

Higher Education & Workforce Subcommittee

**Wednesday, September 25, 2013
9:00 AM – 11:00 AM
102 HOB**

Meeting Packet

**Will Weatherford
Speaker**

**Jeanette Nuñez
Chair**



AGENDA

Higher Education & Workforce Subcommittee
Wednesday, September 25, 2013
9:00 a.m. – 11:00 a.m.
102 HOB

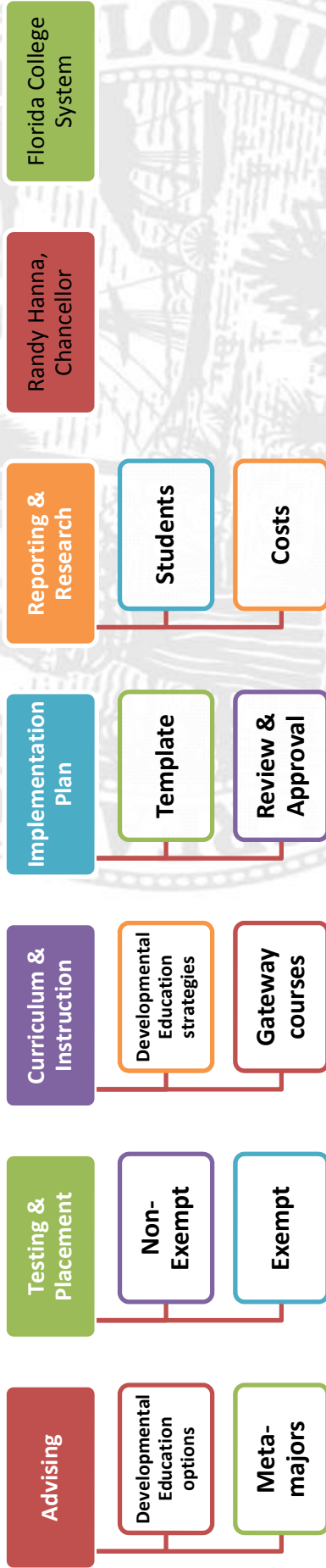
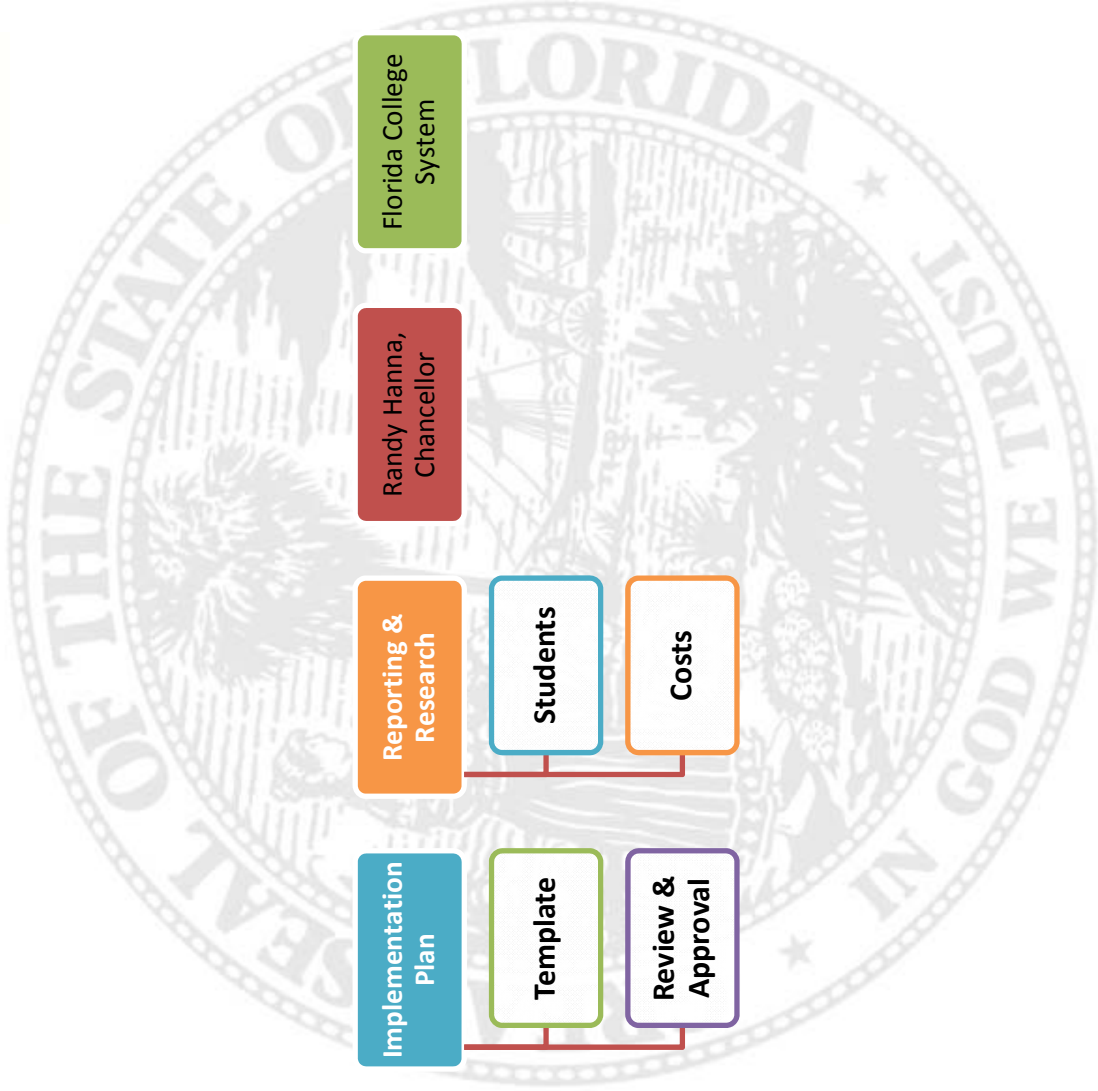
- I. Call to Order/Roll Call
- II. Opening Remarks
- III. Presentation on the implementation of Developmental Education (SB 1720) – Randy Hanna, Chancellor, Florida College System
- IV. Presentations on the implementation of Preeminent State Research Universities (SB 1076)
 - Eric Barron – President, Florida State University
 - Bernie Machen – President, University of Florida
- V. Closing Remarks and Adjournment

Developmental Education Reform

Senate Bill 1720

House Higher Education & Workforce Subcommittee
September 25th, 2013

Randy Hanna, Chancellor
Florida College System





Implementation Activities

| Webinars/Conference Calls | Meetings | Memoranda |
|---|--|--|
| <p>May 9: Florida College Association of Test Administrators – Legislative Overview</p> <p>May 14, 16, 17: Councils of Instructional and Student Affairs - Legislative Overview Webinars</p> <p>May 24: Articulation Coordinating Committee – Legislative Overview Conference Call</p> <p>June 4: Florida College Registrars and Admissions Officers – Legislative Overview</p> <p>June 13: Financial Aid Directors – Legislative Overview Webinar</p> <p>June 25: Equity Officers & Disability Coordinators - Legislative Overview Webinar</p> <p>June 26: Florida Developmental Education Association - Legislative Overview Webinar</p> <p>August 6: Florida College Registrars and Admissions Officers - Legislative Overview Webinar</p> | <p>May 30: Councils of Instructional and Student Affairs – Implementation Discussion</p> <p>May 31: Meta-Major Workshop</p> <p>June 6: Council of Presidents – Legislative Implementation Discussion</p> <p>July 10: Developmental Education Workshop, Cape Coral</p> <p>July 18: Florida College System MIS Advisory Task Force (MISATFOR) – Legislative Overview</p> <p>July 30: Proposed Rule 6A-10.0315 Workshop</p> <p>September 17: Board of Education Rule Adoption (Meta-Majors and Exemption)</p> | <p>July 1: Senate Bill 1720 Developmental Education Reform Technical Assistance</p> <p>August 21: Developmental Education Implementation Plan Template Sent to Presidents</p> <p>August 29: Developmental Education Advising Statement</p> |

Early Reform Efforts

Broward College

- Placement decisions using supplemental student achievements, such as high school GPA
- Direct enrollment in gateway courses for select students who would otherwise be required to enroll in developmental education
- Expanded, accelerated or fast track developmental education options
- Test preparation opportunities for students during the summer

