Florida International University
Board of Governors

2012 University Work Plan

Worlds Ahead: Our Focus and Priorities for 2012-13
State University System of Florida Strategic Plan 2012-2025

✓ Increase access and degree completion for students, including students from traditionally underrepresented groups, returning adult students, and distance learning students

✓ Increase student access and success in degree programs in the STEM fields and other areas of strategic emphasis
Inside the numbers!

✓ For 2012-13 we will graduate approximately 10,800 students
✓ For 2012-13 we will enroll 50,000 students
✓ 3rd highest Hispanic 6 yr graduation rate in country 49%
✓ 4th highest Hispanic 1st year retention rate 82%
✓ Lead nation in Hispanic STEM degrees 914 in 2010-11
✓ 84% of FIU degrees awarded to minorities
✓ Since 2006 applications increased 46%
✓ FIU accounts for 30% of enrollment growth in SUS since 2006-07
South Florida market leads state in job growth

Miami Dade County Public Schools (MDCPS) Advanced Placement rates are growing

Miami Dade College AA graduates increased by 65% since 2006-07

Miami Dade College AA transfers to FIU increased by 46% since 2006-07

FIU is integral to “One Community One Goal” Strategic Plan
Closed 4 departments, 35 degree programs, and 9 centers and institutes; eliminated 231 positions

<table>
<thead>
<tr>
<th>E&amp;G Position Reductions</th>
<th>FY 2007-08</th>
<th>FY 2008-09</th>
<th>FY 2009-2010</th>
<th>FY 2010-11</th>
<th>Cumulative</th>
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<td>Eliminated/Vacancies</td>
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<td>89.7</td>
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<td>71.5</td>
<td>132.7</td>
<td>21.3</td>
<td>231.5</td>
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Efficiencies

- Restructured academic curricula
- Renegotiated contracts
- Initiated energy efficiency programs
- Redefined business models to lower costs
Efficiency outcomes

- Top space utilization in SUS (175% of statutory requirements)
- Leading energy conservation for last four years; saved $27.8 million cumulative average
- Second highest student faculty ratio in SUS 28:1
- Lowest % in SUS of classes under 30 students 45%
- Third lowest in SUS in E&G /FTE and in E&G/degree
- Winter mini session to improve time to degree
Post-Graduation Outcomes for Bachelor’s Degree Graduates

Average Annual Wages (1st Year After Graduation)
Ranked 2\textsuperscript{nd} in SUS

$39,032

Percent of Baccalaureate Graduates Employed in Florida
Ranked 4\textsuperscript{th} in SUS

66\%

Most recent data available from FETPIP
2012-13 Focus!

- Aggressive alignment of graduates with employment opportunities
- Added attention to performance oriented math and writing skills
- More science offerings to deepen role in STEM leadership
- Enhanced student internship offerings for practical experience and job-readiness
Critical Need: Tuition differential

Requesting: 15% tuition differential ( $20.29 per credit)

Uses: Improving graduation rates to 47%
   Expanding STEM education
   Hiring 38 new faculty, 15 advisors, 2 writing instructors and 10 academic support staff

Financial Aid: Continue 30% for need based aid commitment; nearly 7,000 students will receive tuition differential scholarship
Graduation Success Initiative

- Launch MyMajorMatch – Career selection
- Establish Major Maps for each major
- MyMajor website video
Graduation Success Initiative

The Graduation Success Initiative (GSI) helps students to:

Explore  Focus  Graduate
Find the right major  Stay on track  Finish on time

Students

Advisors
Graduation Success Initiative

- Extensive, university-wide set of innovations dedicated to student success
- Expand Algebra program (2010-11 pilot improved pass rates by 15%)
- Hire 55 writing fellows to improve student writing
STEM Success Initiative

- Initiate Teach STEM Miami in collaboration with Miami Dade County Public Schools to provide 200 STEM teachers over next 5 years
- Hire 24 additional STEM faculty in 2012-13 to augment 45 incremental STEM faculty hired over last 5 years
- 199 Physics majors in 2011-12 (majors doubled since 2006-07)
STEM Success Initiative

- Expand Life Sciences South Florida alliance
- Create STEM Transformation Institute to reform STEM education
- Enhance Peer Led Team Learning (PLTL) opportunities with 400 student mentors working with ~8,000 students in 2012-13
STEM Related Research
Dr. Khizroev and Dr. Nair’s research team have conducted a groundbreaking study that used magneto-electric (ME) nanoparticles to improve treatment of patients with Parkinson’s Disease.

