

SENATE STAFF ANALYSIS AND ECONOMIC IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: Education Committee

BILL: SB 2084

INTRODUCER: Senator Alexander

SUBJECT: Advanced Science and Technology Research

DATE: March 18, 2006

REVISED: 03/21/06

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	<u>Harkey</u>	<u>Matthews</u>	<u>ED</u>	<u>Fav/2 amendments</u>
2.	<u></u>	<u></u>	<u>CM</u>	<u></u>
3.	<u></u>	<u></u>	<u>EA</u>	<u></u>
4.	<u></u>	<u></u>	<u>WM</u>	<u></u>
5.	<u></u>	<u></u>	<u></u>	<u></u>
6.	<u></u>	<u></u>	<u></u>	<u></u>

Please see last section for Summary of Amendments

- Technical amendments were recommended
- Amendments were recommended
- Significant amendments were recommended

I. Summary:

This bill creates the 21st Century Technology, Research, and Scholarship Enhancement Act. The bill establishes the Florida Technology, Research, and Scholarship Board (Board) within the Board of Governors of the State University System (BOG) to administer the two programs created in the bill, the 21st Century World Class Scholars Program and the Centers of Excellence Program. The BOG must provide staff support and other support for the board.

The bill provides for the allocation of resources to attract world class scholars to state universities by co-funding endowments for salaries and operating funds and co-funding the purchase of equipment in support of the scholar's research. The bill requires at least \$1 million in private funds be co-invested with state dollars to recruit a 21st Century World Class Scholar and prohibits state appropriations to be used for this purpose. Private funding is eligible for a one-to-one match from the state.

The bill provides for the creation or expansion of Centers of Excellence. Applicants may include entities other than state universities; however, all applicants must submit and demonstrate coordination with one or more state university in order to be eligible for funding. The bill requires the Board to recommend to the BOG for approval and funding the proposals to create or expand a Center of Excellence that meets the approved criteria.

The bill appropriates \$100 million to the 21st Century World Class Scholars Program, \$100 million to the Centers of Excellence Program, and \$399,437 to the BOG for FY 2006-2007 to implement the act.

The bill requires the Board to submit an annual report to the Governor and the Legislature. The act expires June 30, 2011.

This bill creates section 1004.226, Florida Statutes, and 3 unnumbered sections of law.

II. Present Situation:

Centers of Excellence

The 2002 Legislature enacted the Florida Technology Development Act which established a process for the State Board of Education to develop, approve, and authorize expenditures for a plan for establishing one or more “centers of excellence” at, or in collaboration with, universities in the state. The term “center of excellence” was defined as an organization of personnel, facilities, and equipment which, among its functions, identifies and pursues opportunities for research and technology transfer, recruits and retains world class researchers, and stimulates and supports the growth of the state’s technology industry. Three Centers of Excellence were created:

- The Center of Excellence in Biomedical and Marine Biotechnology at Florida Atlantic University, an academic-industry partnership of ocean engineering, marine biotechnology, functional genomics, proteomics and bioinformatics for the discovery, development and commercialization of new medicines from Florida's natural marine resources.
- The Florida Photonics Center of Excellence at the University of Central Florida, focusing on the technologies of nanophotonics, biophotonics, advanced imaging and 3D displays, and ultra-high bandwidth communications.
- The Center of Excellence in Regenerative Health Biotechnology at the University of Florida, stimulating promising research and facilitating phase one studies leading to commercialization of technologies that will provide treatments for human diseases.

The Legislature provided \$30 million for these Centers of Excellence. The act expired July 1, 2004.

The Eminent Scholars Program

The Eminent Scholars program in the State University System is a part of the Major Gifts Program, under which state funds match a percentage of the private gift to endow an Eminent Scholar chair. The private contributions are deposited in the Trust Fund for University Major Gifts, under s. 1011.94, F.S. An Eminent Scholar chair requires a minimum endowment of at least \$1 million, and the private donation for such a chair must be \$600,000. As of January 2005, there were 226 endowed chairs in 36 disciplines in the state university system. The chairs are endowed across the state university system, with each university hosting at least three chairs. The chairs were created with \$166 million in private donations matched with \$117 million in state funds. Most of the chairs are in medicine and business.