Early Reform Efforts

Miami Dade College

- Test preparation courses
- Accelerated developmental reading and writing (8-week course)
- Developmental mathematics options
 - Modularized
 - Math-to-Stats combined and accelerated
 - Accelerated mathematics (8-week courses)
- Multiple measures for direct entry into gateway courses



Save the Date

The Florida College System presents

2013



The Developmental
Education Summit

October 25, 2013

InterContinental Tampa
4860 West Kennedy Boulevard
Tampa, FL



Florida Department of
EDUCATION

Spring 2014 Planning

- Developmental Education Reform Implementation Plan Submission
- Admission/Registration Procedures
- Professional Development
 - Admissions Officers
 - Advisors
 - Faculty
 - Test Administrators
- Instructional Support/Tutoring Services
- Academic Progress Monitoring/Early Warning Systems
- Fall 2014 Implementation



Florida State University 2013 Preeminence Update

Presented by: Eric J. Barron

Commitment: Two Parts

- Path to the Top 25
- Job Creation and Student Career Success

Path to the Top 25

- Starts with a review of the USNWR metrics and their contributions to the overall ranking:
 - Student selectivity (15%)
 - Retention and Graduation Rates (20%)
 - Faculty Resources (20%)
 - Financial Resources (10%)
 - Alumni Giving (5%)
- Next few slides show how FSU compares with tier 1 public research universities and the standard to reach #25 on each metric – notice color coding:
 - Green = already in the Top 25
 - Blue = in striking distance
 - Red = will require significant time & investment

Path to the Top 25

Comparison: Public Research Tier 1 Universities

Student Selectivity – Value 12.5%

| Metric | FSU Rank (%) | Top 25 Univ. (%) |
|---------------------|--------------|------------------|
| Acceptance Rate | 19 | |
| High School Top 10% | 29 (41%) | (48%) |
| High School Top 25% | 28 (80%) | (86%) |
| Verbal SAT | 13 | |
| Math SAT | 33 (600) | (614) |

Graduation and Retention Rates – Value 22.5%

| Metric | FSU Rank (%) | Top 25 Univ. (%) |
|--------------------------|--------------|------------------|
| Average Grad Rate (6 yr) | 28 (75%) | (79%) |
| Avg Freshman Retention | 17 | |

Path to the Top 25

Graduation Rate Performance – Value 7.5%

| Metric | FSU Rank (value) | Top 25 Univ. |
|----------------------|--------------------|--------------|
| Predicted vs. actual | 4 (plus 11) | |

Faculty Resources – Value 20%

| Metric | FSU Rank (value) | Top 25 Univ. (value) |
|-------------------------|------------------|----------------------|
| Faculty Compensation | 27 | *Full Professors (!) |
| % faculty terminal deg. | 26 | (94.5%) |
| % faculty full time | 41 (90.9%) | (18:1) |
| Student/faculty ratio | 70 (26:1) | (42%) |
| Class size less than 20 | 54 (34%) | |
| Class size more than 50 | 14 | |

Top 25 Proposal

Academic Reputation – Value 22.5%

| | |
|------------------------|----|
| Peer assessment | 45 |
| High School Counselors | 47 |

Financial Resources – Value 10%

| | | |
|-----------------------|------------|--------------|
| Resources per student | 70 (\$17K) | 25th (\$37K) |
|-----------------------|------------|--------------|

Alumni Giving – Value 5%

| | |
|----------|---|
| % Giving | 9 |
|----------|---|

Preeminence Funding

| | <u>5YR</u> | <u>Year 1</u> |
|--|------------|---------------|
| Faculty Hires (STEM) | \$26M | \$6M* |
| National Academy Members | 3M | 1M |
| Scholarships – STEM Ready Students | 16M | 3M* |
| Entrepreneurial University Critical Thinking/Career Placement | 23M | 4M |
| Retention and Graduation | 7M | 1M |

*Faculty recruitment and recruiting new students (financial aid packaged in March); nonrecurring funds will be used for start-up costs

Impact on Metrics

Focused Scholarship Dollars will:

increase % of students in top 10% and top 25%
goal is 7% - about 480 more students

improve acceptance rates

increase SAT or ACT math scores
goal is increase of 14 points on avg. math SAT

Difficult to quantify the impact of the scholarships

Impact on Metrics

Faculty Hires will (+94 this year; project +60-75 coming year):

Increase number of full-time faculty as a percent of the total

Increase faculty with terminal degrees

Decrease the faculty/student ratio

26:1 fall 2012 – goal is 18:1

Need a total of 620 faculty (25% of the way)

Decrease class sizes

Difficult to predict without knowing hires

Adds to student expenditures

will have little impact but every dollar counts (\$15M = increase of \$408 per student spending – university ranked 25 on this metric is \$20,000 above us)

Impact on Metrics

Investment in Retention and Graduation:

Retention Rate

92% fall 2012 – +1% is significant

Graduation Rate

75% fall 2012 – goal is 79%

increasing as a function of retention

expect increase next year (76%) – takes several years!

Graduation Performance

already 4th among top publics

improved graduation rates will improve performance

Metrics With Little Impact

Faculty Compensation – Challenge of Full Professors

Financial Resources per student

Alumni Giving

Academic Reputation

(Florida Universities are below quantitative measures)

Peer assessment

High School Counselors



2013-14 KEY INITIATIVES

Key Initiatives

Top 25 Public University

Our national ranking is highly dependent on investment in STEM fields

- Continue hiring initiative in Energy and Material Sciences
- Recruit National Academy Members who are leaders in STEM fields
- Increase graduate and undergraduate degrees in STEM
- Target investments to take STEM fields to even higher levels of national prominence

Strategic Hiring of Faculty

- Energy/Materials 1. Materials for Energy Production, Conversion, Storage and Utilization
- Institute for Successful Longevity: Part 1. Human Brain Development and Plasticity
- Energy/Materials II
- Coastal and Marine Ecosystem Quality and Resilience

Enhancing Student Career Readiness

A high national ranking is highly correlated with career success, yet the typical metrics associated with national rankings do not include career enhancement or job placement.

A high national ranking without substantially increasing job opportunities for the citizens of Florida and commercialization potential to advance Florida's economy is not sufficient.

FSU proposes to become a State and National leader in Job Creation and Student Career Success

Job Creation and Student Career Success – 7 Point Strategy

Strategy 1: Creating a Culture of Entrepreneurship

- 1.1 Open the doors of the College of Business to other majors
- 1.2 Entrepreneurs-in-Residence in every college
- 1.3 Partnerships across colleges (e.g. Chempreneurs)
- 1.4 Competitions
- 1.5 Attracting Private Investment
- 1.6 Student Innovation Foundation

Job Creation and Student Career Success – 7 Point Strategy

Strategy 2: Promoting Patents, Licensing, Startups

- 1.1 Record # of patents submitted and awarded (reached the 12th metric of preeminence bill – 100 three-year total)
- 1.2 Record # of licenses (15 with 5 in progress)
- 1.3 Record # of start-up companies (4)
- 1.4 Three methods of taking ideas to the marketplace
 - Start-up supported by FSU (e.g. GAP funding)
 - Licensing directly to a company
 - New effort public-private partnership for applied research funding

Job Creation and Student Career Success – 7 Point Strategy

Strategy 3: Investing in Innovation

- 1.1 Difficult to predict career opportunities even 4 years in advance
 - market fluctuations (e.g. Petroleum engineers)
- 1.2 Some key majors have low starting salaries
 - (education, agriculture, military...)
- 1.3 Majors matter; national rank matters on employment & salaries
- 1.4 Considerable data bias (partial data sets, demographics)
- 1.5 Focus on Rank and areas of Long Term Innovation Potential
 - Materials
 - Energy
 - Successful Aging
 - Coastal marine sciences - environment

Job Creation and Student Career Success – 7 Point Strategy

Strategy 4: Economic Development in our Region (as well as State)

- 1.1 High level role in economic development councils
and chambers
- 1.2 Active incubation of companies; community partnerships in
incubation of companies
- 1.3 Transformation of Tallahassee
College Town
Civic Center; Conference Hotel
Madison Mile

