

State University System of Florida
Methodology for Determining Areas of Programmatic Strategic Emphasis
June 19, 2008

An essential component of the Forward by Design strategic planning initiative adopted by the Board of Governors (BOG) at its December 2007 meeting is the need to update the current State University System (SUS) of Florida Strategic Plan. Many of the initiative's projects are predicated on assumptions and forecasts underlying the goals of the strategic plan. Therefore, the BOG directed staff to reexamine assumptions related to enrollments, degree production, and targeted degree programs. This document focuses on reevaluating areas of programmatic strategic emphasis that provide the framework for targeting degree programs.

State University System of Florida Strategic Plan for 2005-2013 – Methodology

The Board of Governors, State University System of Florida Strategic Plan for 2005-2013 establishes specific goals related to meeting statewide professional and workforce needs. The Strategic Plan identifies the following four primary categories of programmatic strategic emphasis for the targeting of degree programs:

- x Critical Needs: Education
- x Critical Needs: Health professions
- x Economic Development: Emerging Technologies
- x Economic Development: High-Wage/High-Demand Jobs

The category of Economic Development: Emerging Technologies is divided further into six broad subcategories that include most engineering and science programs, along with other programs which address specific technologies or applications of a technology. The six subcategories are:

- x Mechanical science and manufacturing
- x Natural science and technology
- x Medical science and technology
- x Computer science and technology
- x Design and construction
- x Electronic media and simulation

The State Board of Education annually approves a critical needs list in teacher education, which is the primary source for identifying programs to be targeted in the Critical Needs: Education category. The Critical Needs: Health Professions degree program list is compiled from reports by various stakeholder groups such as the Florida Hospital Association, the Florida Center for Nursing, and the Florida Department of Health.

The areas of emphasis associated with the Economic Development: Emerging Technologies category are based largely upon work of The Advisory Group on Emerging Technologies (Advisory Group), which was organized in 2001 to support a university-level program-targeting initiative for the Workforce Estimating Conference. The Advisory Group included top university researchers and high-tech industry representatives from around the state. In developing its list of areas of emphasis for emerging technologies, the Advisory Group assessed the state's strategic advantages and disadvantages for high-tech business and industry; identified technology areas in which the state already had a critical mass or leadership position; and then focused on programs that leveraged or mitigated those factors. It is important to note that at least three areas which the Advisory Group recommended targeting in 2001 have since emerged as important industry sectors in Florida, as determined by industry growth and/or state investments. These include biotechnology, alternative energy, and digital arts/media. The original areas of emphasis and the list of associated targeted programs

was not necessary to reconvene a separate advisory group on emerging technologies. Table 1 lists areas of interest identified by these organizations. Other organizations whose reports and data informed this process included the Florida Hospital Association, the Florida Center for Nursing, the Florida High-Tech Corridor, the Florida Department of Education, and the U.S. Department of Labor (USDOL).

| TABLE 1. Areas of Interest from Key Florida Economic and Workforce Councils (Key Councils) | | | | |
|--|--|-------------------------------|---|-------------------------------|
| Enterprise Florida Industry Sectors & Roadmap to Fl. Futures | Workforce Florida Targeted Industries | Council of 100 2006 Report | Chamber of Commerce Cornerstone Report | Florida High Tech Corridor |

- x Life Sciences
- x Information
Technology
- x Aerospace &
Aviation
- x Homeland
Security/Defense
- x Financial/Profes-
sional Services
- x Manufacturing
- x Emerging

Review of the Key Council reports and individual lists generally reaffirmed relevancy of existing areas for strategic emphasis in the State University System Strategic Plan. However, it was apparent that the areas needed to be updated to improve alignment with the state's economic and work force needs, so they have been revised as described in the following paragraphs. The review also identified two new potential areas of strategic emphasis, which are proposed for consideration by the BOG. These are Security and Emergency Services and Globalization

Proposed Areas of Programmatic Strategic Emphasis for Strategic Plan Update

Critical Needs: Education is a category based upon the Florida State Board of Education list of critical teacher shortage areas for 2008-2009 (see below). This list can change from year to year, but typically remains the same with only one or two additions/deletions. It is also important to consider this list within the broader context of the overall teacher shortage. School districts reported that 16,063 teachers left the classroom in 2006/07, and, in the last three years, the number of new fall hires ranged from 20,000 to 22,000 to offset attrition and growth. These data indicate a consistent demand for teachers in all specialties, and, for this reason, all teacher education programs were included in the targeted list associated with the SUS 2005-2013 strategic plan.

State Board of Education's list of critical teacher shortage areas for 2008-2009:

- x Middle and high school level mathematics
- x Middle and high school level science
- x Middle and high school level English/language arts
- x Reading
- x Exceptional student education programs (ESE)
- x English for speakers of other languages (ESOL)
- x Foreign languages
- x Technology education/industrial arts

Critical Needs: Health Professions is a category based primarily upon work force projections by The Florida Hospital Association and the Florida Agency for Work force Innovation. These organizations have identified the healthcare professions that exist as critical shortage areas in Florida. In addition, a shortage of nursing faculty has been cited by both of these organizations, the Florida Center for Nursing, and the Florida Department of Health as a critical need occupation because of the direct impact on registered nurse education programs. Those professionals, prepared in state university programs, are listed below. In these SUS programs, a direct one-to-one link can be made with occupational titles.

