

Board of Trustees Meeting

Wednesday, November 18
8:00 AM – 9:00 AM, and
10:30 AM – 12 NOON

Or upon the conclusion of the previous committee meeting

Florida Polytechnic University
WEBEX TELECONFERENCE MEETING

Dial in: 1-415-655-0001 | Access code: 171 608 4905#

MEMBERS

Cliff Otto, Chair	Mark Bostick, Vice Chair	Dr. W. Earl Sasser
Dr. Laine Powell	Gary C. Wendt	Bob Stork
Connor Coddington	Beth Kigel	Dr. Ala' J. Alnaser
Dr. Narendra Kini	Lyn Stanfield	

AGENDA

8:00 AM – 9:00 AM

I. Call to Order	Cliff Otto, Chair
II. Roll Call	Kristen Wharton
III. Public Comment	Cliff Otto, Chair
IV. Introduction of New Trustees	Cliff Otto, Chair
V. University Growth Plan	Randy K. Avent, President
VI. Recess Meeting	Cliff Otto, Chair

10:30 AM – 12:00 PM

VII. Reconvene Meeting and Call to Order	Cliff Otto, Chair
VIII. Roll Call	Kristen Wharton
IX. Public Comment	Cliff Otto, Chair
X. Chairman's Remarks	Cliff Otto, Chair
XI. President's Remarks	Randy K. Avent, President
XII. Operations Plan Update 20-21	Randy K. Avent, President

XIII. Consent Agenda
Action Required

Cliff Otto, Chair

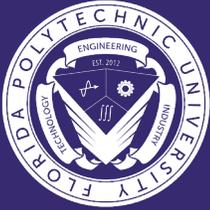
- A. Audit & Compliance Committee
 - 1. Approve the Bright Futures Scholarship Program Audit for June 2017-2019
 - 2. Approve CARES Act Compliance Monitoring Review
 - 3. Approve Textbook Adoptions Compliance Monitoring Review – Fall 2020
 - 4. Approve Performance Based Funding (PBF) Data Integrity Audit Scope
- B. Finance & Facilities Committee
 - 1. Approve the Finance & Facilities Committee Charter
- C. Governance Committee
 - 1. Approve the Governance Committee Charter
- D. Strategic Planning Committee
 - 1. Approve the Strategic Planning Committee Charter
- E. Academic & Student Affairs Committee
 - 1. Approve the revised Academic and Student Affairs Committee Charter
 - 2. Approve the revised Academic Calendar for spring 2021
 - 3. Approve the 2020-2021 Faculty Handbook
 - 4. Approve the revised policy FPU-5.0001AP New Degree Program Planning & Approval
 - 5. Approve awarding the associate of arts degree under the terms and conditions stipulated in the Florida Board of Governors Regulation 8.007, effective upon adoption of FPU-5.0001AP
 - 6. Approve a one-time waiver of the zero-credit fee for the SLS Academic Improvement course for spring 2021 only
- F. Board of Trustees
 - 1. Approve the September 9, 2020 Board of Trustees Meeting Minutes
 - 2. Approve the September 9, 2020 Board Workshop Minutes
 - 3. Approve the May 21, 2019 Board Workshop Minutes

