

Strategic Workshop

September 9, 2020

8:00 AM-9:00 AM

Or upon the conclusion of the previous committee meeting

**Florida Polytechnic University
WEBEX TELECONFERENCE MEETING**

Dial in: 1-415-655-0001 | Access code: 171 599 4704#

MEMBERS

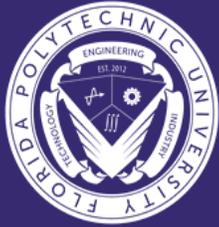
**Cliff Otto, Chair
Dr. Ala J. Alnaser
Connor Coddington**

**Mark Bostick, Vice Chair
Frank Martin
Don Wilson**

**Dr. W. Earl Sasser
Bob Stork
Gary C. Wendt**

AGENDA

- | | |
|--|--|
| I. Call to Order | Cliff Otto, Chair |
| II. Roll Call | Kristen Wharton |
| III. Public Comment | Cliff Otto, Chair |
| IV. Approval of the May 20, 2020 Minutes
<i>*Action Required*</i> | Cliff Otto, Chair |
| V. Performance Based Funding (PBF) Program Review | Tim Jones, CFO
Florida Board of Governors |
| VI. University of Distinction: Growth Plan | Randy K. Avent, President |
| VII. Closing Remarks and Adjournment | Cliff Otto, Chair |



Board of Trustees Workshop

DRAFT MEETING MINUTES

Wednesday, May 20, 2020

8:30 AM – 9:30 AM

Florida Polytechnic University WEBEX TELE-CONFERENCE MEETING

I. Call to Order

Chair Don Wilson called the meeting to order at 8:32 a.m.

II. Roll Call

Michele Rush called the roll: Chair Don Wilson, Vice Chair Cliff Otto, Trustee Mark Bostick, Trustee Connor Coddngton, Trustee Henry McCance, Trustee Victoria Astley, Trustee Earl Sasser, Trustee Bob Stork, Trustee Frank Martin, Trustee Philip Dur, and Trustee Gary Wendt were present (Quorum).

Trustees not present: Trustee Lou Saco

Staff present: President Randy Avent, Provost Terry Parker, Mr. Mark Mroczkowski, Ms. Gina DeJulio, Ms. Kathy Bowman, Mr. Rick Maxey, Mrs. Kris Wharton, Ms. Michele Rush, Mrs. Kim Abels, and Mr. David Blanton were present.

III. Public Comment

There were no requests received for public comment.

IV. Approval of the February 26, 2020 Minutes

Trustee Gary Wendt made a motion to approve the Board Workshop meeting minutes of February 26, 2020. Trustee Philip Dur seconded the motion; a vote was taken, and the motion passed unanimously.

V. President's Report

President Randy Avent provided a summary of major issues the University faced in the first half of 2020. In his report, the President reviewed the University's financial resiliency plan, campus sustainability, and University COVID-19 operations plan.

Regarding financial resiliency, President Avent intends to preserve liquidity for a potential recession; protect and grow the academic enterprise; increase revenues through campus growth, Performance Based Funding (PBF) and Universities of Distinction; explore quality versus size; and invest in University Advancement and the Florida Polytechnic University Foundation.

President Avent stated the University is currently in a strong financial position. \$3.3M in Performance

Based Funding (PBF) is expected next year. These funds will be added to the University's base budget. One of President Avent's concerns is the cut to auxiliary funds if the University is not conducting classes on campus. Trustee Victoria Astley inquired for clarification what items are funded out of auxiliaries, to which Mr. Mark Mroczkowski responded auxiliary salaries, administration salaries in excess of \$200k, food service, and the like. Mr. Mroczkowski is working on a plan to mitigate any financial loss to auxiliary funds.

Regarding campus sustainability, President Avent addressed the recent attempt to merge Florida Poly with another SUS institution and listed action items to mitigate this from occurring again in the future. The University is focused on continuing to build strong support behind its differentiated value as well as "right the wrongs" in data that lacked important context. A campus growth plan is currently in the process of being developed so an accurate total for building out the campus can be stated. Florida Poly will also continue to add degrees that align to Florida's target industries to grow Florida's economy.

Florida Poly has an aggressive growth plan for the next three, five, and ten years which includes being ranked in the U.S. News & World Report for "Engineering Colleges without Doctoral Program." Trustee Henry McCance recommends our faculty chairs establish relationships with key people in the current top 15 ranked schools. Trustee Bob Stork inquired as to how this plan aligns with Performance Based Funding (PBF), to which President Avent replied he did try to match projections and add in programs to help achieve that alignment. It also requires further conversation with the Board of Governors (BOG) regarding receiving accommodation for the APR and four-year graduation rates as the nature of the University's STEM focus demands it.

As the Applied Research Center (ARC) did not receive funding from the legislature for FY21, the building's completion date will be delayed six months to a year. The University also expects an increase of \$5M to the total cost of construction. President Avent proposed using carry forward funds to provide gap funding until FY22 when the University will request \$14.9M of the legislature to complete the building.

President Avent addressed Florida Poly's response to COVID-19 and parameters for reopening. The Board of Governors (BOG) will set broad guidelines and allow each university in the SUS to define their own implementation. The president reviewed Florida Poly's draft plan for reopening which will be presented to the BOG on June 23.

Trustee Astley expressed concern that faculty have ability to give feedback to the COVID-19 response planning committees. President Avent stated Provost Parker will address this further in the Academic and Student Affairs Committee meeting today.

VI. Closing Remarks and Adjournment

With no further business to discuss the meeting adjourned at 9:45 a.m.



Performance Funding Introduction

Tim Jones, Vice Chancellor
September 9, 2020

www.flbog.edu

Performance Funding – A Look Back



- 2012 – Chair Colson charged the Budget & Finance Committee with creating a performance-based funding model
- January 2014 – Board approved a model
- 2016, Section 1001.92, F.S. created in House Bill 7029 (Ch. 2016-237, L.O.F.). Board Regulation 5.001 created
- FY 2020-21: \$560 M Total PBF Appropriation (\$265 M State Investment, \$295 M Institutional Investment)



4 Guiding Principles:

- Use metrics that align with Strategic Plan goals
- Reward excellence or improvement
- Have a few clear, simple metrics
- Acknowledge the unique mission of the different institutions

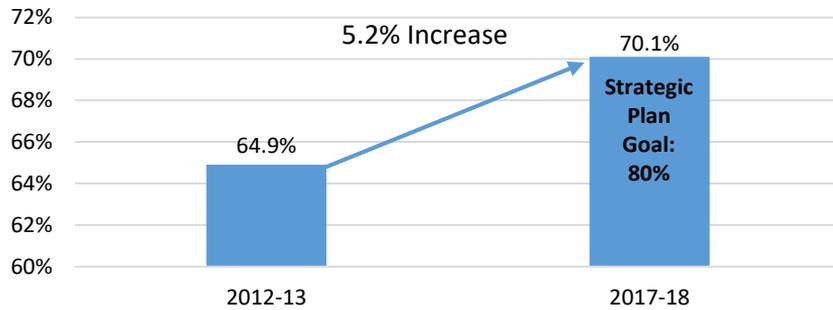
Key Components:

- New funds allocated based on 10 metrics
- Base funds and new funds
- One metric chosen by the Board of Governors and one by the Board of Trustees
- Institutions evaluated on the excellence or improvement for each metric
- Data based on one year