This exciting research demonstrates interdisciplinary collaboration on a novel noninvasive system to deliver electrical stimulation to the brains of patients with Parkinson’s Disease. This innovative technique allows for multiple treatments as compared with the current treatments which require surgical procedures, and thus cannot be easily delivered or easily repeated.

**Students and Postdocs**
- 1 undergraduate student
- 2 doctoral students
- 1 postdoc
Dr. Waschbusch’s research gains national recognition by the New York Times Magazine

He is currently conducting a 3 year study on callous-unemotional children who are at-risk of developing aggressive, anti-social behaviors as adults that could limit their abilities to lead normal lives and, in some cases, lead to criminal behavior. The results are expected to show the right treatment, at the right time, can mitigate long-term behavioral issues.

Students and Postdocs

- 184 undergraduate students
- 25 doctoral students
- 5 postdocs
- 2 interns
Anuradha Godavarty, Associate Professor of Biomedical Engineering, was named a Health Care Hero.

Dr. Godavarty and her research team invented device to aid in detection of breast cancer

Research efforts have led to multiple inventions of portable, hand-held imaging devices that have the potential for improving breast cancer detection.
Near-infrared light (between 650-900 nm) is minimally absorbed and preferentially scattered by tissues

**Advantages**
- No x-rays
- No breast compression
- No nuclear radiation
- Potentially portable
- Relatively inexpensive

**Statistics regarding Breast Cancer**
- 1 in 8 women have lifetime risk
- 2\textsuperscript{nd} most common cancer in women

**Mortality rate decreasing**
- Early detection
- Treatment improvements
Hand-Held Optical Imager – Comparison of Imaging Methods

Tumors (left breast, 2‘o clock, 51 yrs)

Portable NIR Scanner (Patents 4, 5)

With Dr. Kiszonas (Radiologist, Sylvester) & Dr. Lopez-Penalver (Breast Surgeon)

**Unique Features**
- Adapts to any tissue shape
- Operator independent contact and no-contact imaging
- Allows reflectance and transmission imaging
- Improved resolution

**Potential Applications**
- Pre-screening breast (on-site)
- Breast chemotherapy response monitoring
- Intra-operative breast tumor resection
- Others (on-site sport injuries, arthritis)
Optical Imaging Laboratory
College of Engineering & Computing

Collaborators
• Dr. Kiszonas, Radiologist, Sylvester, U of Miami
• Dr. Lopez-Penalver, Breast Surgeon
• Dr. Boppart, Prof., U of Illinois Urbana Champaign
• Dr. Ponder, Imaging Diagnostic Systems Inc.

Students and Postdocs
• 32 undergraduate students
• 15 graduate students
• 3 doctoral students
• 4 postdocs

Funding Agencies
Enhance Internship Opportunities

✓ Expand path breaking partnership with FPL

✓ Initiate internship collaboration with Sothebys International, Miami Dade County, Jackson Health System and a major global high tech manufacturer

✓ Provided internship opportunities to 2,000 students in 2011-12

✓ 40 DC Summer Interns
Return on Investment

✓ Chronicle of Higher Education recognition
✓ Listed in the Top 100 Universities in the World under 50 years old by Times Higher Education
✓ Expected increase in graduation rate to 47% in 2012-13
✓ Increased number of STEM degrees to 1693 and Hispanic STEM degrees to 969 in 2011-12
✓ Science & Engineering Research Expenditures 5 Year Trend: 49% increase
✓ Research Doctoral Degrees Awarded 5 Year Trend: 68% increase
2012 University Work Plan

2012-13 Focus!

- Aggressive alignment of graduates with employment opportunities
- Increase STEM graduates and deepen role in STEM leadership
- Enhance student internship offerings for practical experience and job-readiness
- Implement additional efficiencies
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