XIV. Committee Reports

Cliff Otto, Chair
Committee Chairs

- A. Audit & Compliance Committee

Bob Stork,
Committee Chair



- B. Finance & Facilities Committee
Cliff Otto,
Committee Chair
- C. Governance Committee
Actions Required
Mark Bostick,
Committee Chair
- D. Strategic Planning Committee
Gary Wendt,
Committee Chair
- E. Academic & Student Affairs Committee
Actions Required
Dr. Earl Sasser,
Committee Chair
- XV. Board of Trustees Meeting Schedule
Cliff Otto, Chair
- February 10, 2021 (Virtual Committee Meetings)
 - February 17, 2021 (Virtual ASA Committee & Full Board Meetings)
 - End of April TBD (Virtual Committee Meetings)
 - May 3, 2021 (Board Retreat) *May 2 is Commencement*
- XVI. Board of Governors Meeting Schedule
Cliff Otto, Chair
- January 26-27, 2021 (*NCF, Sarasota*)
 - March 22-24, 2021 (*FAMU, Tallahassee*)
 - June 22-24, 2021 (*USF, Tampa*)
 - August 31-September 1, 2021 (*FAU, Boca Raton*)
 - October 6, 2021 Facilities Committee; Budget & Finance Committee Workshops (*FGCU, Ft. Myers*)
 - November 3-4, 2021 (*FIU, Miami*)
- XVII. Closing Remarks and Adjournment
Cliff Otto, Chair

**Florida Polytechnic University
Board of Trustees
November 18, 2020**

Subject: University Growth Plan

Proposed Committee Action

Information only – no action required.

Background Information

Two items came out of last year's merger attempt that need to be addressed before this year's legislative session. The first item is a growth plan that shows how the University will increase in size and scope. The second item is how that growth plan will support our mission and a general idea of the state funding needed to support that plan. This presentation will address the first item only as we develop a growth plan for the University that looks at all potential aspects of growth, including new disciplines. We will address both the operational and capital budgets needed to support that plan over the next ten years at the winter board meeting.

Supporting Documentation: Florida Polytechnic Growth Plan PowerPoint

Prepared by: Randy K. Avent, President



FLORIDA POLYTECHNIC
UNIVERSITY

Florida Polytechnic Growth Plan

Randy K. Avent
18 November 2020

First Year Rankings



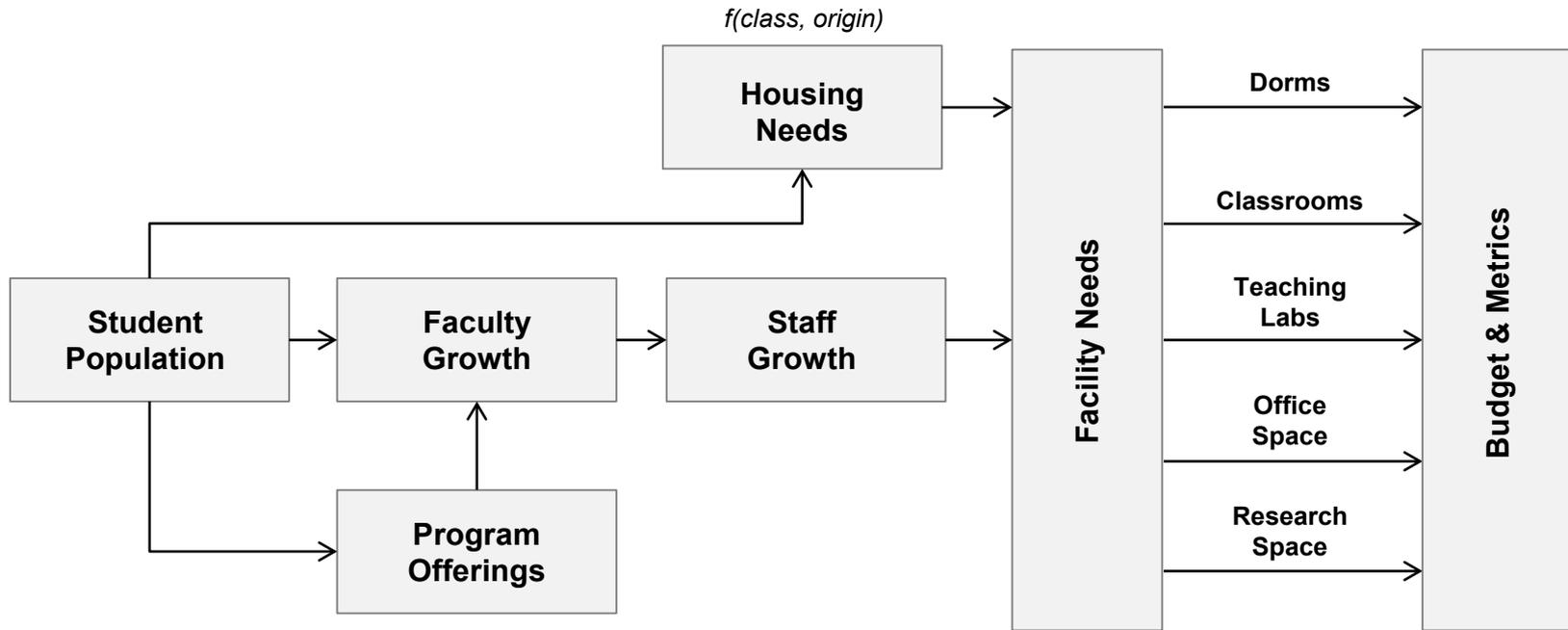
- **Top 40 public undergraduate engineering college (no doctorate)**
- **Ranked third among Florida public universities (WalletHub's 2021 Best Colleges and Universities) 22nd in the South (out of 328) and 14th nationally for best career outcomes**
- **Ranked #1 in the US for lowest out-of-state tuition and fees (ValueColleges, 2020) & Number 2 for nationally for Best Affordable Mechanical Engineering Degree by Affordable Schools (2019)**