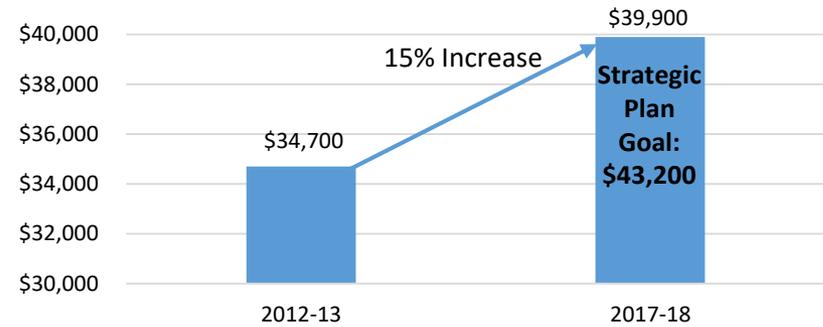
Performance Funding Improvement



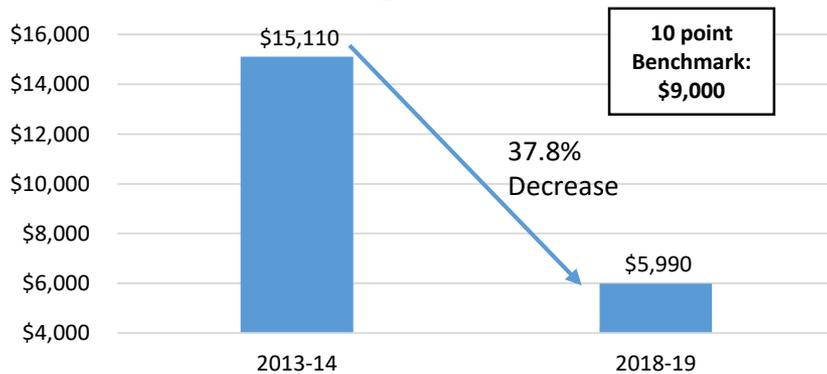
Metric 1: Percent of Bachelor's Graduates Employed



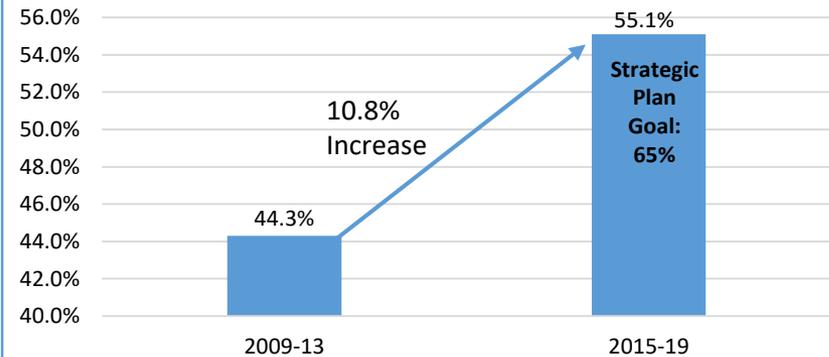
Metric 2: Median Wages of Bachelor's Graduates Employed Full Time



Metric 3: Average Cost to the Student



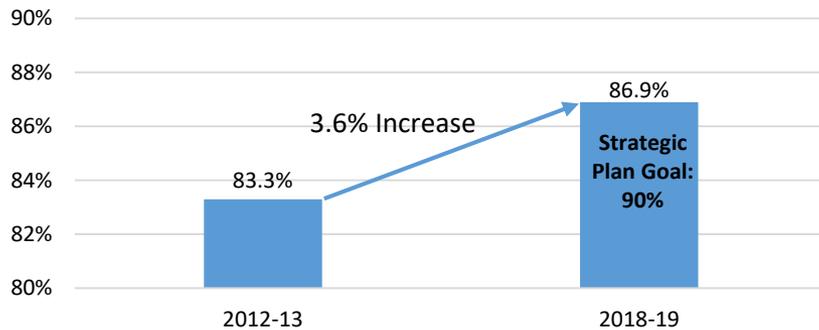
Metric 4: 4 Year Grad Rate



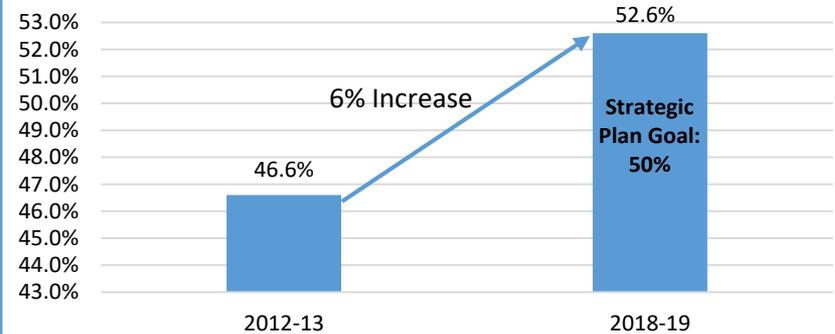
Performance Funding Improvement



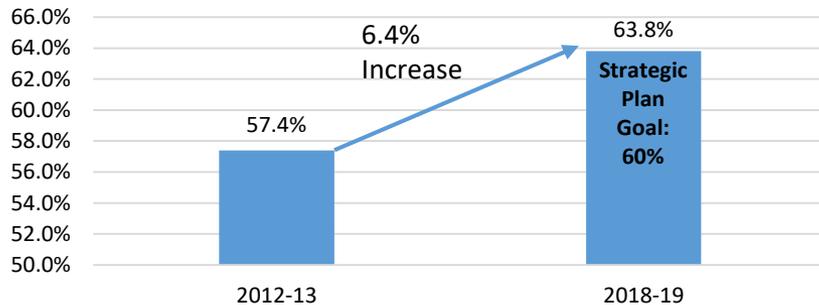
Metric 5: Academic Progress Rate
2nd Year Retention w/ GPA above 2.0



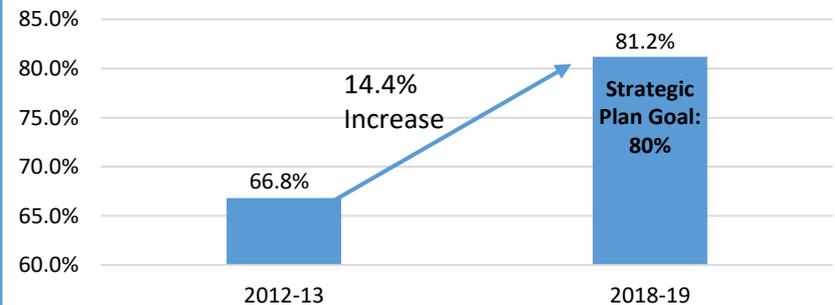
Metric 6: Percent of Bachelor's Degree
Awarded in Programs of Strategic Emphasis