- x Registered Nurse
- x Respiratory Therapist
- x Physical Therapist
- x Radiology Technician
- x Occupational Therapist
- x Medical Technologist
- x Pharmacist
- x Orthotist/Prosthetist
- x Epidemiology
- x Athletic Training
- x Medical Scientist
- x Veterinarian
- x Physician Assistant
- x Nursing Faculty

A ***Science, Technology, Engineering, and Math (STEM)*** category is proposed as a replacement for the Economic Development: Emerging Technologies category. The six subcategories of Economic Development: Emerging Technologies currently configured in the SUS Strategic Plan encompass many degree programs that overlap into other subcategories. For this reason, it was determined that little is gained by continuing to differentiate using six subcategories. The broad category titled STEM will still encompass programs associated with the six current subcategories listed below. Use of the term STEM also aligns the SUS categories with language being used in national research and academic targeting efforts.

- x Mechanical science and manufacturing
- x Natural science and technology
- x Medical science and technology

- x Computer science and technology
- x

individual university compacts with the BOG based on a variety of criteria, including numbers of projected openings, importance to the local community/economy, difficulty filling vacancies, etc. It is anticipated that, to become “targeted,” these programs should represent a relatively limited proportion of each institution’s projected degrees. Identified programs could then be aggregated at the state level into an “employer demand” category.

Critical Need: Security and Emergency Services is proposed as a new category to address the needs of homeland security and disaster preparedness, which were identified by two Key Councils as important emerging areas of interest. This category will include degree programs associated with law enforcement and criminal justice, along with several related programs in other degree classifications. Although most of the programs in law enforcement and criminal justice are typically two-year degrees or less, there are a number of more advanced programs offered as baccalaureate and graduate degrees, such as Criminology and Criminal Justice Administration. By creating a specific area of emphasis, the BOG can recognize the importance of these programs that would not be included in other categories.

Economic Development: Globalization is more of an over-arching concept found in the various reports reviewed, rather than a specific industry or occupational area. Degree programs that assist in making the SUS globally competitive can be found throughout the system across many disciplines, especially within the sciences, engineering, and information technology programs. However, there are programs that directly support globalization through program graduates and focused research. Some of these programs have an international focus, such as international affairs, international business, international construction, international law, etc. Area studies and foreign language programs that focus on critical trade partners or foreign competitors would also fall under the broad umbrella of increasing globalization.

Comparison of Proposed BOG Areas of Programmatic Strategic Emphasis and Key Councils Areas of Interest

The following tables have been developed to demonstrate how the BOG Areas of Programmatic Strategic Emphasis address the economic and workforce needs of the state. Degree programs that are identified are only illustrative examples of the types of programs that might become targeted and do not represent a comprehensive targeted program list. A targeted program list will be developed for each university as part of the compact negotiation process using the BOG areas of programmatic strategic emphasis as guidance. The lists for all universities can then be aggregated into a systemwide targeted degree program list.

The areas of specific interest identified by each Key Council in Table 1 were merged and reorganized into broader categories and subcategories. This revised list is now found in the first column of Table 2. The second column of Table 2 lists the newly proposed BOG areas of programmatic strategic emphasis that correlate most closely with Key Councils areas of interest. The table clearly illustrates the overlap between areas of programmatic strategic emphasis in meeting the needs of the state. Key Council areas of interest are most often associated with several BOG areas of emphasis.

| TABLE 2. Update to BOG Areas of Strategic Emphasis | | |
|---|--|--|
| Merged Key Councils Areas of Interests from Table 1 | Related BOG Areas of Programmatic Strategic Emphasis | |
| Business & Global Economics x Financial Services x Professional Services x Hospitality | Regional Workforce Demand Globalization STEM Programs | |
| Sciences x Life Sciences x Biotechnology Mfg. x Scientific & Technical Services | Critical Health Professions STEM Programs Globalization | |
| Medical Services x Healthcare x Social Services | Critical Health Professions Regional Workforce Demand STEM Programs | Globalization Security & Emergency Services |
| Education | Critical Education Regional Workforce Demand | Globalization STEM Programs |
| Technology x Research and Development x Emerging Technologies | Regional Workforce Demand Globalization STEM Programs | Critical Health Professions |
| Sustainable Development x Energy x Environment | Regional Workforce Demand Globalization STEM Programs | |
| Information Technology | Regional Workforce Demand STEM Programs | Globalization |
| Disaster Management x Homeland Security x Hurricane Preparedness | Security & Protective Services Regional Workforce Demand Critical Health Professions | Globalization STEM Programs |
| Engineering x Aerospace/Aviation x Manufacturing x Construction | Regional Workforce Demand Globalization STEM Programs | Security & Protective Services |
| Arts/Communication/Interactive Entertainment | Regional Workforce Demand Globalization | STEM Programs |

Science, Technology, Engineering, and Math (STEM)

Engineering Programs

- x Aerospace Engineering
- x Biological Engineering
- x Chemical Engineering
- x Electrical Engineering
- x Mechanical Engineering

Physical Science Programs

- x Physics
- x Chemistry
- x Materials Science
- x