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**

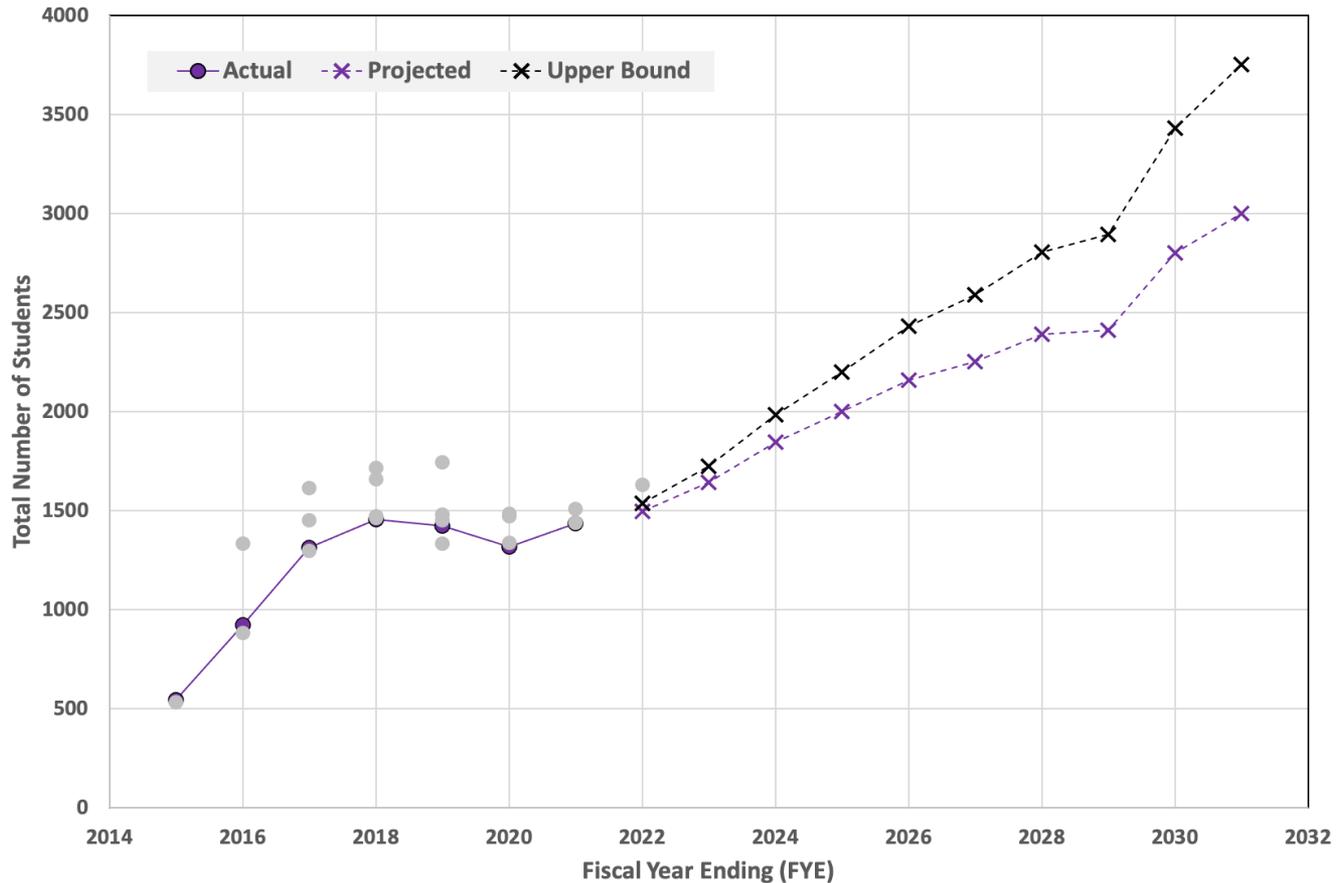
Strategic Growth Diagram



Outline

- Introduction
 - **Student growth**
 - **Employee growth**
 - **Facility needs**
 - **Summary**
-

Student Population



- **Student growth contributes to growing impact, reducing the cost of our programs and making us a strong state investment**

Growth Pathways

- **Campus experiences**
- **Degree enhancements**
- **Relative growth in Engineering**
- **Program growth**
- **Retreat majors**

Campus Experiences

- **Hire a “Coordinator” to grow and add student affinity programs**
 - **Embryonic:** Band, NUPOC, Esports
 - **New:** Robotics, club sports (women’s soccer, ultimate frisbee)
 - **Consider:** Orchestra
- **Admissions ++**
 - Register new students as soon as possible
- **Improve student outcomes**
 - Institutionalize early warning system
 - Intrusive advising, tutoring
 - Financial aid leveraging & internal policies for retention
 - Create attendance policies
 - Address COVID-related learning loss

Degree Enhancements

- **Consider impact of double concentrations**
- **Curricular Certificates (Entrepreneurship, Liberal Studies, Health Systems Engineering, ...)**
- **Combined BS/MS program**
- **Others to pursue**
 - Honors Calculus
 - 1+3 programs with State Colleges
 - BS/MBA program with Florida Southern College
 - Online programs
 - Dual enrollment programs
- **Grow the graduate program**



Relative Growth in Engineering

University	BS Computer Science	BS Engineering	Eng:CompSci
Florida International University	162	401	2.48
Florida State University	176	176	1.00
University of Central Florida	325	662	2.04
University of Florida	200	597	2.99
University of South Florida	140	357	2.55
Stevens Institute of Technology	88	303	3.44
Rose-Hulman Institute of Technology	68	234	3.44
Colorado School of Mines	102	428	4.20
Rensselaer Polytechnic Institute	197	287	1.46
Worcester Polytechnic Institute	153	338	2.21
Missouri University of Science & Technology	116	463	3.99
NM Institute of Mining & Technology	25	95	3.80
Michigan Technological University	53	453	8.55
Clarkson University	28	223	7.96
Florida Institute of Technology	46	155	3.37
Florida Polytechnic University	113	114	1.01

- Underperforming in Engineering relative to Computer Science
- Ability to grow engineering at Florida Poly dependent on market saturation