Metric 8a: Percent of Graduate Degrees
Awarded in Programs of Strategic Emphasis



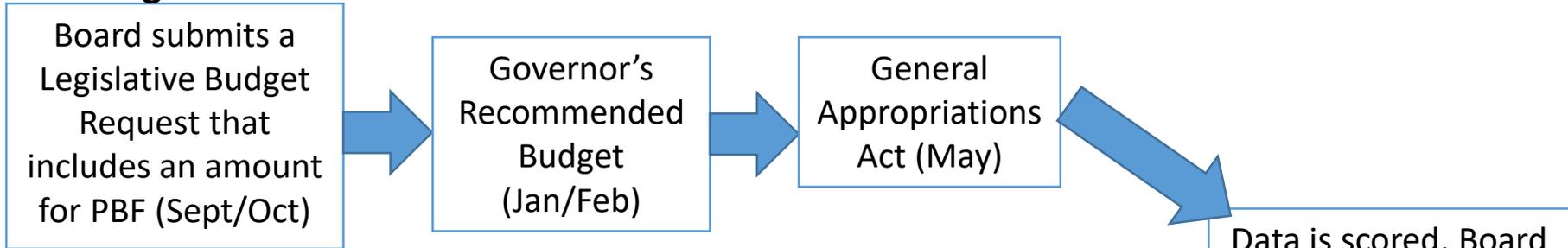
Metric 9: Percent of Baccalaureate Degrees
Awarded Without Excess Hours



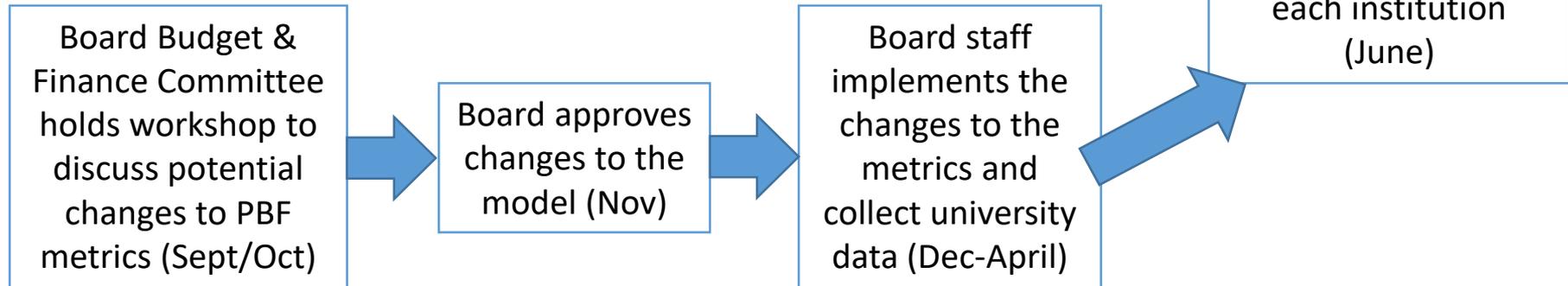
Performance Funding – Annual Timeline



Funding Timeline



Policy Timeline



Performance Funding – Metrics



Metrics 1-7 & 9 - Common to all Institutions

<p>1. Percent of Bachelor's Graduates Employed (Earning \$25,000+) or Continuing their Education</p>	<p>5. Academic Progress Rate (2nd Year Retention with GPA Above 2.0)</p>
<p>2. Median Wages of Bachelor's Graduates Employed Full-time</p>	<p>6. Bachelor's Degrees Awarded in Areas of Strategic Emphasis</p>
<p>3. Average Cost to the Student (Net Tuition per 120 Credit Hours)</p>	<p>7. University Access Rate (Percent of Undergraduates with a Pell-grant)</p>
<p>4. Four Year Graduation Rate (Full-time FTIC)</p>	<p>8a. Graduate Degrees Awarded in Areas of Strategic Emphasis 8b. Freshman in Top 10% of Graduating High School Class – for NCF and FL Poly</p>
<p>9. Board of Governors Choice - Percent of Bachelor's Degrees without Excess Hours</p>	<p>10. Board of Trustees Choice - (Percent of Bachelor Degree Graduates with 2+ Workforce Experiences – FL Poly)</p>

Performance Funding History



	State Investment	Institutional Investment	Total
2014-2015	\$100 M	\$65 M	\$165 M
2015-2016	\$150 M	\$250 M	\$400 M
2016-2017	\$225 M	\$275 M	\$500 M
2017-2018	\$245 M	\$275 M	\$520 M
2018-2019	\$265 M	\$295 M	\$560 M
2019-2020	\$265 M	\$295 M	\$560 M
2020-2021	\$265 M	\$295 M	\$560 M

Performance Funding – Allocation Methodology



Institutional Investment (Base State) Funding Allocation:

1. A prorated amount will be deducted from each university's base recurring state appropriation.
2. On a 100-point scale, a threshold of 55-points is established as the minimum number of total points needed to be eligible for the institutional investment. Beginning in Fiscal Year 2021-22, a threshold of 60-points is established as the minimum number of points needed to be eligible for the institutional investment.
3. Any institution that fails to meet the minimum point threshold for the institutional investment must submit an improvement plan to the Board for consideration at its August/September meeting that specifies the activities and strategies for improving the institution's performance. As of July 1, 2016, an institution is limited to only one improvement plan.

Performance Funding – Institutional Investment



	2020-21 Base State Funds	Base State Funds at Risk*
FAMU	\$107,646,033	\$14,580,734
FAU	\$171,275,087	\$23,199,336
FGCU	\$94,661,627	\$12,821,987
FIU	\$253,167,002	\$34,291,656
FSU	\$333,637,818	\$45,191,487
FL Poly	\$36,761,442	\$4,979,364
NCF	\$32,604,883	\$4,416,355
UCF	\$284,215,190	\$38,497,155
UF	\$385,404,980	\$52,203,387
UNF	\$106,769,373	\$14,461,990
USF	\$290,254,422	\$39,315,174
UWF	\$81,515,810	\$11,041,376
Total	\$2,177,913,667	\$295,000,000
	Base Dollars at risk	\$295,000,000
	Base at risk/Total Base Funds	13.5%

*Minimum of 60 points to receive the institutional investment.

Performance Funding – Allocation Methodology



State Investment Funding Allocation:

1. Each metric is evaluated based on Excellence or Improvement. The higher point value for Excellence or Improvement are counted in the university's total score.
2. On a 100-point scale, institutions with the top 3 scores (including ties) are eligible for their proportional amount of the State's investment.
3. Institutions with a score the same or higher as the previous year, are eligible for their proportional amount of the State's investment.
4. Any institution with a score lower than the previous year's score for two consecutive years must submit a student success plan to the Board. 50 percent of the State investment will be released upon approval of the plan, with the balance released upon successful implementation of the plan.
5. Beginning with FY 2021-22 State Appropriation, any institution with a score lower than 70 points must submit a student success plan to the Board in order to be eligible for 50 percent of their proportional amount of the state's investment. The remaining 50 percent is allocated to the top 3 highest scores.