Job Creation and Student Career Success – 7 Point Strategy

Strategy 5: Accessing the Power of a FSU, FAMU, and TCC partnership

1.1 “Educate Your Business”

A joint commitment to meet any workforce needs

*A joint commitment to be at the table in recruiting
companies to Florida*

*Brochure being distributed by Chamber and Economic
Development Council*

1.2 Added benefit – veteran retention, graduation and job success

Job Creation and Student Career Success – 7 Point Strategy

Strategy 6: Embedding Career Success in the Curriculum

- 1.1 Knowledge of Career Opportunities, Potential Employers and Starting Salaries - as a part of every program guide and compact
- 1.2 Overhaul of the Curriculum to add Experiential learning (i.e. internships) and practical applications
- 1.3 Use of Entrepreneurs-in-Residence – Professors of Practice
- 1.4 Private contractor to assess employer opinions on strengths and weaknesses

Job Creation and Student Career Success – 7 Point Strategy

Strategy 7: Advancing Career Readiness through the Career Center

- 1.1 Broad array of services from career advising, counseling, programming, and instruction; college liaisons, events, employability skills workshops
- 1.2 Internships; career shadowing
- 1.3 Use of Entrepreneurs-in-Residence – Professors of Practice
- 1.4 Employer databases; career opportunity listings
- 1.5 Career portfolio
- 1.6 Major effort to involve the Alumni Association

Summary: Support for Continued Preeminence Funding

FSU has a unique and narrow window of opportunity to invest deliberately (e.g. in the strategic hiring of faculty) allowing us to ascend the ranks of the preeminent universities in North America and to create jobs and dramatically enhance student career success.



AAU and Other Metrics

Goal – AAU Ready

Metrics proposed to improve presented in Governor's Request

- Graduation Rate Performance
- Student faculty ratio
- % classes under 20
- Faculty awards
- Total STEM degrees
- Total Graduate and Professional STEM degrees
- Total licenses granted
- National Academy memberships
- Total annual research expenditures
- Total annual research expenditures in non-diversified medical sciences
- Doctoral degrees
- Post-doctoral appointments
- Endowment size
- Alumni Giving

Preeminence

Metrics (must achieve 11 of 12)

- GPA and SAT Scores (4.0 and 1800)
- Public University Ranking in Top 50
- Freshman Retention Rate exceeding 90%
- 6-year Graduation Rate exceeding 70%
- National Academy Members exceeding 6
- Total Annual Research – exceeding \$200M
- Total Non-Medical – exceeding \$150M
- National STEM ranking Top 100 – 5 fields
- Patents – exceeding 100 in 3-years
- Doctoral Degrees exceeding 400
- Post-doctoral appointments exceeding 200
- Endowment Size exceeding 500M

Top 25 Proposal

Our national ranking is highly dependent on investment in STEM fields

Faculty hiring initiative in energy and material sciences to ensure that we are national leaders in these critical fields.

Targeted investments to take STEM fields to even higher levels of national prominence

Recruitment of National Academy Members who are global leaders in STEM fields

Attract STEM student scholars to become a top producer of degrees in the mathematical, physical and natural sciences

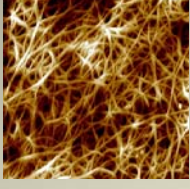
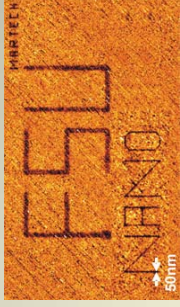
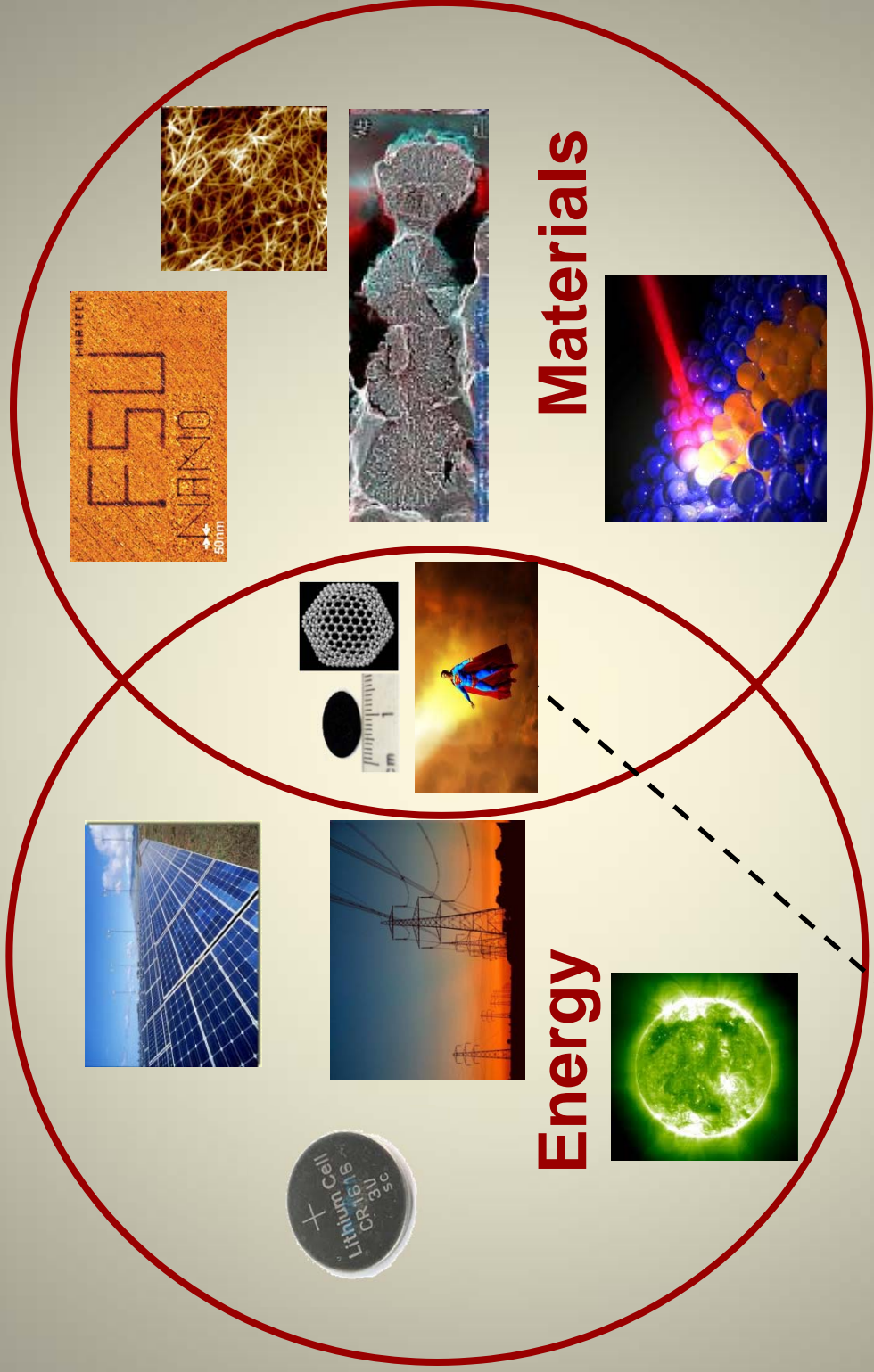
Strategic Hiring of Faculty

Ongoing Program:

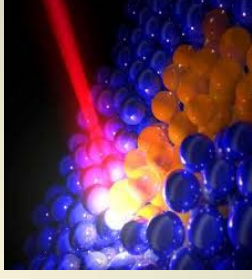
- Materials for Energy Production, Conversion, Storage and Utilization
- Institute for Successful Longevity

Potential New Programs:

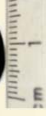
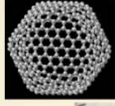
- Energy/Materials II
- Human Brain Development and Plasticity
- Coastal and Marine Ecosystem Quality and Resilience