Market Saturation

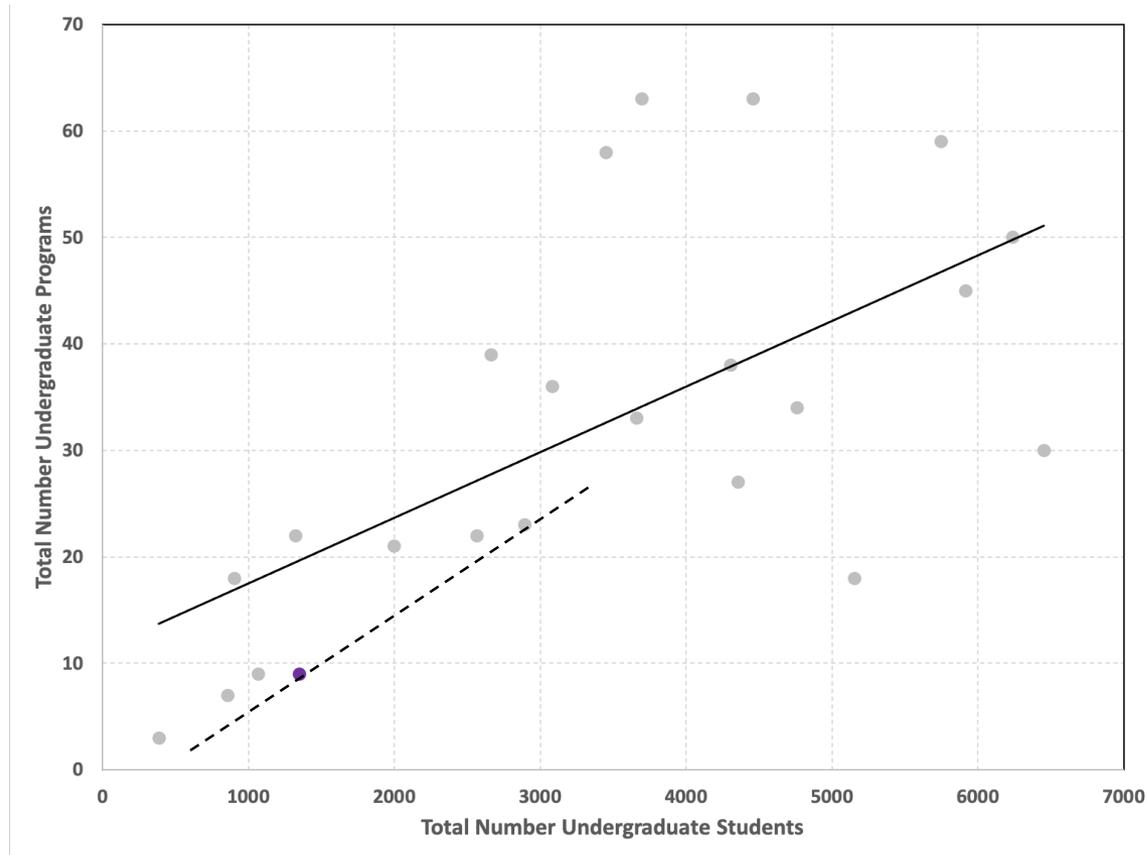
Admissions Criteria:	SAT 1300+
Number US Students:	332,681
Number FL Students:	17,183
Wants POLY Majors:	5,829

Market Saturation

Admissions Parameters:	SAT 1300+	AP 4+, M SAT>600,M PSAT>500
Number US Students:	332,681	1,129,000
Number FL Students:	17,183	66,350
Wants POLY Majors:	5,829	16,144