Performance Funding – State Investment



	Score	Base State (2020-21)	Base %	State Investment Allocation
FAMU	73	\$107,646,033	4.9%	\$13,097,947
FAU	85	\$171,275,087	7.9%	\$20,840,081
FGCU	88	\$94,661,627	4.3%	\$11,518,056
FIU	88	\$253,167,002	11.6%	\$30,804,369
FSU	85	\$333,637,818	15.3%	\$40,595,742
FL Poly	70+	\$36,761,442	1.7%	\$4,472,988
NCF	87	\$32,604,883	1.5%	\$3,967,234
UCF	89	\$284,215,190	13.0%	\$34,582,191
UF	90	\$385,404,980	17.7%	\$46,894,568
UNF	83	\$106,769,373	4.9%	\$12,991,279
USF	94	\$290,254,422	13.3%	\$35,317,021
UWF	82	\$81,515,810	3.7%	\$9,918,524
		\$2,177,913,667	100%	\$265,000,000
Amount of State Investment:			\$265,000,000	



- SB 72 adds two new metrics to the model:
 - Two-year graduation rate for FCS associate in arts transfer students
 - Six-year graduation rate for students who are awarded a Pell Grant in their first year



www.flbog.edu

Board of Governors

Performance Funding Model Overview

The Performance Funding Model includes 10 metrics that evaluate the institutions on a range of issues. Two of the 10 metrics are Choice metrics; one picked by the Board and one by the university boards of trustees. These metrics were chosen after reviewing over 40 metrics identified in the University Work Plans.

The model has four guiding principles: 1) use metrics that align with SUS Strategic Plan goals, 2) reward Excellence or Improvement, 3) have a few clear, simple metrics, and 4) acknowledge the unique mission of the different institutions.

Key components of the model:

- Institutions will be evaluated on either Excellence or Improvement for each metric.
- Data is based on one-year data.
- The benchmarks for Excellence were based on the Board of Governors 2025 System Strategic Plan goals and analysis of relevant data trends, whereas the benchmarks for Improvement were determined after reviewing data trends for each metric.
- The Florida Legislature and Governor determine the amount of new state funding and an amount of institutional funding that would come from each university's recurring state base appropriation.

Metrics Common to all Institutions:

Seven metrics apply to all eleven institutions. The eighth metric, graduate degrees awarded in areas of strategic emphasis (8a), applies to all institutions except New College. The alternative metric for New College (8b) is "freshman in the top 10% of graduating high school class."

Metrics Common to all Institutions	
1. Percent of Bachelor's Graduates Employed (Earning \$25,000+) or Continuing their Education	6. Bachelor's Degrees Awarded in Areas of Strategic Emphasis
2. Median Wages of Bachelor's Graduates Employed Full-time	7. University Access Rate (Percent of Undergraduates with a Pell-grant)
3. Average Cost to the Student (Net Tuition per 120 Credit Hours)	8a. Graduate Degrees Awarded in Areas of Strategic Emphasis 8b. Freshman in Top 10% of Graduating High School Class - for NCF only
4. Four Year Graduation Rate (Full-time FTIC)	9. Board of Governors Choice - Percent of Bachelor's Degrees without Excess Hours
5. Academic Progress Rate (2nd Year Retention with GPA Above 2.0)	10. Board of Trustees Choice

Board Choice Metric - All universities should be working to improve the percentage of degrees awarded without excess credit hours.

Board of Trustees Choice Metric - Each Board of Trustees has chosen a metric from the remaining metrics in the University Work Plans that are applicable to the mission of that university and have not been previously chosen for the model.

How will the funding component of the model work?

To ensure each university is striving to excel and improve on key metrics, there must be a financial incentive. That financial incentive will not only be new state funding, but an amount of the base state funding reallocated.

Board of Governors

Performance Funding Model Overview

State Investment versus Institutional Base Funding:

The amount of the state investment appropriated by the Legislature and Governor for performance funding will be matched by an amount reallocated from the university system base budget. These “institutional base” funds are the cumulative recurring state appropriations the Legislature has appropriated to each institution. Any state investment funding appropriated would be allocated as follows:

Institutional Base Funding Allocation

1. A prorated amount will be deducted from each university’s base recurring state appropriation.
2. On a 100-point scale, a threshold of 55-points is established as the minimum number of total points needed to be eligible for the institutional investment. Beginning in Fiscal Year 2021-22, a threshold of 60-points is established as the minimum number of points needed to be eligible for the institutional investment.
3. Any institution that fails to meet the minimum point threshold for the institutional investment must submit an improvement plan to the Board for consideration at its August/September meeting that specifies the activities and strategies for improving the institution’s performance. As of July 1, 2016, an institution is limited to only one improvement plan.

State Investment Funding Allocation

1. Each university metric is evaluated based on Excellence or Improvement and has ten benchmarks ranging from low to high. The lowest benchmark receives one point, while the highest receives ten points. The higher point value for Excellence or Improvement on each metric are counted in the university’s total score.
2. The state investment will be allocated based on points earned, with a maximum of 100 points possible.
3. On a 100-point scale, institutions with the top 3 scores are eligible for their proportional amount of the state’s investment. In the case of a tie for the top 3 scores, the tie will go to the benefit of the institutions.
4. All SUS institutions with a score the same or higher as the previous year, are eligible for their proportional amount of the state’s investment.
5. Any institution with a score less than the previous year but the previous year’s score was higher or the same than the year before, are eligible for their proportional amount of the state’s investment.
6. Any institution with a score the same or lower than the previous year’s score for two consecutive years must submit a student success plan to the Board for consideration at its August/September meeting that specifies the activities and strategies for improving the institution’s performance metrics in order to be eligible for their proportional amount of the state’s investment. The baseline scores begin with the June, 2018 results.
7. Beginning with the Fiscal Year 2021-22 appropriation, any institution with a score lower than 70 points must submit a student success plan to the Board for consideration at its August/September meeting that specifies the activities and strategies for improving the institution’s performance metrics in order to be eligible for 50 percent of their proportional amount of the state’s investment.



FLORIDA POLYTECHNIC
UNIVERSITY

University of Distinction : Growth Plan

Randy K. Avent
9 September 2020

University Positioning

- **Mission Statement**

Serve students and industry through excellence in education, discovery and application of engineering and applied sciences

- **Vision Statement**

Florida Poly will be a premier STEM university known for producing highly desirable graduates and new technology solutions

Florida Polytechnic University is a small, new university focused on engineering programs

University Weaknesses

- **Florida Poly is a small institution**
 - Larger institutions can more easily have economic impact
 - Larger institutions are more easily sustainable
 - Larger institutions attract more outside investment from industry and businesses
- **Florida Poly is new institution**
 - Poly lacks branding important to grow numbers and quality
- **Florida Poly is focused on engineering**
 - Engineering programs historically have low retention and graduation rates
 - Florida Poly will suffer (relatively) in Performance Based Funding (PBF)

Florida Polytechnic University needs to grow while increasing its brand and PBF performance

Campus Growth Plan

- **Three-year plan (2024)**
 - Top 25 in USNWR Engineering Colleges without Doctoral Program
 - 1800 students, 325 yearly graduates
 - 83% APR, 41% 4-year graduation rate
- **Five-year plan (2026)**
 - Top 15 in USNWR Engineering Colleges without Doctoral Program
 - 2000 students, 375 yearly graduates
 - 85% APR, 43% 4-year graduation rate
- **Ten-year plan (2031)**
 - Top 10 in USNWR Engineering Colleges without Doctoral Program
 - 3000 students, 650 yearly graduates
 - 90% APR, 55% 4-year graduation

**Florida Polytechnic University will be an Undergraduate
Engineering University of Distinction**

Outline

- Introduction
- **National rankings**
- **Retention/graduation**
- **Campus Growth**
- **Summary**

