA, 31 Oct – 4 Nov 2016.
c. Langley Payton*, Outstanding Graduate Oral Presentation (Engineering Sciences), "Maximizing Donor Conversions: AQGIV Case Study", Florida Academy of Sciences, 10 Mar 2017.
d. Michael Sanchez**, Outstanding Undergraduate Oral Presentation (Engineering Sciences), "Pulse Oximetry", Florida Academy of Sciences, 10 Mar 2017.
e. Laura Wemple**, Outstanding Undergraduate Poster Presentation (Engineering Sciences), "Effectiveness of doping agents on the photocatalytic oxidation of organic pollutants", Florida Academy of Sciences, 10 Mar 2017.
f. Dieff Vital**, Al Hall Memorial Award (Engineering Sciences), "Global Particulate Matter Characterization for Gasoline and Diesel Filters", Florida Academy of Sciences, 10 Mar 2017.
g. Marshall Smith**, Outstanding Undergraduate Oral Presentation (Physics & Space Sciences), "Going with the Proton Flow Generating Fusion Power in the Van Allen Belt", Florida Academy of Sciences, 10 Mar 2017.

*- graduate student
**-undergraduate student
‡ - faculty

## Other Qualitative and Survey Results

At the point of graduation, students provide feedback about their program of study and experience with university services through an exit survey. Survey is distributed electronically to all graduating students in each term during an academic year. Result presented reflect responses only to those majors of which graduating students have shared their feedback.

Information collected in the Graduation Exit Survey helps to evaluate and improve the academic programs and services. The following provides a summary of findings from Florida Polytechnic University's first graduating class in AY 2016-17 using average scores with the following scale:

1 = Strongly Disagree; 2 = Disagree; 3 = Neither Agree or Disagree, 4 = Agree, 5 = Strongly Agree

| Average Score 4 - 5 | Average Score 3 – 3.99 | Average Score 2 – 2.99 | Average Score Below 2 |
|---|---|---|---|
| | | | |

| | MS Engineering | MS Innovation & Technology | BS Computer Engineering | BS Electrical Engineering | BS Mechanical & Industrial Engineering | BS Computer Science & Information Technology | BS Science & Technology Management |
|---|---|---|---|---|---|---|---|
| **Number Survey Responses** | 5 | 13 | 1 | 2 | 4 | 5 | 4 |
| Courses were academically challenging. | | | | | | | |
| The faculty in my program were effective teachers. | | | | | | | |
| Courses in my major were offered frequently enough… | | | | | | | |
| I was satisfied with the variety of courses offered… | | | | | | | |
| The program emphasized current trends and developments… | | | | | | | |
| The quality of instruction… was excellent. | N/A | N/A | | | | | |