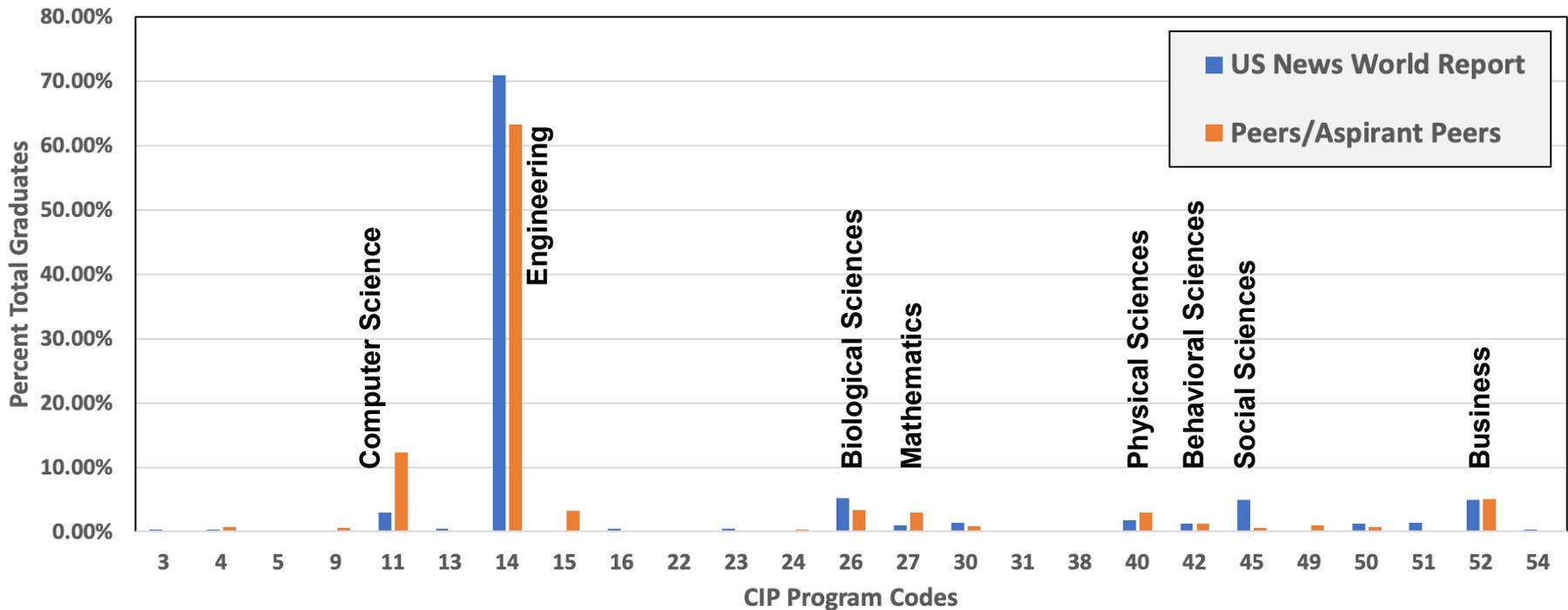
- **Degree of saturation is a function of admissions criteria**
- **Options for growth**
 - Move “heavily” to out-of-state and international students
 - Change admissions parameters with less emphasis on SAT scores
 - Increase number of undergraduate programs

New Program Growth



- **Strong correlation between number of programs and student body size**
- **What new programs will drive strong growth?**