National Rankings

- **US News and World Report is the gold standard**
- **Expect rankings this year in at least three categories**
 - Regional Colleges South
 - Undergraduate Computer Science Programs (No Doctorate)
 - Undergraduate Engineering Programs (No Doctorate)
- **Expected timeline**
 - Embargoed preview (2nd week of September)
 - Two weeks to identify substantial changes
 - Announced two weeks later (end of September)
- **“Troublesome” metrics**
 - 6-year graduation rate (17 of 100 points)
 - Peer assessment survey (20 of 100 points)

**Just announced we would not be included this year
because of lack of data**



“Best in the South”

• Regional Colleges

1. High Point University
2. Ouachita Baptist University
3. Maryville College
4. Flagler College
5. LaGrange College
6. Erskine College
7. Catawba College
8. Claflin University
9. Barton College
10. University of Mobile
11. USC – Upstate
12. USC – Aiken
13. Blue Mountain College
14. Averett University
15. Huntingdon College

• Regional Universities

1. Rollins College
2. The Citadel
3. James Madison University
4. Berry College
5. Stetson University
6. Appalachian State University
7. Christopher Newport University
8. College of Charleston
9. Ashbury University
10. Florida Southern College
11. Embry-Riddle University
12. John Brown University
13. Longwood University
14. Milligan College
15. Queens University of Charlotte

Undergraduate Engineering Programs (No Doctorate)

1. **Rose-Hulman Institute**
2. **Harvey Mudd College**
3. **Olin College of Engineering**
4. **US Military Academy**
5. **US Naval Academy**
6. **Bucknell University**
7. **US Air Force Academy**
8. **Cal Poly – San Luis Obispo**
9. **Milwaukee School of Engineering**
10. **Cooper Union**
11. **Cal Poly – Pomona**
12. **US Coast Guard Academy**
13. **Kettering University**
14. **Lafayette College**
15. **University of San Diego**

US News World & Report

2020 Methodology

- **Outcomes (35%)**
 - Graduation and retention (22%)
 - Graduate rate performance (8%)
 - Social mobility (5%)
- **Faculty resources (20%)**
 - Class size (8%)
 - Faculty salary (7%)
 - Percent terminal degrees (3%)
 - Student-to-faculty (1%)
 - Percent full time (1%)
- **Expert opinion (20%)**
- **Financial resources (10%)**
- **Student excellence (10%)**
- **Alumni giving (5%)**

“Undergraduate Engineering programs are ranked based solely on the judgements of deans and senior faculty at peer institutions”

Peer Assessment

Our STEM-centric curriculum is designed to prepare graduates for exciting careers in today's fastest-growing fields.

32 PROGRAMS OF STUDY

BUSINESS ANALYTICS & DATA SCIENCE

Big Data Analytics
Health Informatics
Intelligent Mobility
Logistics and Supply Chain Management
Quantitative Economics & Econometrics

COMPUTER ENGINEERING*

Advanced Topics
Autonomous Robotic Systems
Digital Design
Embedded System Design
Machine Intelligence

COMPUTER SCIENCE*

Advanced Topics
Game Development & Simulation
Information Assurance & Cyber Security
Software Engineering

ELECTRICAL ENGINEERING*

Advanced Topics
Autonomous and Electric Vehicles
Control Systems
Electromagnetic Radiation Communication
Renewable Energy

ENGINEERING MATHEMATICS

Complex Systems Mathematics
Mathematics of Medicine & Biology

* ABET accredited programs

ENGINEERING PHYSICS

Physics of Energy
Physics of Medicine
Physics of Space

ENVIRONMENTAL ENGINEERING

Modern Techniques in Sustainability
Water/Hydrology

MECHANICAL ENGINEERING*

Advanced Topics
Aerospace
Materials & Advanced Manufacturing
Mechanical & Thermal Systems
Nanotechnology
Operations Research

GRADUATE PROGRAMS

MASTER'S OF SCIENCE IN COMPUTER SCIENCE

Computer Science
Data Science

MASTER'S OF SCIENCE IN ENGINEERING

Computer Engineering
Electrical Engineering
Engineering Management
Mechanical Engineering



Computing & Engineering Accreditation Commissions

Florida Polytechnic University's iconic **Innovation, Science and Technology (IST)** building ranks as one of the 18 "most breathtaking" buildings in the world, according to a survey of architects, placing it alongside iconic structures such as the Parthenon in Greece, the Empire State Building and Frank Lloyd Wright's "Fallingwater" residence.

Designed by internationally-renowned architect Dr. Santiago Calatrava, the IST Building has earned 23 international architectural and engineering awards since 2014.

The structure is the cornerstone of Florida Poly's campus and the University's main classroom and laboratory building. The 162,000-square-foot, white-domed building is a moveable and functional work of art, with a louvered roof system that adjusts with the sun's angle, surrounded by a ring of curved metal pergolas that shade its outer terrace and walkways.

ADVANCED MOBILITY INSTITUTE

Florida Polytechnic University has a growing autonomous vehicle education and research program that partners with a brand new 400-acre cutting-edge facility next to campus developed by the Florida Department of Transportation, dedicated to the research, development and testing of autonomous vehicle technologies. AMI includes a specialized courses in autonomous systems and self-driving vehicles co-developed with MIT.

ENTREPRENEURSHIP

• Over the last three years we have placed in the top three in 9 out of 12 state or local entrepreneurial competitions
• We have beat every major university in Florida over our three years

100%

OF STUDENTS EARN INTERNSHIPS BEFORE THEY GRADUATE



Florida's Premier Public STEM University

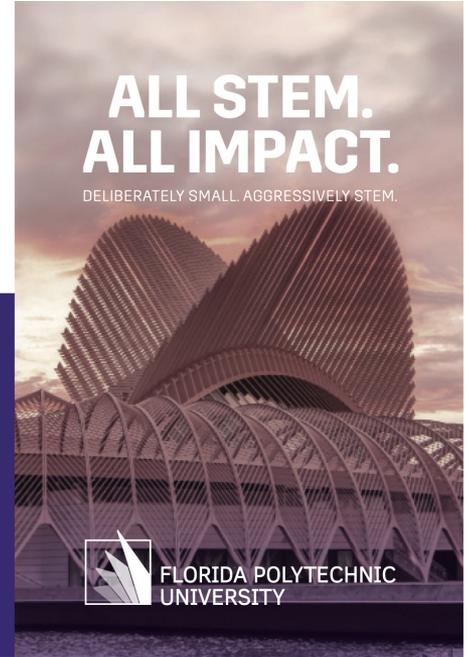
FLORIDA POLYTECHNIC UNIVERSITY
OFFICE OF THE PROVOST
4700 Research Way
Lakeland, FL 33805
T 888-874-4774
F 888-874-4774



FLORIDA POLYTECHNIC UNIVERSITY

ALL STEM. ALL IMPACT.

DELIBERATELY SMALL. AGGRESSIVELY STEM.



