



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



STATE
UNIVERSITY
SYSTEM
of FLORIDA
Board of Governors

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



The Context!

- ✓ 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



Efficiencies

- ✓ Closed 4 departments, 35 degree programs, and 9 centers and institutes; eliminated 231 positions

E&G Position Reductions FTE, #	Annual				Cumulative
	FY 2007-08	FY 2008-09	FY 2009-2010	FY 2010-11	
Eliminated/Vacancies	-	-	13.0	5.0	18.0
Terminated/Laid Off	-	2.0	4.0	2.0	8.0
Attrition	-	19.5	26.0	6.0	51.5
Faculty	-	21.5	43.0	13.0	77.5
Eliminated/Vacancies	-	28.0	50.7	0.3	79.0
Terminated/Laid Off	6.0	15.0	27.0	1.0	49.0
Attrition	-	7.0	12.0	7.0	26.0
Staff	6.0	50.0	89.7	8.3	154.0
Total	6.0	71.5	132.7	21.3	231.5

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 2nd in SUS

**2009-10
ACTUAL**

\$39,032

Percent of Baccalaureate Graduates Employed in Florida

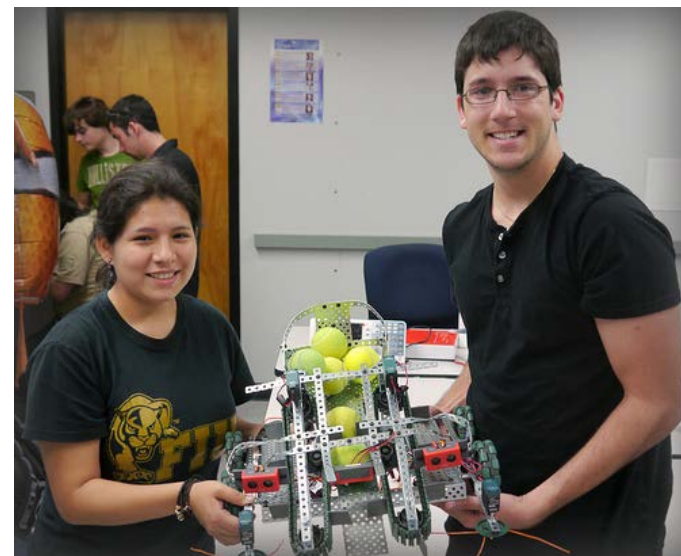
Ranked 4th in SUS

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



15%

Tuition
Differential

Graduation Success Initiative

- ✓ Launch MyMajorMatch – Career selection
- ✓ Establish Major Maps for each major
- ✓ [MyMajor website video](#)



GSI:
GRADUATION SUCCESS INITIATIVE

FIU

Undergraduate
Education



Graduation Success Initiative

The Graduation Success Initiative (GSI) helps students to:

Explore

Find the right major



Focus

Stay on track



Graduate

Finish on time



Students



Choose
one



Advisors

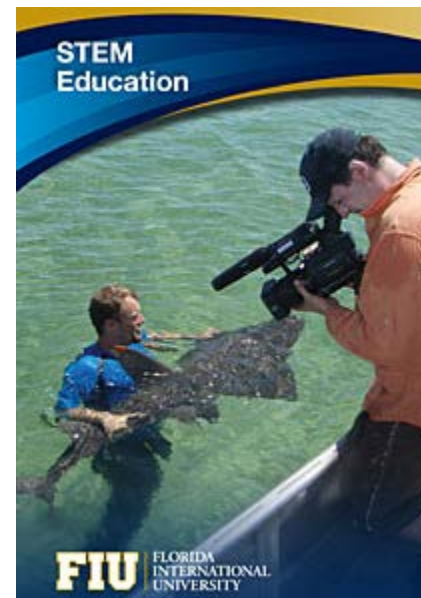
Graduation Success Initiative

- ✓ 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)



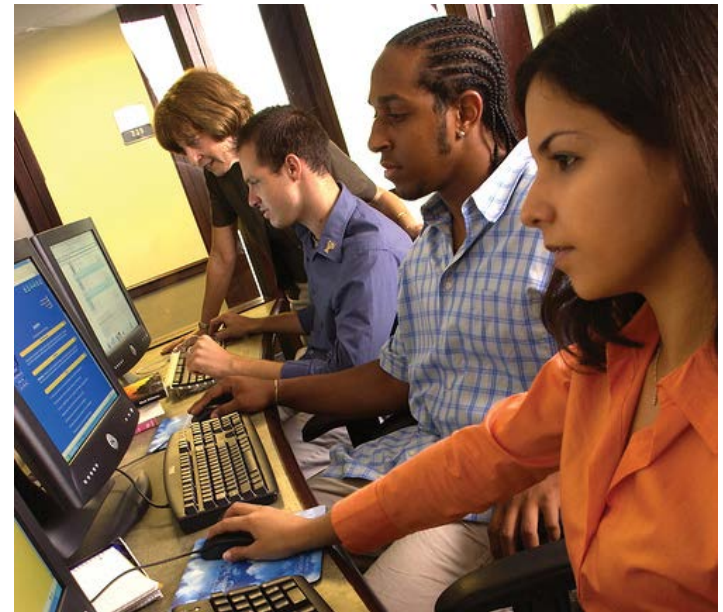
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ANSWERING THE NATION'S STEM CHALLENGE