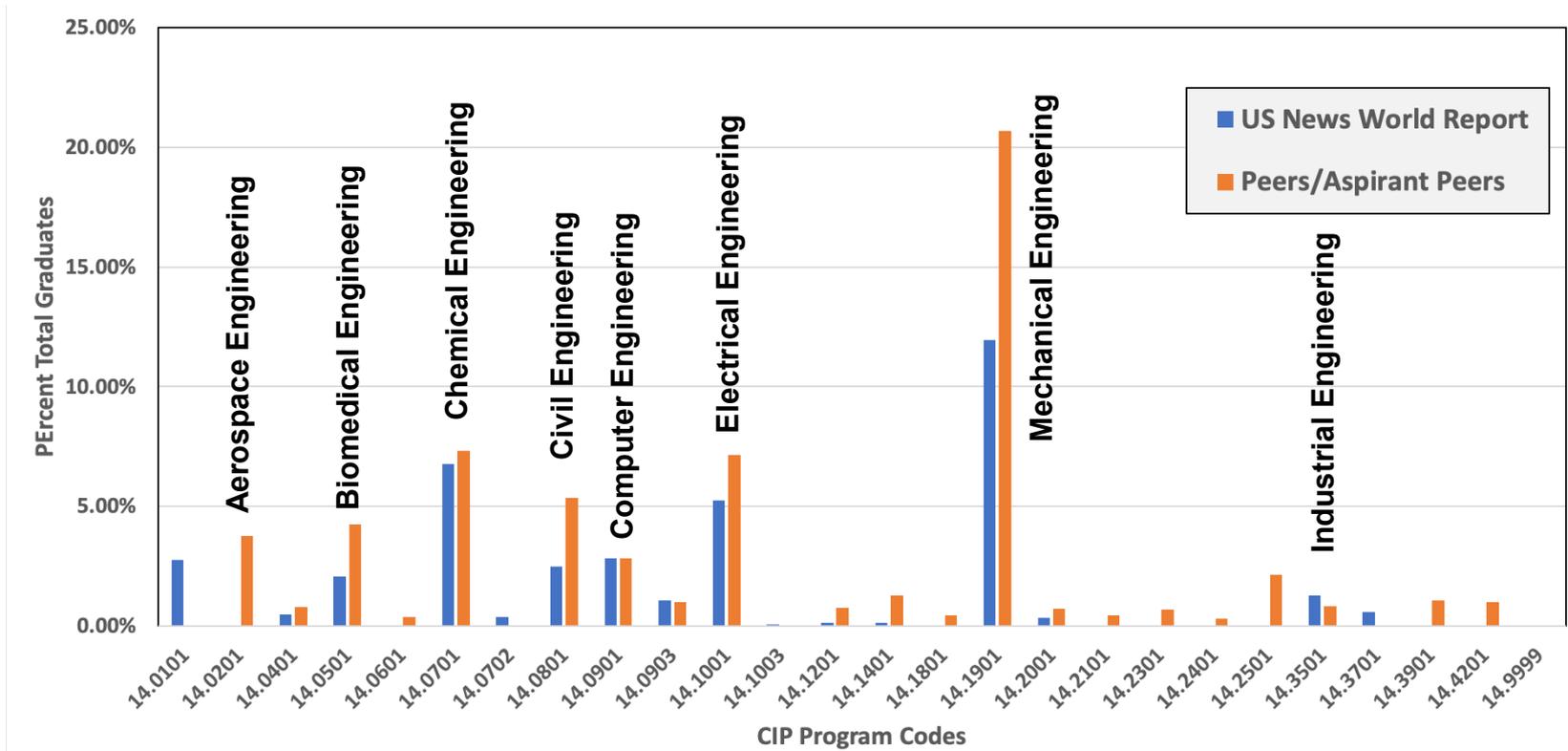
Most Popular Colleges



- Peers saw incremental program growth by adding new programs outside core Engineering & Computer Science



Most Popular Engineering Majors



- **Chemical and Biomedical are expensive degrees with little job opportunities, Aerospace belongs to UCF and Embry-Riddle**
- **Civil and Industrial Engineering represent largest workforce needs**