Sent to all institutions within Regional Colleges South and the 200+ ranked in Undergraduate Engineering (No Doctorate)



FLORIDAPOLY

Peer Assessment

100%
OF STUDENTS EARN INTERNSHIPS
BEFORE THEY GRADUATE

1,352
STUDENTS

#1
THE NATION'S FIRST ALL
DIGITAL
UNIVERSITY
LIBRARY

57%
IN THE TOP 25% OF
THEIR HS CLASS

FACULTY PROFILE
Muhammad H. Rashid
Professor and Chair of Electrical and
Computer Engineering

17 books listed in the US Library of Congress and
more than 160 technical papers.
Life Fellow of the Institute of Electrical and
Electronics Engineers (IEEE, USA) and Fellow of the
Institution of Engineering and Technology (IET, UK).
His textbooks have translations in Spanish,
Portuguese, Indonesian, Korean, Italian, Chinese,
and Persian, and have been adopted at 57 US
universities including Stanford, Cornell, RIT, UC
Berkeley, Carnegie Mellon, Rose-Hulman, NYU and
UT Austin.
Generally recognized on campus as one of the
nicest people you'll ever meet.

1332
ADMITTED SAT

30.3
ADMITTED ACT

4.34
HS GPA OF F20 ADMITTED FRESHMEN

16:1
STUDENT FACULTY RATIO

CONGRATULATIONS
To our Fulbright
Student Scholars

Clinton Elliott
Engineering Management
Queensland, Australia

Marius Brinkman
Electrical Engineering
Arnsberg, Germany

Constanze Knahl
Computer Science
Bastheim, Germany

Al- Mashhadani Zubaidah
Engineering Robotics
Baghdad, Iraq

Sent to all institutions within Regional Colleges South and the 200+ ranked in Undergraduate Engineering (No Doctorate)

Outline

- Introduction
- National rankings
- **Retention/graduation**
- **Campus Growth**
- **Summary**

Primary Withdrawal Reasons

- **Challenging courses**
 - **Student readiness for STEM academics**
 - **Financial hardships**
 - **Campus experience**
 - **Program diversity**
-

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Academic Success Center
Student/Advising support services
Professional Skills course
Scholarship eligibility
Phoenix first-year
Improved course availability
Degree roadmaps

Co-curricular Council
Leadership Institute
Limited course withdrawals
Academic Improvement Program
Incentivize summer

Addressing first three through several efforts, need increased focus on the last two issues

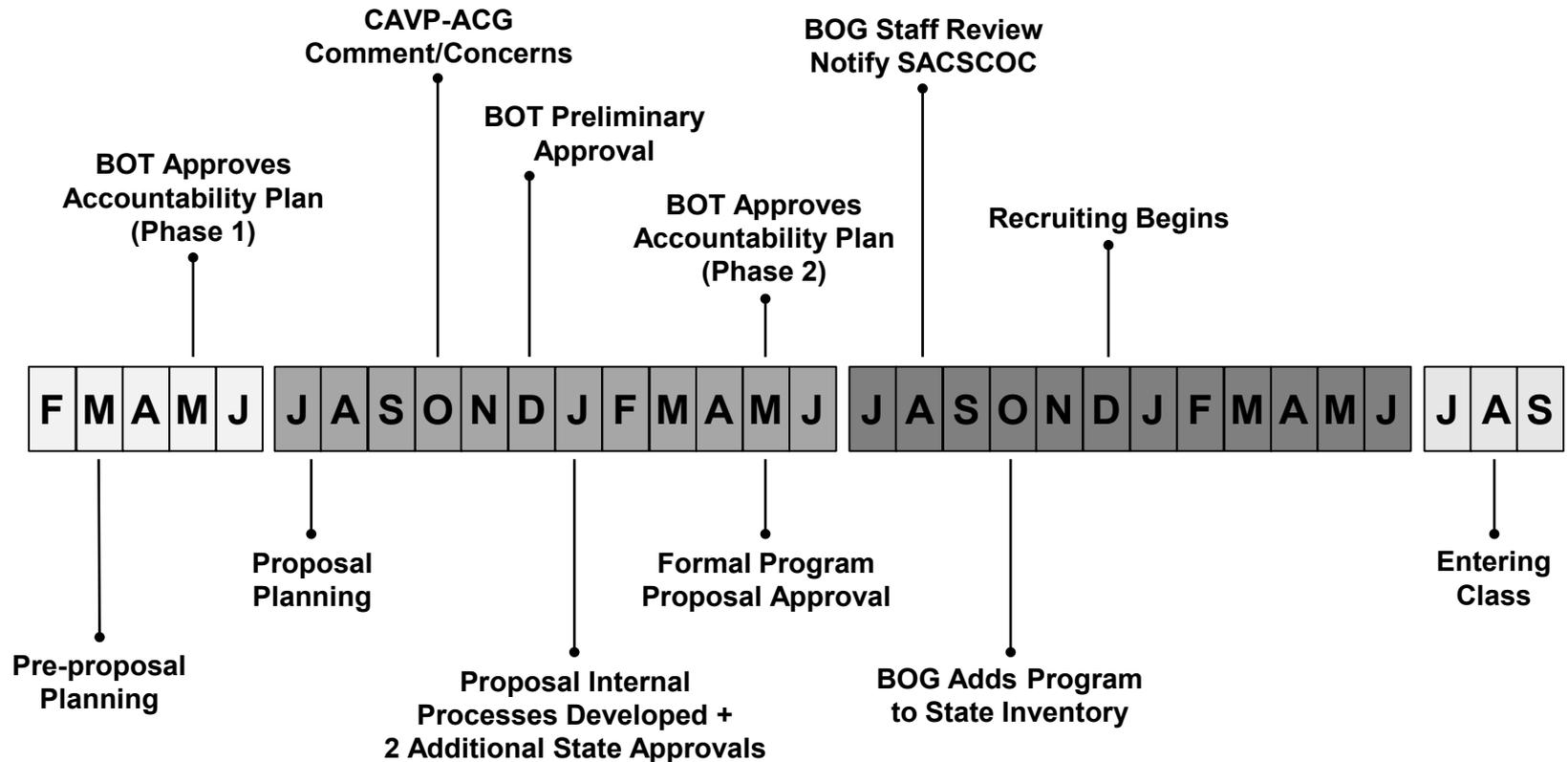
New Efforts

- **Campus experience**
 - Student affinity groups (eSports, scatter band)
 - Enhanced student campus space
 - New Student Center
 - Campus Respiratory Clinic
 - Expand social fabric by connecting students with campus opportunities through Phoenix Link (Campus Labs)
 - Focus on weekend activities (Purple Fire Weekends)
 - Pro-active financial aid solutions
 - Campus Spirit (new Phoenix mark) and campus décor (Wellness and Student Development wall pride)
- **Program diversity**
 - Current offerings limited to engineering, mathematical and physical sciences
 - Lack of retreat majors means students no longer interested in engineering must transfer
 - Should we consider new majors that grow the university and provide retreat majors