Materials



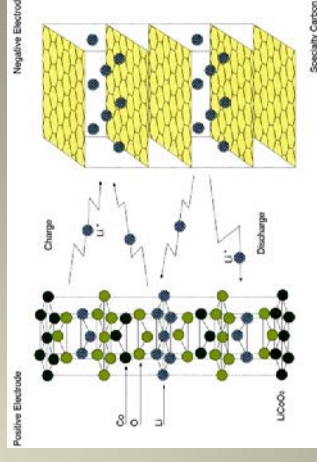
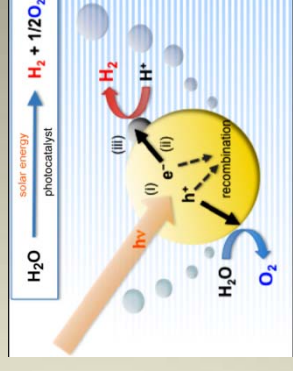
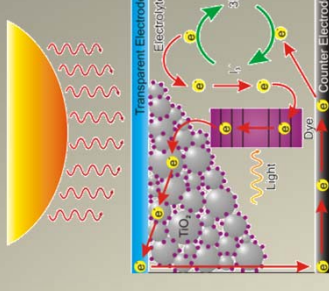
Energy



**Materials for Energy Production,
Conversion, Storage and Utilization**

Faculty Hiring Initiative in the Area of *Materials for Energy Production, Conversion, Storage and Utilization*

- Three new hires thus far.....
- H. Gao (**UC Berkeley**) - Physics, energy harvesting materials; nanophotonics
- K. Hanson (**UNC Chapel Hill**) - Chemistry & Biochemistry, dye sensitized solar cells
- B. Ma (**Lawrence Berkeley National Laboratory**) - Chemical & Biomedical Engineering, nanostructured light absorbing materials
- Five additional Faculty will be hired in AY 2013-14



FSU has Existing and Growing Strengths in the Brain Development and Plasticity

- Aging and cognition
- Alzheimer's and other neurodegenerative diseases
- Autism
- Traumatic brain injury
- Skill acquisition
- Learning



Research is taking place across campus to include the Departments of Biology, Biomedical Science, Geriatrics, Mathematics, Medical Humanities & Social Sciences, Psychology, Statistics etc. as well as Centers and Institutes to include the Autism Institute, Center for Brain Repair, Florida Center for Reading Research etc.

Investments in New Faculty in this Area Will Dovetail Nicely with FSU and Federal Initiatives

FSU's Successful Longevity Big Idea

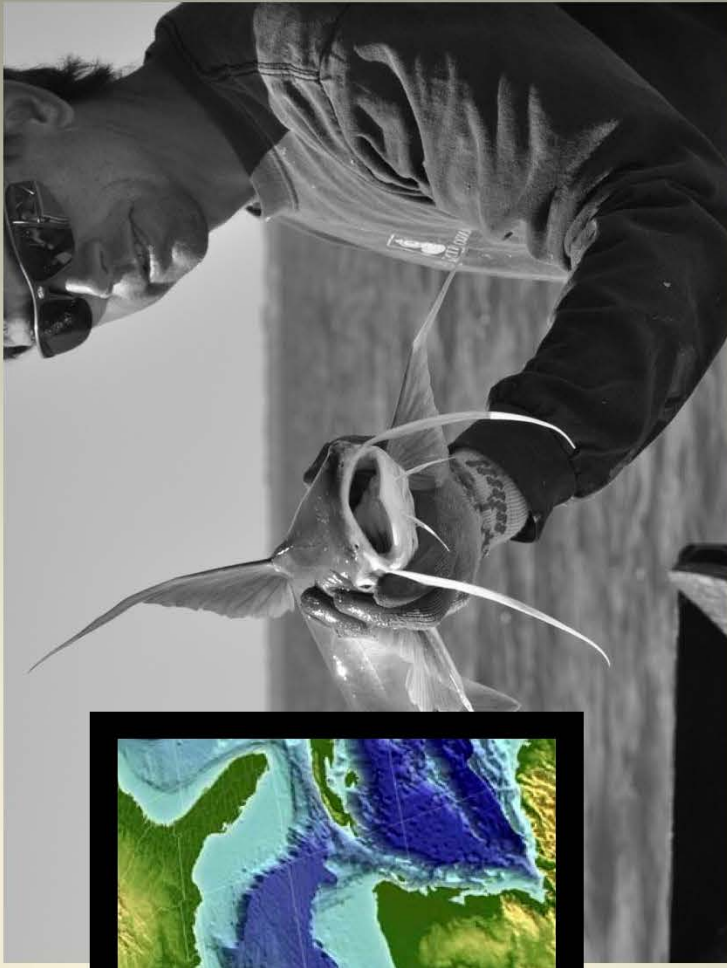
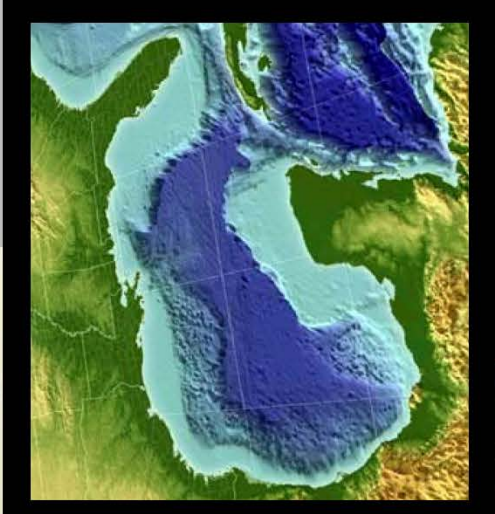
- Creation of an Institute for Successful Longevity
- Search for Inaugural Director is underway
- Age related changes in cognition will be a central component

New Federal Initiative (announced 4/13)

- BRAIN (**B**rain **R**esearch through **A**dvancing **I**nnovative **N**eurotechnologies)
- Initial pool \$250-300 M
- Will involve Federal agencies and long-term collaborations with private entities (e.g. Howard Hughes Medical Institute, Salk Institute)

Coastal & Marine Ecosystem Quality & Resilience:

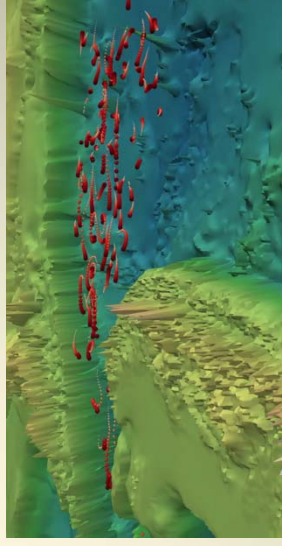
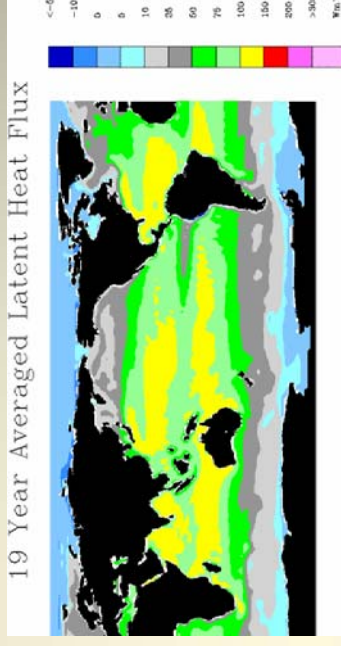
Addressing the impacts of perturbations on productivity & stability



Potential Strategic Investments in New Faculty to Leverage Existing Strengths and Funding Opportunities



- Earth, Ocean and Atmospheric Science
- Florida State University Coastal and Marine Laboratory
- Biological Science
- Center for Ocean-Atmospheric Prediction Studies
- Geophysical Fluid Dynamics Institute
- Florida Climate Institute
- Deep-C Consortium



Coastal & Marine Ecosystem Quality & Resilience

GOAL – hire 10-12 new faculty members

- PHASE 1 – make hires in ecology, biogeochemistry, & physical oceanography who focus on the basic science that defines how perturbations affect ecosystems
- PHASE 2 – Because the conservation and economic values of coastal and marine ecosystems are inexorably linked--- make hires in the areas of natural resource economics, human geography, and urban and regional planning

Thank You

**A Comprehensive Plan for Job Creation and Student
Career Success
at
Florida State University
September 2013**

Prospectus

Florida State University is implementing a seven-point comprehensive plan to expand our current efforts to promote the career success of our students and to create jobs through economic development and innovation:

The implementation includes:

1. *Creating a Culture of Entrepreneurship*

Florida State University is actively transforming its culture, becoming a truly entrepreneurial university by

- opening the College of Business to other majors,
- hiring faculty who are “professors” by virtue of practice and experience in developing products and building companies,
- creating successful partnerships between “inventors” and potential entrepreneurs,
- advancing competitions that support new licenses, new processes, and startup companies,
- creating a FSU-branded platform that attracts investors, and
- creating a student innovation foundation that enables student entrepreneurship.

