### 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#**

<table>
<thead>
<tr>
<th>MEMBERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cliff Otto, Chair</td>
</tr>
<tr>
<td>Dr. Laine Powell</td>
</tr>
<tr>
<td>Connor Coddington</td>
</tr>
<tr>
<td>Dr. Narendra Kini</td>
</tr>
<tr>
<td>Mark Bostick, Vice Chair</td>
</tr>
<tr>
<td>Gary C. Wendt</td>
</tr>
<tr>
<td>Beth Kigel</td>
</tr>
<tr>
<td>Lyn Stanfield</td>
</tr>
<tr>
<td>Dr. W. Earl Sasser</td>
</tr>
<tr>
<td>Bob Stork</td>
</tr>
<tr>
<td>Dr. Ala’ J. Alnaser</td>
</tr>
</tbody>
</table>

### 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*

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

A. Audit & Compliance Committee
   Bob Stork,
   Committee Chair

Cliff Otto, Chair
Committee Chairs
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
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**
Outline

• Introduction

• Student growth

• Employee growth

• Facility needs

• Summary
- 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

### Underperforming in Engineering relative to Computer Science

### Ability to grow engineering at Florida Poly dependent on market saturation

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

<table>
<thead>
<tr>
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<th>SAT 1300+</th>
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<tbody>
<tr>
<td>Admissions Criteria:</td>
<td>SAT 1300+</td>
</tr>
<tr>
<td>Number US Students:</td>
<td>332,681</td>
</tr>
<tr>
<td>Number FL Students:</td>
<td>17,183</td>
</tr>
<tr>
<td>Wants POLY Majors:</td>
<td>5,829</td>
</tr>
</tbody>
</table>
Market Saturation

- 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

<table>
<thead>
<tr>
<th>Admissions Parameters:</th>
<th>SAT 1300+</th>
<th>AP 4+, M SAT&gt;600, M PSAT&gt;500</th>
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</thead>
<tbody>
<tr>
<td>Number US Students:</td>
<td>332,681</td>
<td>1,129,000</td>
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<tr>
<td>Number FL Students:</td>
<td>17,183</td>
<td>66,350</td>
</tr>
<tr>
<td>Wants POLY Majors:</td>
<td>5,829</td>
<td>16,144</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>SOC Title</th>
<th>2019</th>
<th>2027</th>
<th>Growth</th>
<th>Percent Growth</th>
<th>Total Job Openings</th>
<th>Hourly Wage ($)</th>
<th>FL $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountants and Auditors</td>
<td>91,055</td>
<td>101,830</td>
<td>10,775</td>
<td>11.8</td>
<td>77,945</td>
<td>29.94</td>
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<tr>
<td>Management Analysts</td>
<td>59,366</td>
<td>68,745</td>
<td>9,379</td>
<td>15.8</td>
<td>52,322</td>
<td>31.70</td>
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<tr>
<td>Financial Managers</td>
<td>23,354</td>
<td>27,879</td>
<td>4,525</td>
<td>19.4</td>
<td>19,378</td>
<td>54.90</td>
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<tr>
<td>Personal Financial Advisors</td>
<td>16,024</td>
<td>18,545</td>
<td>2,521</td>
<td>15.7</td>
<td>12,692</td>
<td>43.49</td>
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<tr>
<td>Chief Executives</td>
<td>21,143</td>
<td>21,360</td>
<td>217</td>
<td>1.0</td>
<td>12,103</td>
<td>82.21</td>
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<tr>
<td>Financial Analysts</td>
<td>12,233</td>
<td>13,649</td>
<td>1,416</td>
<td>11.6</td>
<td>9,984</td>
<td>33.20</td>
<td>B</td>
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<tr>
<td>Marketing Managers</td>
<td>9,006</td>
<td>10,226</td>
<td>1,220</td>
<td>13.5</td>
<td>7,838</td>
<td>49.86</td>
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<td>Budget Analysts</td>
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<td>3,475</td>
<td>254</td>
<td>7.9</td>
<td>2,209</td>
<td>33.61</td>
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<tr>
<td>Sales Engineers</td>
<td>2,154</td>
<td>2,380</td>
<td>226</td>
<td>10.5</td>
<td>2,047</td>
<td>51.90</td>
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<tr>
<td>Civil Engineers</td>
<td>19,793</td>
<td>21,890</td>
<td>2,097</td>
<td>10.6</td>
<td>13,915</td>
<td>39.98</td>
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<tr>
<td>Industrial Engineers</td>
<td>10,854</td>
<td>12,342</td>
<td>1,488</td>
<td>13.7</td>
<td>7,384</td>
<td>35.41</td>
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<tr>
<td>Mechanical Engineers</td>
<td>8,198</td>
<td>9,124</td>
<td>926</td>
<td>11.3</td>
<td>5,217</td>
<td>39.98</td>
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<tr>
<td>Architectural and Engineering Managers</td>
<td>7,244</td>
<td>7,961</td>
<td>717</td>
<td>9.9</td>
<td>4,869</td>
<td>59.84</td>
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<td>Electrical Engineers</td>
<td>6,987</td>
<td>7,819</td>
<td>832</td>
<td>11.9</td>
<td>4,540</td>
<td>43.59</td>
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<td>Engineers, All Other</td>
<td>6,022</td>
<td>6,574</td>
<td>552</td>
<td>9.2</td>
<td>3,745</td>
<td>37.03</td>
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<td>Electronics Engineers, Except Computer</td>
<td>5,559</td>
<td>5,856</td>
<td>397</td>
<td>7.1</td>
<td>3,281</td>
<td>44.85</td>
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<td>Environmental Engineers</td>
<td>2,843</td>
<td>3,064</td>
<td>221</td>
<td>7.8</td>
<td>1,738</td>
<td>34.61</td>
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<tr>
<td>Aerospace Engineers</td>
<td>2,855</td>
<td>3,128</td>
<td>273</td>
<td>9.6</td>
<td>1,872</td>
<td>51.83</td>
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<td>Computer Hardware Engineers</td>
<td>2,372</td>
<td>2,617</td>
<td>245</td>
<td>10.3</td>
<td>1,480</td>
<td>46.46</td>
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<tr>
<td>Software Developers, Systems Software</td>
<td>18,174</td>
<td>20,776</td>
<td>2,602</td>
<td>14.3</td>
<td>12,382</td>
<td>47.82</td>
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<td>Computer and Information Systems Managers</td>
<td>13,032</td>
<td>14,774</td>
<td>1,742</td>
<td>13.4</td>
<td>9,762</td>
<td>57.97</td>
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<td>Operations Research Analysts</td>
<td>6,905</td>
<td>8,489</td>
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<td>22.9</td>
<td>5,166</td>
<td>32.33</td>
<td>M+</td>
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<td>Chemists</td>
<td>2,660</td>
<td>2,921</td>
<td>261</td>
<td>9.8</td>
<td>2,222</td>
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<td>Psychologists, All Other</td>
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<td>2,326</td>
<td>278</td>
<td>13.6</td>
<td>1,386</td>
<td>44.84</td>
<td>M+</td>
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<td>Statisticians</td>
<td>996</td>
<td>1,334</td>
<td>338</td>
<td>33.9</td>
<td>1,017</td>
<td>38.76</td>
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</tbody>
</table>

- 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