Outline

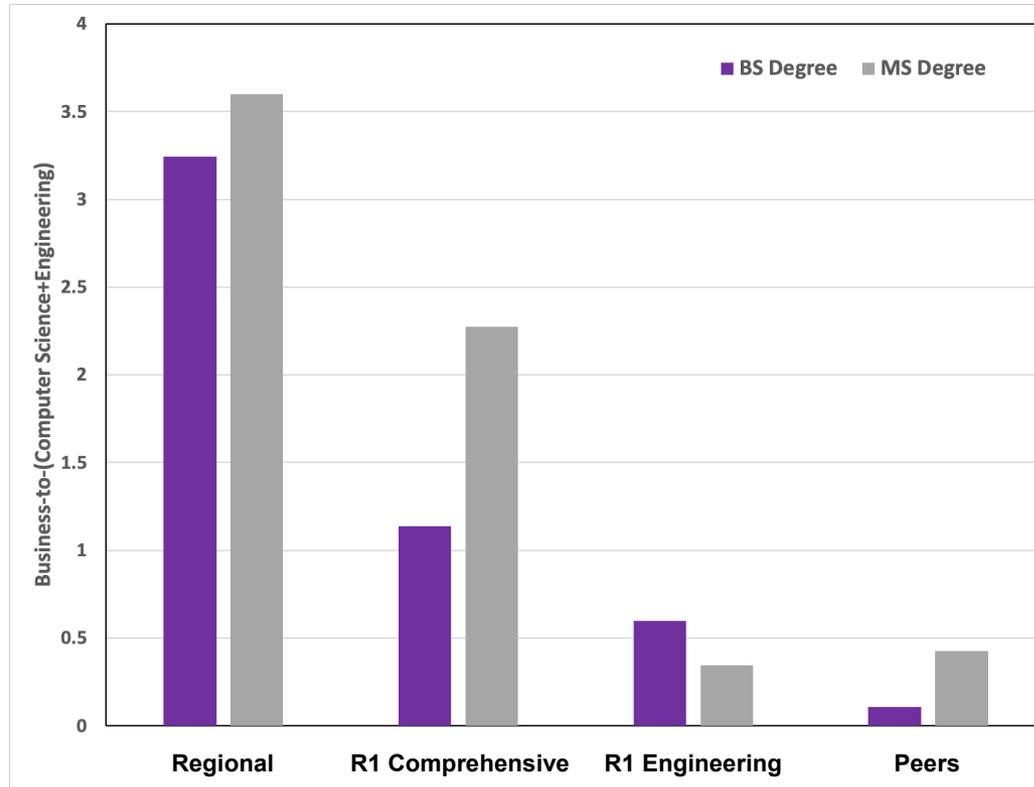
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New Program Timeline



- Realistic timeline of at least three years to add new programs

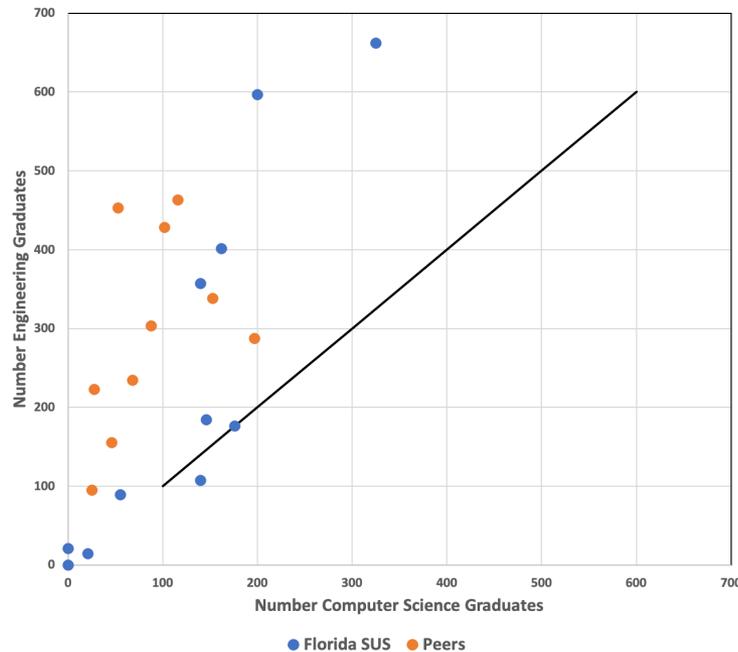
Expanding Scope



- **Business programs tend to be less popular at peer engineering schools**
 - BS degrees in Business: 66 awarded out of 1028 on average each year (6.4%)
 - MS degrees in Business: 151 awarded out of 725 on average each year (21%)
- **Business programs lack coherence with existing programs**
- **Information Technology (+200) may be worth considering**

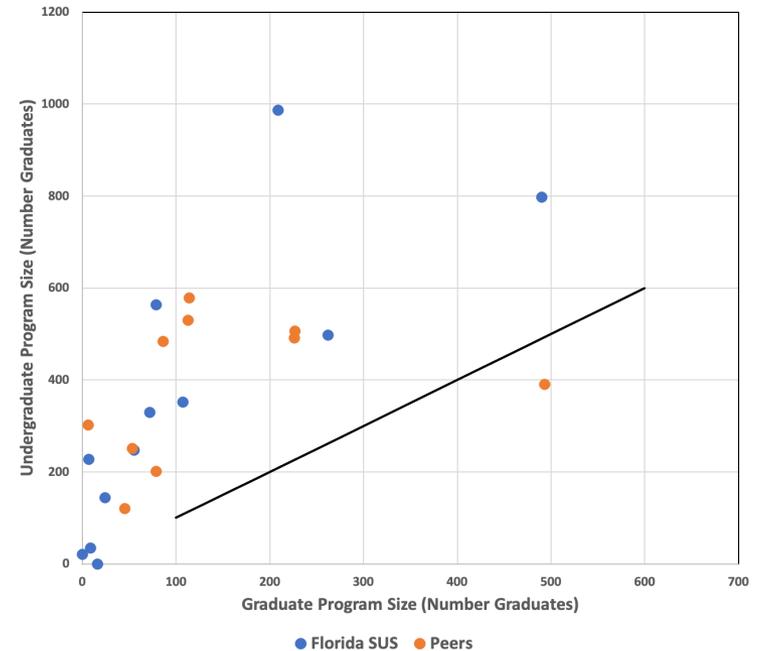
Existing Program Growth

• Engineering-to-Computer Science



- Average (SUS) = 1.84
- Average (Peers) = 3.40
- Florida Poly = 1.01

• Undergraduate-to-Graduate



- Average (SUS) = 3.00
- Average (Peers) = 2.67
- Florida Poly = 18.9

Opportunity to grow the graduate program and number of engineering students relative to computer science



New Program Growth

Florida Department Economic Opportunity

Florida 2019 - 2027 Occupational Employment Projections Technology, Engineering and Mathematics Occupations