Our objective is a culture change that promotes the transition from invention and creativity to the marketplace, while simultaneously ensuring student success.

2. *Promoting patents, licensing, and startup companies*

Florida State University is enjoying record-breaking success in promoting patents, licensing and startup companies. However, new opportunities for public-private partnerships promise even greater success.

3. *Investing in Innovation - promoting job creation and student experiences leading to career opportunities*

Universities have the difficult challenge of predicting market changes and student career opportunities four to five years into the future, but an analysis of available data suggests a two-fold approach to investment:

- a focus on increasing our quality and national ranking, which is correlated nationally with job success and higher starting salaries, and
- careful investment in areas that are sufficiently innovative that they will create market growth and career opportunities for our students.

4. *Economic Development in the Tallahassee region*

Florida State University is becoming increasingly engaged in the economic development in our region and the State. Our approach is three-fold:

- participate at a high level in economic development councils and chambers,
- incubate start-up companies based on FSU intellectual property, and
- help transform the region as a destination and as a community that attracts businesses.

5. *Accessing the Power of a FSU, FAMU, TCC Partnership*

Tallahassee has three unique higher education institutions within a 5-mile radius, which together offer an extraordinarily broad set of degree and associate degree opportunities. We have agreed to work together to promote economic development. Together, we are committed to providing the workforce needs of any company that locates within our region and we are ready to be at the table in recruiting new companies to Florida. The power of the three institutions in attracting new business opportunities to the region and to Florida has not been tapped, yet the potential is enormous.

6. *Embedding Student Career Success in the Curriculum*

Florida State University proposes to ensure that every student recognizes and understands the career opportunities, types of employers and salary potential of every major, that career success is embedded in our curricula, and that we provide the types of experiential learning that promote student success. We have the potential to help students make meaningful choices through a map of the knowledge, skills and abilities that occupations require, and to ensure that we align these with various degree programs.

7. *Advancing Career Readiness through the Career Center*

Florida State University has a highly regarded Career Center dedicated to ensuring career readiness and promoting career success. As student demand grows with the University's increased commitment to student career success, we propose to expand our programming and fully engage our alumni in promoting student success.

Some elements of this plan are focused largely on job creation while others are focused more on student career success. However, every effort to focus on job creation aids in student success, and our effort to promote student career success creates a focus that crosses the university. In concert, these seven areas of focus will have a transformative impact on the students at Florida State University and on the economic development of Florida and our region.

1. *Creating a Culture of Entrepreneurship*

Florida State University is actively transforming its culture, becoming a truly entrepreneurial university by opening the College of Business to other majors, hiring faculty who are “professors” by virtue of practice and experience in developing products, new processes and building companies, creating successful partnerships between “inventors” and potential entrepreneurs, advancing competitions that support new licenses and startup companies, creating a FSU-branded platform that attracts investors, and by creating a student innovation foundation that enables student entrepreneurship. Our objective is a culture change that promotes the transition from invention and creativity to the marketplace, while simultaneously producing student success.

The University is focused on six major objectives:

1.1 Open the College of Business to other majors

Business colleges across the country have large numbers of students and consequently very little incentive to open their doors to non-business majors. Yet, for nearly every major, a background in business would promote career success. For example, companies that hire engineers indicate that an engineering major combined with a business minor would create a stronger employee, because these employees would be more aware of corporate needs and objectives in the development of ideas and products. Even in fields such as music, an ability to market oneself and “fill the house” may make the difference between an avocation and a vocation, even for a gifted musician.

Many of FSU’s alumni have created companies that have little connection to their major, and they have done so the hard way - without the benefit of a foundation

in business. It is time for higher education to enable students to gain business acumen, regardless of major. For this reason, Florida State is opening the doors of the College of Business to any major for a 12-credit course of study leading to a minor in Entrepreneurship. We have hired the first faculty members specifically for this purpose, and more faculty will be added as demand grows. This is a transformative step in the potential career success of our students.

1.2 Entrepreneurs-in-Residence

There is a considerable benefit to having our students learn from individuals who are “professors” by virtue of practice and experience. Consider again the example of the student seeking an engineering degree who now has the benefit of having a faculty member who is an engineer but comes from the private sector – after creating patents, licensing products and building companies. These individuals have the capability to enhance the business education of the student, specifically using engineering-based experiences in the classroom, taking an active role in business plans, and enabling the student incubator. Florida State University is in the process of hiring such “entrepreneurs-in-residence” throughout our system of colleges. Every college has requested the ability to hire at least one entrepreneurs-in-residence. The Provost and Executive Vice President is working to promote coordination among all of the entrepreneurs-in-residence and College of Business programs such as the Jim Moran Institute.

The hiring of entrepreneurs-in-residence will have considerable benefit in terms of career success and career readiness. There will be an added benefit - our faculty and students will gain an in-house expert on taking ideas to the marketplace. The hiring of entrepreneurs-in-residence was specifically supported through Preeminence funding from the Legislature and the Governor for Florida State University.

1.3 Partnerships across colleges

Florida State University pioneered a concept called “chempreneurs,” which joins Chemistry graduate students (individuals with ideas and potential products but little business acumen) with Business undergraduates (individuals with a considerable interest in taking products to the marketplace but little insight into the potential innovations coming out of the field of chemistry). This partnership promotes entrepreneurship as well as career success at the graduate and undergraduate level. FSU intends to systematically fund this partnership in other areas based on the success of chempreneurs. As partnerships grow, the University will become more efficient in leveraging the expertise and talents from across the University.

1.4 Competitions

Financial rewards, that recognize success and enable the development of start-up companies or new licensing agreements, incentivize faculty and students to go beyond discovery and take an idea to the marketplace. The FSU Office of IP (Intellectual Property) Development and Commercialization has a GAP program (the “gap” between laboratory to the marketplace) that commits \$250,000 + a year to promote licensing and startup companies, and provides incubator space for promising start-ups. The number of entrepreneurial competitions is growing for our undergraduate population. For example, the College of Communication and Information is creating an IT incubator, and we have a new multidisciplinary DIGITECH week that promotes and rewards the development of digital technology applications, and a campus-based competitive fair *inNOLEvation*. The College of Business has also introduced a shark tank (a process of having young entrepreneurs pitch their ideas in front of potential investors). Although these programs are increasingly successful, Florida State University is seeking additional funding to broaden the opportunities for faculty and students. A major objective is to access private philanthropy so we can incentivize entrepreneurship broadly across the campus.

1.5 Attracting Investors

Ultimately, the success of FSU-related start-ups will depend on the ability of our ideas and inventions to attract angel investors and venture capital. Florida State University intends to promote investment in our intellectual property created by faculty and students. We propose to build a FSU branded platform (using commercially available software or public-private partnerships) that provides both a format for proposals and access for potential investors. By creating a venue for ideas, FSU can open the door to investors in a systematic manner (e.g. to a Tallahassee region angel group, or to our 300,000+ alumni who register, or more broadly).

1.6 Student Innovation Foundation

As we challenge students to become entrepreneurial and to create business ventures, many will view their fellow students as a logical market for their ideas. Our experience indicates that these business proposals may intersect with other University contracts and agreements, laws that cover state agencies, or have legal ramifications (e.g. liability insurance) or even seek access to students where access is currently controlled (e.g. residence halls). The likelihood of a business proposal being blocked grows with the number of offices within the University that must approve a proposal. Every request outside of current policy adds to the workload, and bumps up against a resistance to set new precedents. For this

reason, FSU has created an Innovation Foundation (not yet staffed) where students can take their ideas to a professional staff – go through an assessment – and then, if warranted, the student entrepreneurs can receive a green light for University for approval. The objective is to cut through red tape and create greater potential and opportunity for approval. The Innovation Foundation is designed to accept gifts that will promote student entrepreneurship, and has the potential to enable energetic students to launch successful careers.