Gaps Identified by FL DEO

SOC Title	2019	2027	Growth	Percent Growth	Total Job Openings	Hourly Wage (\$)*	FL†	
Accountants and Auditors	91,055	101,830	10,775	11.8	77,945	29.94	B	\$ 59,880.00
Management Analysts	59,366	68,745	9,379	15.8	52,322	31.70	B	\$ 63,400.00
Financial Managers	23,354	27,879	4,525	19.4	19,378	54.90	B	\$ 109,800.00
Personal Financial Advisors	16,024	18,545	2,521	15.7	12,692	43.49	B	\$ 86,980.00
Chief Executives	21,143	21,360	217	1.0	12,103	82.21	B	\$ 164,420.00
Financial Analysts	12,233	13,649	1,416	11.6	9,984	33.20	B	\$ 66,400.00
Marketing Managers	9,006	10,226	1,220	13.5	7,638	49.86	B	\$ 99,720.00
Budget Analysts	3,221	3,475	254	7.9	2,209	33.61	B	\$ 67,220.00
Sales Engineers	2,154	2,380	226	10.5	2,047	51.90	B	\$ 103,800.00
Civil Engineers	19,793	21,890	2,097	10.6	13,915	39.98	B	\$ 79,960.00
Industrial Engineers	10,854	12,342	1,488	13.7	7,384	35.41	B	\$ 70,820.00
Mechanical Engineers	8,198	9,124	926	11.3	5,217	39.98	B	\$ 79,960.00
Architectural and Engineering Managers	7,244	7,961	717	9.9	4,869	59.84	B	\$ 119,680.00
Electrical Engineers	6,987	7,819	832	11.9	4,540	43.59	B	\$ 87,180.00
Engineers, All Other	6,022	6,574	552	9.2	3,745	37.03	B	\$ 74,060.00
Electronics Engineers, Except Computer	5,559	5,956	397	7.1	3,281	44.85	B	\$ 89,700.00
Environmental Engineers	2,843	3,064	221	7.8	1,738	34.61	B	\$ 69,220.00
Aerospace Engineers	2,855	3,128	273	9.6	1,672	51.83	B	\$ 103,660.00
Computer Hardware Engineers	2,372	2,617	245	10.3	1,480	46.46	B	\$ 92,920.00
Software Developers, Systems Software	18,174	20,776	2,602	14.3	12,382	47.62	B	\$ 95,240.00
Computer and Information Systems Managers	13,032	14,774	1,742	13.4	9,762	57.97	B	\$ 115,940.00
Operations Research Analysts	6,905	8,489	1,584	22.9	5,166	32.33	M+	\$ 64,660.00
Chemists	2,660	2,921	261	9.8	2,222	30.00	B	\$ 60,000.00
Psychologists, All Other	2,048	2,326	278	13.6	1,386	44.84	M+	\$ 89,680.00
Statisticians	996	1,334	338	33.9	1,017	38.76	B	\$ 77,520.00

- **Filters: over 1000 projected openings, BS/MS+ degrees, consistent with mission and >\$60K salary**

New Program Growth Summary

- **New programs more likely to provide incremental growth rather than “order-of-magnitude”**
 - Reflected in the number of programs versus student body size graph
- **New programs must be consistent with mission and must address workforce gaps identified by Florida Department of Economic Opportunity (DEO)**
- **Add new programs to grow student body and provide retreat pathways as one longer-term path to growing**
 - Maximize program “commonality” to reduce costs while increasing the student body

New Program Path

- Use Environmental Engineering as a path to add Civil Engineering
- Grow Industrial Engineering out of Data Science and Business Analytics (DSBA) and Mechanical Engineering
- Make Financial Analytics (FINTECH) and Marketing Analytics concentrations in DSBA with potential paths to independent programs
- Consider adding Computer & Information Systems as a joint program out of Computer Science and Business Analytics

Action Items (1/2)

- **Implement Campus Experience and Degree Enhancements**
 - Hire Coordinator to run student affinity groups
 - Expand student affinity groups to include robotics and club sports (women's soccer and ultimate frisbee)
 - Build certificate pathways that allow “double concentrations”
 - Continue “informal” 1+3 program with state colleges
 - Consider increasing marketing and admission counselors
- **Implement initiatives that result in relative Engineering growth**
 - Consider renaming buildings to highlight engineering
 - New logo similar to Mines that highlights engineering
- **Adjust admissions criteria to increase pool of talented students interested in Engineering**

Action Items (2/2)

- **Continued focus on recruiting out-of-state and international students**
 - Increase out-of-state tuition waiver to grow out-of-state students while increasing tuition collections
- **Use Business Analytics as a retreat major with increased focus on DEO-identified “Analysts” positions**
 - Add Financial Analytics and Marketing Analytics as concentrations with a pathway towards an early certificate for First Year STEM students
- **Add new degrees**
 - Two new preproposals added to 2021 Accountability Report
 - 1-2 additional preproposals added no later than 2023 Accountability Report

Outline

- Introduction
- Student growth
- **Employee growth**
- **Facility needs**
- **Summary**