Occupational Code	Occupational Title	2019 Employment	2027 Employment	Employment Growth	Percent Employment Growth	Total Job Openings	2018 Median Hourly Wage (\$)	ELS Education†
15-1132	Software Developers, Applications	39,205	49,627	10,422	26.6	32,726	44.53	B
17-2051	Civil Engineers	19,793	21,890	2,097	10.6	13,915	39.98	B
15-1121	Computer Systems Analysts	20,523	22,681	2,158	10.5	13,033	38.08	B
15-1133	Software Developers, Systems Software	18,174	20,776	2,602	14.3	12,382	47.62	B
15-1143	Computer Network Architects	19,031	20,787	1,756	9.2	11,838	41.74	B
15-1142	Network and Computer Systems Administrators	19,588	21,308	1,720	8.8	11,708	36.14	B
15-1199	Computer Occupations, All Other	11,484	12,926	1,442	12.6	7,860	36.78	B
17-2112	Industrial Engineers	10,854	12,342	1,488	13.7	7,384	35.41	B
15-1131	Computer Programmers	14,710	14,555	-155	-1.1	7,112	35.03	B
13-1081	Logisticians	6,992	7,787	795	11.4	6,413	29.77	B
15-1141	Database Administrators	8,166	9,229	1,063	13.0	5,415	41.09	B
17-2141	Mechanical Engineers	8,198	9,124	926	11.3	5,217	39.98	B
15-2031	Operations Research Analysts	6,905	8,489	1,584	22.9	5,166	32.33	B
19-2041	Environmental Scientists and Specialists, Including Health	5,946	6,493	547	9.2	5,039	23.80	B
15-1122	Information Security Analysts	5,311	6,738	1,427	26.9	4,628	42.86	B
17-2071	Electrical Engineers	6,987	7,819	832	11.9	4,540	43.59	B
17-1011	Architects, Except Landscape and Naval	6,995	7,386	391	5.6	4,409	34.01	B
17-2199	Engineers, All Other	6,022	6,574	552	9.2	3,745	37.03	B
17-2072	Electronics Engineers, Except Computer	5,559	5,956	397	7.1	3,281	44.85	B
17-1022	Surveyors	3,885	4,297	412	10.6	2,698	25.81	B
17-2081	Environmental Engineers	2,843	3,064	221	7.8	1,738	34.61	B
17-2011	Aerospace Engineers	2,855	3,128	273	9.6	1,672	51.83	B
17-2061	Computer Hardware Engineers	2,372	2,617	245	10.3	1,480	46.46	B
17-1012	Landscape Architects	2,096	2,238	142	6.8	1,353	30.29	B
15-2041	Statisticians	996	1,334	338	33.9	1,017	38.76	M
17-2111	Health and Safety Engineers, Except Mining Safety Engineers and Inspectors	1,033	1,126	93	9.0	642	35.75	B
17-1021	Cartographers and Photogrammetrists	609	710	101	16.6	470	28.44	B
17-2031	Biomedical Engineers	718	788	70	9.7	462	34.77	B
15-2011	Actuaries	579	702	123	21.2	430	48.29	B
17-2131	Materials Engineers	636	695	59	9.3	430	47.35	B
15-1111	Computer and Information Research Scientists	556	605	49	8.8	354	46.15	M
17-2041	Chemical Engineers	465	524	59	12.7	307	43.95	B
17-2121	Marine Engineers and Naval Architects	307	340	33	10.7	187	42.87	B
19-3011	Economists	239	255	16	6.7	152	43.50	M
15-2021	Mathematicians	127	156	29	22.8	112	44.38	M
17-2021	Agricultural Engineers	193	201	8	4.1	108	35.81	B
17-2161	Nuclear Engineers	138	145	7	5.1	89	49.19	B

Civil Engineering has the largest employment growth and we have a pathway in place through Environmental Engineering

Student Growth

- **Consider new academic program products (+150)**
 - Honors program, double majors, combined BS/MS programs, 2+2 programs
 - Online programs, Professional Science Masters (PSM), certificates
- **“Regularize” the student body (+985)**
 - Grow current engineering programs to roughly two and a half the size of the computer science program
 - Grow the graduate program to about 10% of that student body
- **Add Civil Engineering as the next engineering major (+300)**
- **Consider new academic programs that grow the student body and increase retention**

Retention and APR*

- FY20 Retention is 85%, compares favorably with peers

	Costs	Incoming Quality		Success		Institutional Alignment			Access
	NET PRICE	SAT	ACT	Retention	4-yr Grad	SIMILARITY	% BS STRAT	% GRAD STRAT	PELL
Stevens Institute of Technology	\$ 38,469	1440	33	94%	39%	75%	81%	89%	16%
Rose-Hulman	\$ 41,536	1430	32	91%	69%	95%	100%	100%	13%
Mines	\$ 25,472	1420	33	93%	52%	100%	100%	99%	15%
RPI	\$ 37,648	1399	32	93%	61%	73%	82%	80%	17%
WPI	\$ 43,027			95%	80%	87%	89%	85%	12%
AVERAGES	\$ 37,230	1422	32.5	93%	60%	86%	90%	91%	15%
MUST	\$ 14,133	1376	31	81%	22%	76%	85%	95%	25%
NM Institute of Mining	\$ 13,741	1350	29	74%	19%	72%	85%	82%	30%
Michigan Tech	\$ 17,139	1335	30	83%	28%	70%	78%	84%	23%
Clarkson	\$ 31,050	1283	29	85%	56%	64%	80%	62%	22%
FIIT	\$ 33,610	1260	29	80%	45%	53%	62%	49%	20%
AVERAGES	\$ 21,935	1321	29.6	81%	34%	67%	78%	74%	24%

- FY20 APR is 76% will get improvement points this year

		FAMU	FAU	FGCU	FIU	FSU	NCF	UCF	UF	UNF	USF	UWF
5. Academic Progress Rate (2nd Year Retention with GPA Above 2.0)	Excellence	73.0%	79.2%	75.2%	88.1%	91.6%	85.9%	90.1%	95.5%	80.7%	87.7%	80.3%
	Improvement	1.7%	-1.2%	2.8%	0.1%	0.2%	10.0%	1.4%	0.3%	2.1%	1.1%	0.5%
Excellence Score		0	1	0	8	10	6	10	10	2	8	2
Improvement Score		3	0	5	0	0	10	2	0	4	2	1
Higher Score		3	1	5	8	10	10	10	10	4	8	2

Summary

- **Aggressive growth plan was presented that addressed national rankings, Performance Based Funding and student growth**
- **National ranking focus is on US News World & Report's list of Undergraduate Engineering Programs (No Doctorate)**
- **Performance Based Funding focus is on student outcomes (retention (APR) & graduation rates) and graduate student growth**
- **There is capacity in the “current” programs to grow the student population to 3000 students**

Performance Based Funding Excellence Points

	Points Scale			Actual Year	Points
	 (10)	 (5)	 (1)		
• Percent BS graduates employed	72.8%	61.4%	52.3%	<u>67.5%</u> 2020	 8
• Median wages for BS graduates	\$ 40,700	\$ 28,200	\$ 18,200	<u>\$54,800</u> 2020	 10
• Average Cost to the Student	\$ 9,000	\$ 14,000	\$ 18,000	<u>-\$5,790</u> 2020	 10
• FTIC Four-Year graduation rate	50%	43.8%	38.8%	<u>39.5%</u> 2020	 2
• Academic progress rate (retention)	90%	83.8%	78.8%	<u>65.4%</u> 2020	 0
• BS awarded in strategic areas	50%	37.5%	27.5%	<u>100%</u> 2020	 10
• University access rate (UG w/ Pell)	42%	22%	6%	<u>29.5%</u> 2020	 7
• % Freshmen in Top 10% HS	50%	47.5%	27.5%	<u>25%</u> 2020	 0
• BOG choice: % of degrees w/out excess hours	60%	47.5%	37.5%	<u>89.2%</u> 2020	 10
• BOT: % Grads w/ 2+ Workforce Experiences (no benchmarks yet)	51%? (UWF)	31% ? (UWF)	15% ? (UWF)	<u>73.2%</u> 2020	 10

Florida Polytechnic University needs to increase retention and graduation rates while growing the Graduate program