In concert, the six areas of emphasis on entrepreneurship that are described above promote partnerships that join individuals with ideas with those who can take the ideas to the market place (“every great inventor needs a great entrepreneur”) and facilitate and incentivize entrepreneurship. They represent a true culture change on a university campus, and will have a substantial impact on the career success of our students, and on the potential of Florida State to create job growth.

2. Promoting patents, licensing, and startup companies

Florida State University is enjoying record-breaking success in promoting patents, licensing and startup companies. However, new opportunities for public-private partnerships promise even greater success.

Florida State University has a deliberate approach in translating intellectual property to the marketplace and it is clearly working. However, we are moving in several areas to accelerate the process. The FSU process begins with a large number of invention and creative work disclosures. This set of disclosures is the basis for filing of patent applications that result in new patents, which are then the basis for marketing new licenses and creating startup companies. Startup companies tend to be the riskiest. During the last three years, FSU had a higher disclosure rate than any prior three-year period (statistics compiled since FY 2000). The number of patents over the three-year period satisfied the 12th Preeminence metric for Florida State (the number of patents was the only Preeminence metric that FSU did not meet last year). We have a record number of 124 patent applications pending, we received a record number of patents (43) as well as a record number of new licenses (15; with five additional licenses in progress) and we initiated a record number of new startup companies (4).

FSU typically awards GAP funding in a competitive process to create startup companies, about a third of which occupy leased space enabled by the Office of Research. In addition, we seek licensing and option agreements with the private

sector to assess intellectual property and take our inventions and creative works to the market. Despite record numbers, FSU is working to accelerate this process. We are working to create a unique public-private partnership through the formation of a LLC that will hire the expertise to attract investors and develop proposals for small business administration funding (SBIR and STTR) in order to advance our technology to the level of product delivery and to create additional royalty income for the university. This now creates three mechanisms for taking intellectual property to the market: (1) university incentivized startups, (2) direct partnership with companies, and (3) a private sector partnership designed to attract dollars for applied research and development leading to the delivery of a product. FSU is also active in promoting Florida's Institute for Commercialization of Public Research, which finances loans to startups as an additional acceleration mechanism. Like many universities, Florida State University also offers a Sneak Peek - an opportunity for investors to gain a first look at FSU creative works.

In addition, FSU is proposing to develop a team to study startup companies generated by universities since 1980, using 150 universities as the source of data for generation of startups, creation of jobs, and paths to the marketplace.

3. Investing in Innovation - promoting job creation and student experiences leading to career opportunities

Universities have the difficult challenge of predicting market changes and student career opportunities four to five years into the future, but an analysis of available data suggests a two-fold approach to investment: (1) a focus on increasing our quality and national ranking, which is correlated nationally with job success and higher starting salaries, and (2) careful investment in areas that are sufficiently innovative that they will actually create market growth and career opportunities for our students.

The potential career opportunities for students are an important factor in determining the new areas for faculty and program investment. Most career opportunities reflect current U.S. and global economic conditions, and experience additional fluctuation based on demand in various market sectors. In contrast, University training is (at a minimum) a four-year endeavor. It is notoriously difficult to predict economic conditions and job demand by major or sector four years in advance. And, universities should focus on lifetime career goals. Still, several insights can be gained from an analysis of salary and

unemployment data (e.g. Georgetown University Center on Education and the Workforce, payscale.com, earning power and rankings reported by the *Wall Street Journal* or *Business Insider*, and Michigan State's "Collegiate Employment Research Institute"):

- Institutional rank matters, and consequently degrees in a major at a highly ranked university tend to yield higher salaries than the same degree at lower ranked universities.
- The subject you major in is well-correlated with starting salaries but, in many cases, has less correlation with long-term earning power. Several AA degrees have relatively high starting salaries, but then the salaries stagnate, while the earning power of university degrees continues to grow. In addition, there are differences in starting salaries based on gender and race, and economic background.
- The lowest starting salaries tend to be in agriculture, fine arts, education (including teaching and early childhood education), military service, counseling, library sciences, theology and religious studies. Many of these fields have historically low starting salaries, despite their value for quality of life (e.g. education, theology, and the fine arts), state economies (e.g. agriculture), or the national defense.
- Currently the highest paying starting salaries are in electrical engineering, materials sciences, mechanical engineering, military technologies (although this field has a high unemployment rate), petroleum and natural gas engineering (the highest starting salaries), nuclear engineering, and naval architecture and marine engineering. These areas tend to have high starting salaries but have lower long-term growth projections.
- An examination of the high-paying fields shows substantial variation through time as a result of market forces. For example, as nuclear power plant production declined, demand for graduates dropped precipitously, student interest waned in response to the market, and many universities then closed their programs. Renewed demand combined with low student production numbers has yielded a much higher starting salary. Petroleum and natural gas engineering followed almost the identical path in relationship to the cost of oil and gas. During the period of low oil prices, almost every program in the U.S. was closed because of lack of employment as a result of stifled exploration. Students sought other majors. With the increase in oil prices, and resultant increase in exploration, undergraduates today receive a premium in salary. This premium will likely continue until universities have time to complete the education of more students or until market forces change.
- Small liberal arts colleges and major research universities are not necessarily distinguishable in terms of overall average job acquisition (i.e.

both can be highly ranked), however the colleges and universities that are highly ranked in terms of average pay for their graduates also tend to be either less comprehensive or place a heavy emphasis on business, finance, engineering and other STEM fields). This is to be expected based on the large starting salary differences between majors (e.g. general agriculture - \$28,000; theology and religious studies - \$25,000; compared to petroleum engineering - \$83,000; materials sciences - \$65,000; finance - \$44,000).

- Studies for individual states are often misleading because the data sets are not national or international, disadvantaging large universities that place students in highly desirable, high-paying jobs at multi-national companies.

Given the difficulty of predicting market changes four to five years into the future, these data suggests three basic directions: (1) a focus on increasing our quality and national ranking, (2) careful investment in areas that are sufficiently innovative that they will actually create market growth and career opportunities for our students, and (3) a focus on curricular changes that ensure skill sets that promote long-term career success (this item is covered under “6. *Embedding Student Career Success in the Curriculum*”).

Study after study demonstrates that America’s research universities have been essential contributors to prosperity, and the source of thousands of ideas and inventions that have driven the economic success of the nation. The most powerful economic engines have a strong partnership between state financial support that ensures access to education, a federal government that supports fundamental and results-driven research, and universities that house students and scholars. The recession has significantly weakened the ability of U.S. universities to capitalize on opportunities and drive innovation. Universities are less nimble after years of budget cuts, and it is imperative that we invest wisely in areas that have the highest potential to drive innovation, create jobs and improve the quality of life.

Preeminence funding from the Legislature and Governor provides the opportunity to reinvest in Florida State University in a manner directed toward increasing our national ranking while increasing the potential of our students to have strong careers. Through this funding, FSU is concentrating on several areas in STEM fields that have the highest potential for short-term and long-term innovation.

New materials, energy, defense, water, the environment, and human health are likely to remain as enduring challenges, for which the potential for innovation is high and the value to the State of Florida is significant. Consider just two examples:

Materials research was the lynchpin in the digital revolution and a pre-requisite for the explosive growth of Silicon Valley. Today, materials research is characterized by innovations that cross almost every sector of society from the artificial growth of human bone and targeted delivery of cancer-fighting drugs that are revolutionizing human health to placing high-powered computers in the palm of a hand. It is also the lynchpin for solving the problems that limit the use of renewable energies - energy storage and transmission. The marriage between materials and energy has high potential to be transformative and this plays to Florida State's strengths. Consequently, FSU is leveraging current capabilities to attract the best and brightest - crossing physics, chemistry and engineering to solve the problems that currently limit the use of renewable energies, as well as strengthen our role in innovation across a broad number of industries and products.

FSU is also focusing on successful longevity - physical and mental fitness as individuals age. Demographic studies and the rising cost of health care demonstrate the importance of addressing the problems associated with aging. For this reason, many believe that issues associated with successful aging will dominate the research and policy agenda of the United States for decades. Many institutions have centers for aging that focus on single attributes such as nutrition or exercise. Florida State has the full spectrum of the neurosciences, cognitive studies, nutrition, physical fitness, medicine, nursing, geriatric care, and policy to bring to bear on one of the most important problems facing Florida and the nation. Again, successful longevity plays to Florida State's strengths.