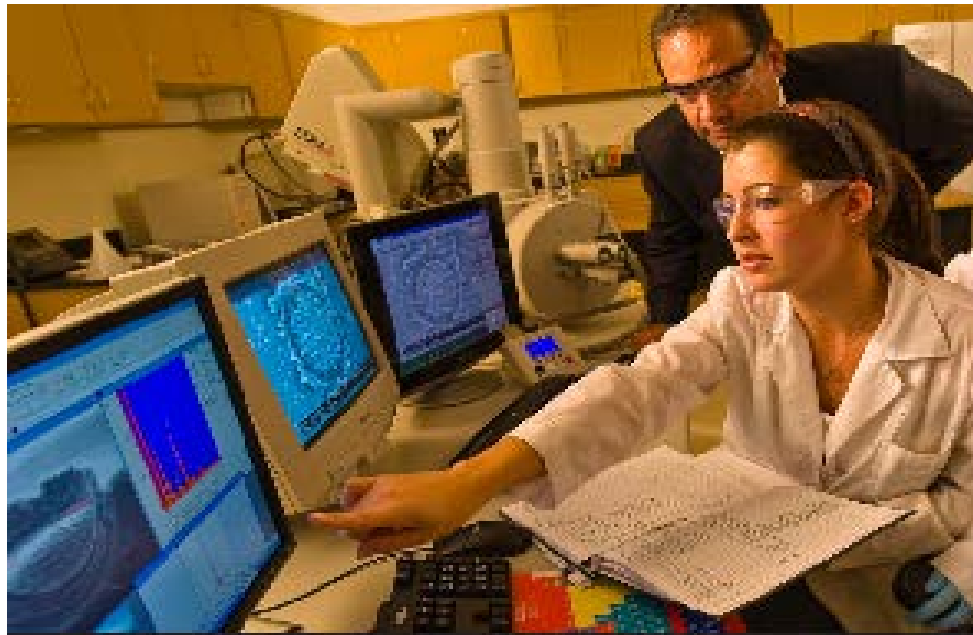


STEM Success Initiative

- ✓ 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





Sakrat Khizroev,
Professor of Electrical and
Computer Engineering

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.



Dr. Anuradha Godavarty's research team

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

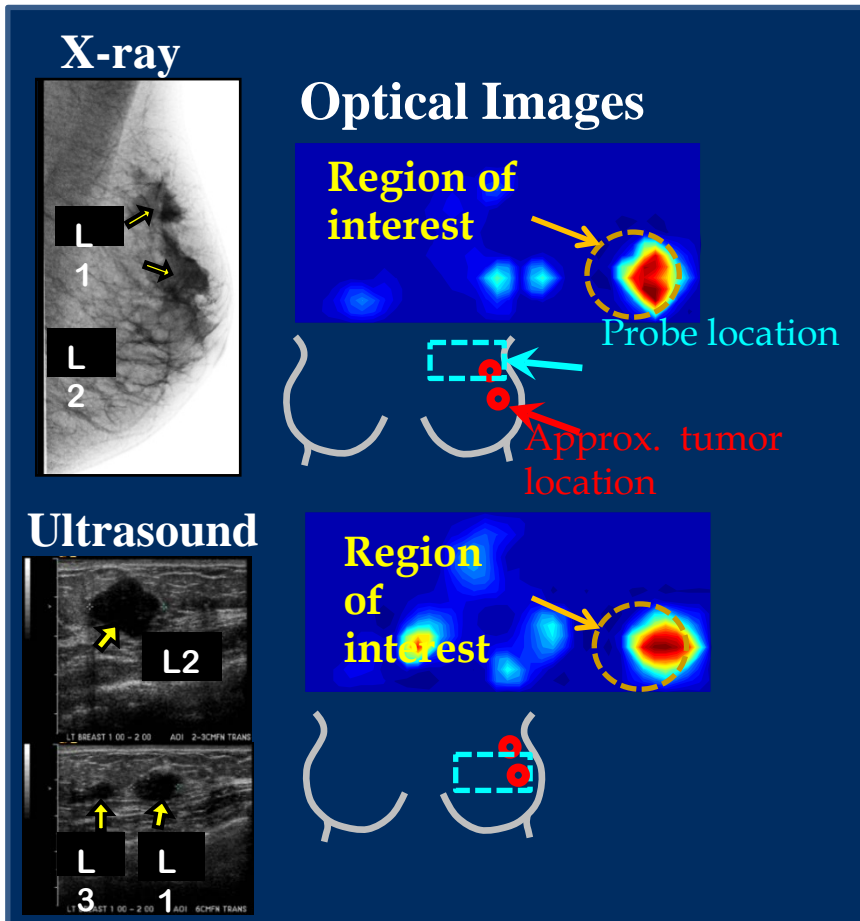
- 1 in 8 women have lifetime risk
- 2nd most common cancer in women

Mortality rate decreasing

- Early detection
- Treatment improvements

Hand-Held Optical Imager – Comparison of Imaging Methods

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



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

Portable NIR Scanner (Patents 4, 5)



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



Prof. Anuradha Godavarty surrounded by students

Students and Postdocs

- 32 undergraduate students
- 15 graduate students
- 3 doctoral students
- 4 postdocs

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.

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



2012-13 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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