These two examples describe the value of Preeminence funding in transforming the ability of Florida State University to be innovative and to promote job creation. The number of such opportunities is significant.

4. Economic Development in the Tallahassee region

Florida State University is becoming increasingly engaged in the economic development in our region and the State. Our approach is three-fold: (1) participate at a high level in economic development councils and chambers, (2) incubate start-up companies based on FSU intellectual property, and (3) help transform the region as a destination and as a community that attracts businesses.

Florida State is focused on three areas of economic development:

- (1) FSU now participates in economic development councils at a high level. The President is a member of the steering committee of Imagine Tallahassee and is a member of the board of the Economic Development Council (EDC). FSU's Chief of Staff is a new member of the Executive Committee of the Tallahassee Chamber of Commerce. The Vice President for Research, Vice President for University Relations, and Dean of the College of Engineering are also actively involved in EDC efforts to promote economic opportunities generated through partnerships with the University.
- (2) Florida State is actively incubating companies based on University-wide and college-based efforts. At the University level, companies are incubated based on GAP funding and enabling the leasing of space in Tallahassee. In the College of Business, the *InNOLEvation Accelerator* – is a focal point for undergraduate business start-up activity providing student entrepreneurs with resources needed during start-up. A dedicated space with private offices supports as many as eight early stage ventures and offers common area for students to take time out to discuss their ideas in a relaxed but stimulating environment. Tallahassee is currently host to a variety of efforts to provide incubator space and expertise to developing companies. FSU is participating in multiple efforts to enhance these efforts to include provision of space, expertise, resources, and perhaps most important, the new ideas and technology that form the basis of a number of the start-ups populating these efforts. The University is also exploring additional partnerships, including with the City and County, to enable new companies to find their start in Tallahassee.
- (3) Florida State is in the midst of transforming, with the city and county, an aging warehouse district in Tallahassee. Beginning with a vision that incorporates a revitalized Civic Center, a new FSU-branded conference hotel with retail and restaurants and College Town (a mixed-use housing and retail development), combined with the city investment in Gaines Street, Tallahassee will have a major pedestrian-friendly "Madison Mile" that stretches from the Civic Center to the Doak Campbell Stadium, providing an outstanding venue for visitors and residents, particularly before and after major events at the Civic Center or at the Stadium. Our vision moves us from a dilapidated set of old warehouses to a stretch of retail and restaurants that match up with similar venues in Boulder, Colorado or Madison, Wisconsin. This new venue should help attract conferences, more visitors to our events, and help positively alter the perspectives of those who are considering a move to the region. The

overall plan for the district is a full partnership between the community and Florida State University.

5. *Accessing the Power of a FSU, FAMU, TCC Partnership*

Tallahassee has three unique higher education institutions within a 5-mile radius, which together offer an extraordinarily broad set of degree and associate degree opportunities. We have agreed to work together to promote economic development. Together, we are committed to providing the workforce needs of any company that locates within our region and we are ready to be at the table in recruiting new companies to Florida. The power of the three institutions in attracting new business opportunities to the region and to Florida has not been tapped, yet the potential is enormous.

To reach this potential, FSU, FAMU, and TCC are actively developing opportunities to collaborate.

First, FSU has partnered with TCC and FAMU to create a promise that the three institutions will work together to attract businesses to Tallahassee by ensuring that, between the three institutions, we can meet any and all regional workforce needs. We have indicated that we are willing to take an active role in recruiting new companies by directly working to address workforce needs. This promise is contained in a brochure "Educate your Business" which is being distributed through the local Chamber and the Economic Development Council (EDC). This is another example of FSU efforts to connect with businesses and to be a part of the team in attracting new businesses to the region, and doing so in a manner that helps guide students toward job opportunities. We are eager to be at the table in recruiting companies so that we can demonstrate our commitment to satisfy the workforce needs of any business.

Second, the three institutions have created a consortium to promote the success of our student veterans, by expanding their educational opportunities, creating a broader sense of community, and creating strong linkages to potential employers.

The success of this initiative will be measured by the outcomes of our collaboration. Our objective is straight-forward - to be a key player in economic development.

6. Embedding Student Career Success in the Curriculum

Florida State University proposes to ensure that every student recognizes and understands the career opportunities of every major, that career success is embedded in our curricula, and that we provide the types of experiential learning that promote student success. We have the potential to help students make meaningful choices through a map of the knowledge, skills and abilities that occupations require, and to ensure that we align these with various degree programs.

FSU is actively developing a comprehensive student career success initiative within our academic programs, through three areas of focus: improved career advising in the major, curriculum improvements, and internships. The responsibility for bringing together the broad spectrum of University personnel to ensure that the University has a comprehensive and integrated program rests at the highest levels of the University (Office of the Provost and Executive Vice President).

First, we will ensure that each student recognizes the types of career opportunities associated with each major. Currently, each undergraduate major includes a written academic program guide consisting of a Program Description, Academic Map (ensuring progress to timely degree completion), link to the department's web page, and Academic Learning Compact (listing course attributes and expected outcomes). The Program Description includes graduation expectations with a list of likely job titles and potential employers so that every student understands the career outcomes associated with each major. However, some majors are more explicit about levels of training required, career destinations of their of students, and breadth of communications on potential career opportunities. Some colleges track both internships and jobs, and are able to inform prospective students about the employment of their graduates. FSU intends to ensure that every major is explicit about career opportunities, that academic advisors are educated about opportunities, and that communication is not limited to Program Descriptions that are available online. Our objective is to ensure that students are making educated decisions about their choice of majors and careers.

Second, the faculty are actively working on experiential learning and practical applications within majors to better embed student career success within the curriculum. Many of our colleges and majors have highly successful programs,

including considerable efforts to promote experiential learning, clinical placements, internships, and a host of other targeted programs. Although, many majors already do this well, our faculty are engaged in the expansion of current successes to a broader set of degrees. The newly proposed curriculum shifts from the old purely distributive model (take a little math, a little English, a little science and you are ready for life in the 21st century) and replaces it with competency-based distribution areas that are focused on *what we want FSU graduates to become*:

- Critical Analyzers of Quantitative and Logical Claims
- Clear, Creative, and Convincing Communicators; and Critical Readers
- Thoughtful Patrons of and Participants in Cultural Practices
- Critical Appraisers of Theories and the Facts that Support Them
- Culturally Conscious Participants in a Global Community
- Interdisciplinary and Flexible Thinkers
- Lifelong and Independent Learners

As the cornerstone of the new curricular plan are two FSU signature course series, which take advantage of the Preeminence Bill's provision that we might offer twelve hours of unique, un-exemptible coursework as part of our liberal studies curriculum: E-Series (engage, experiment, examine, experience) and Scholarship-in-Practice courses that yield scholarly or creative products. This new curriculum will focus on:

- Employer preferred skills, such as oral communication, teamwork, information fluency, and independent, critical, and creative thinking. These skills are essential to be upwardly mobile on a career ladder.
- Freshmen and sophomore internships and other "formative experiences" (FSU is working with the Career Center to collect the appropriate information about potential first and second-year internships so that they might be approved by a faculty committee for Liberal Studies credit).
- A new emphasis on Professional Writing and Ethics.
- The Scholarship-in-Practice category opens Liberal Studies to important courses in Colleges such as Business and Engineering.

The University team that is working on faculty efforts to enhance the curriculum is broadly based, including entrepreneurs-in-residence as well as members of the Career Center. Our efforts dovetail with a focused effort on extracurricular activities that enhance career success, ranging from international study to competitions such as Mock Trial.

In many ways, our professional schools of medicine and law are role models in career success (Medicine - 100% placement and Law- ranked 23rd nationally in job placement in the profession) through comprehensive integration of career

readiness and the curriculum. The potential to expand this focus (i.e. a direct path for undergraduates into health professions) is significant.

In addition, FSU is working with a private contractor to create a survey that seeks to assess employer opinion on weaknesses in graduates or gaps in training that can be addressed in our curricula. This assessment provides an opportunity to steer changes in curriculum and training.

Third, the University team is assessing a much broader base of opportunities to better promote internships as learning experiences. Internships are frequently a path to permanent employment because of the value of networking and practical experience. In addition, employers have the opportunity to evaluate a potential employee before offering a permanent position. Some majors require internships, and some colleges are very deliberate in promoting internships and providing opportunities. Our Career Center provides internship information to students from many colleges that do not have internship requirements or internal offices that connect students to internship opportunities. Internships are also one of the five areas recognized as part of our engaged scholar society (Garnet and Gold Scholars). Garnet and Gold Scholars are recognized at graduation and on their transcript. This scholar society was developed specifically to encourage students to participate in activities that lead to successful career outcomes.

Through these efforts, we have the potential to help students make meaningful choices through a map of the knowledge, skills and abilities that occupations require, and to ensure that we align these with various degree programs.

7. *Advancing Career Readiness through the Career Center*

Florida State University has a highly regarded Career Center dedicated to ensuring career readiness and promoting career success. As student demand grows with the University increased commitment to student career success, we propose to expand our programming and fully engage our alumni in promoting student success.

The University has been investing significantly in enhanced career readiness programming and career success.

Florida State University already has a highly regarded Career Center within Student Affairs. The Career Center plays multiple roles, including:

- Promoting career preparedness through career advising, counseling, programming and instruction, and enhanced career readiness programming within colleges through liaisons (targeted employability skills workshops, e-newsletters, collaborative career events, social media);
- Expanding internships and experiential learning opportunities for students such as career shadowing and collaborative mentoring programs with colleges;
- Strengthening interaction with academic departments and with the local community organizations, and national corporations;
- Providing students a database of over 14,000 employers and 7000 internship and career opportunity listings per year;
- Enlisting alumni, parents, and friends of the university to provide career and industry information to students via ProfessioNole;
- Increasing employer opportunities through expanded partnerships with federal and state government, local and state chambers of commerce, Workforce Plus, and Florida and national employers;
- Showcasing students' skills that employers have reported are essential for job success via the on-line Career Portfolio;
- Hosting 11 career fairs, multiple networking events, and over 260 employer recruiting visits resulting in 4000 student interviews
- Developing employability skills, and
- Tracking plans of graduating students (Graduation surveys).

As the University adds even greater emphasis on student career success and career readiness, student demand is likely to result in a significant workload increase in the Career Center. We expect growing demand in areas associated with coordination between Center staff and career and employment activities within colleges, social media, employer development, internship development, and career advising, counseling and programming.

A focus on career readiness and success will have significant implications for resources. Consider just the implications of incorporating internships within the curriculum and the rapid growth of the Garnet and Gold Scholars program. The University must be ready to meet the growth in student demand for internships.

Our efforts are not limited to internal programs. The FSU Alumni Association is joining the University efforts by hiring staff specifically to focus on better connecting students with alumni. These efforts cross multiple areas from networking through our ProfessioNole program, to advising and mentoring, to internships and career opportunities. In addition, many of our colleges focus on pipeline programs and fairs that help guide K-12 students into STEM fields.

THE UNIVERSITY OF FLORIDA



UF UNIVERSITY of
FLORIDA

Preeminence and UF Online

First Steps and Future Vision

UF President Bernie Machen

Higher Education and Workforce Subcommittee

September 25th, 2013

Overview

SB 1076 created preeminence, online institute

UF and FSU meet preeminence requirements; UF, home to online institute

Both initiatives moving forward under oversight of the Florida Board of Governors

Preeminence

UF to receive \$15 million for five years ‘to elevate academic and research preeminence’

We will devote resources to raising UF’s profile compared to its peers nationally

Now a moment of great opportunity for UF

National Benchmarks

We compared UF to top-15 public AAUs on 29 key benchmarks

UF ranks among top ten on 22 benchmarks

We're behind on seven – most related to faculty

| Metric | Current UF Rank | UF Metric | Current Rank | Target Ranks | | | | |
|--|-----------------|-----------|--------------|--------------|------|-----------------------|------------------|------|
| | | | | 2013 | 2014 | 2015 | 2016 | 2017 |
| Student Admissions | | | | | | | | |
| Freshmen in top 10% high school class | 12 | 78% | 12 | 12 | 11 | 10 | 10 | 10 |
| Freshmen acceptance rate | 7 | 43% | | | | | Remain in top 10 | |
| Median undergraduate SAT 2009 | 10 | 1250 | | | | | Remain in top 10 | |
| Student Success | | | | | | | | |
| Graduation and retention rank | 8 | 38 | | | | | Remain in top 10 | |
| Average freshmen retention rate | 5 | 96% | | | | | Remain in top 10 | |
| Predicted six-year graduation rate | 5 | 85% | | | | | Remain in top 10 | |
| Actual six-year graduation rate | 11 | 84% | 11 | 11 | 10 | 10 | 10 | 10 |
| Doctorates granted 2010 | 4 | 771 | | | | | Remain in top 10 | |
| Total number undergraduate STEM degrees | 7 | 2,501 | | | | | Remain in top 10 | |
| Total number graduate and professional STEM degrees | 1 | 2,346 | | | | | Remain in top 10 | |
| Total number undergraduate minority degrees | 1 | 2,329 | | | | | Remain in top 10 | |
| Total number graduate and professional minority degrees | 1 | 786 | | | | | Remain in top 10 | |
| Faculty | | | | | | | | |
| Student to faculty ratio | 16 | 21:1 | 16 | 16 | 16 | 15 | 14 | 12 |
| Faculty resources rank | 13 | 115 | | | | No change anticipated | | |
| Percent of faculty who are full time | 2 | 98% | | | | Remain in top 10 | | |
| National Academy members 2010 | 16 | 23 | 16 | 16 | 15 | 15 | 14 | 13 |
| Faculty awards 2010 | 11 | 22 | 11 | 11 | 11 | 10 | 10 | 9 |
| Postdoctoral appointees 2009 | 9 | 597 | | | | Remain in top 10 | | |
| Value | | | | | | | | |
| Average student debt 2011 | 2 | | | | | Remain in top 5 | | |
| Princeton Reviews' Best Value Colleges Rank | 4 | - | | | | Remain in top 5 | | |
| Smart Money College Rank | 2 | - | | | | Remain in top 5 | | |
| Kiplinger Best Public College Value | 3 | 3 | | | | Remain in top 5 | | |
| Research & Technology Transfer | | | | | | | | |
| Total US patents granted 2011 | 4 | 86 | | | | Remain in top 5 | | |
| Total licenses granted 2011 | 2 | 131 | | | | Remain in top 5 | | |
| Total start up companies 2011 | 4 | 12 | | | | Remain in top 5 | | |
| Total research expenditures 2010 (x1,000) | 9 | | | | | Remain in top 10 | | |
| Total federal research expenditures 2010 (x1,000) | 13 | | 13 | 13 | 12 | 12 | 11 | 10 |
| Total research expenditures S&E excluding medical (x1,000) | 8 | | | | | Remain in top 10 | | |
| Total research expenditures S&E including medical (x1,000) | 9 | | | | | Remain in top 10 | | |

Preeminence Process

Call for proposals to deans and directors netted 52 submissions

SVPs and VPs for research recommended 22 areas of investment

A committee of 11 distinguished professors has also made recommendations to senior leadership

Next Steps

Allocate \$15 million recurring, plus UF one-time contribution of up to \$15 million

We will make decisions by mid-October

UF Online

Requires high-quality, fully online, four-year baccalaureate programs

Florida students pay 75 percent of regular tuition

Provides \$10 million for startup costs and \$5 million for operations annually

First Steps

UF Online Executive Director Betty Phillips to start in January

UF to offer first five degree programs in January

Modest expectations for January enrollment due to accelerated development timeline

Quality

We will maintain UF's rigorous admission standards

We will draw on UF's extensive experience with online graduate degree programs

We will help faculty make transition with financial, technological and teaching support

Ten-Year Goals

~ 310,000 credit hours

~ 24,000 online students

~ \$76 million in revenues

Conclusion

Preeminence funding to improve key faculty benchmarks, increase national prominence

UF Online to increase access, reduce cost of higher education – while maintaining rigor and quality

Both are well-timed and meaningful opportunities for UF and State of Florida