Governor Bush's Economic Development Initiative

In a January 30, 2006 press release, Governor Bush launched new economic development initiatives to bolster the state's efforts to diversify and build Florida's Innovation Economy. As part of the initiative, the Governor recommended a \$630 million investment in the 2006-2007 budget for programs that will generate the innovation needed to create the industries of the future. This proposal included \$200 million to create and fund the 21st Century Technology, Research and Scholarship Enhancement Act.

Enterprise Florida, Inc.

Enterprise Florida, Inc., created under part VII of ch. 288, F.S., is a partnership between Florida's business and government leaders and is the principal economic development organization for the State of Florida. The organization's mission is to diversify Florida's economy and create better paying jobs for its citizens by supporting, attracting and helping to create businesses in innovative, high-growth industries.¹

BioFlorida

BioFlorida promotes biotechnology and related science in Florida through industry specific programming, education, networking and legislative initiatives. "BioFlorida focuses on creating and maintaining a favorable business and legislative environment, advancing the commercialization of research and working with investors, private enterprise, government, academia and the financial and service sectors to further develop existing companies, launch start-up companies and attract new business to Florida."²

The Florida Research Consortium

The Florida Research Consortium is a partnership between Florida's universities, business community and state government that is "focused on enhancing cutting-edge research programs at Florida's public and private universities and adding to the diversity and strength of Florida's technology economy through the commercialization of that research."³ The consortium is organized as a not-for-profit corporation and is governed by a 43-member board of business, university and elected leaders.

IT Florida

ITFlorida is an umbrella, not-for-profit, membership organization that represents Florida's diverse technology community on a statewide basis. ITFlorida's mission is "to Make Florida A Leader in High Tech Advancement by serving as an umbrella organization comprised of both public and private technology leaders for high tech in the state, providing guidance to the state on technology issues and initiatives; guiding the Governor, the Legislature, and Enterprise

¹ <http://www.eflorida.com/aboutus/default.asp?tn=3>

² <http://www.bioflorida.com/>

³ <http://floridaresearch.org/index.php?submenu=About&src=gendocs&link=About%20Us%20-%20Top&category=About%20US&PHPSESSID=b712ba6ae3ca8d3b995633faf44ffa6d>

Florida on the strategic technology direction and initiatives of the state; and working to ensure the successful integration of technology infrastructure statewide.”⁴

The Florida Aviation Aerospace Alliance

The Florida Aviation Aerospace Alliance is a private, dues paying, non-profit, corporation representing the aviation, space, and aerospace defense businesses in Florida together with a commitment to enhance the growth of their businesses and the growth of the aviation and aerospace industry in Florida.⁵ The alliance offers its members an education and training program, networking opportunities, and state and federal lobbying activities.

Office of Tourism, Trade, and Economic Development

Under s. 14.2015, F.S., the Office of Tourism, Trade and Economic Development (OTTED) is created in the executive Office of the Governor to assist the Governor in working with the Legislature, state agencies, business leaders, and economic development professionals to formulate policies and strategies designed to provide economic opportunities for all Floridians. In order to achieve its mission, OTTED works closely with Enterprise Florida Inc., VISIT FLORIDA, Florida Sports Foundation, Florida Space Authority, Florida Film Commission, Black Business Investment Board, and Front Porch Florida.⁶

III. Effect of Proposed Changes:

The bill creates the 21st Century Technology, Research, and Scholarship Enhancement Act. The bill provides Legislative findings that:

- Diversifying Florida's economy requires a focus on building a growing base of high-wage jobs and on nurturing those technologies and clusters that will be the foundation of the state's growing economic diversity and prosperity.
- Special programs are needed to facilitate the recruitment of exceptional talent to Florida's research universities and centers and to provide the infrastructure and resources that precipitate joint efforts and coinvestment among state research and development institutions, private industry, and government.
- Florida needs consistent commitment and investment in order to further the state's strategy of capitalizing on innovative research and development to build a thriving, technology-rich economy.

The purposes of the 21st Century Technology, Research, and Scholarship Enhancement Act are:

- Investing in programs that attract world class scholars and building Centers of Excellence as an important means of increasing technology-based business in this state;
- Requiring coinvestment as a means of leveraging state dollars;

⁴ http://www.itflorida.com/wb2/itfl/itfl_Our_Mission#Mission

⁵ <http://www.faaa.org/organization.html>

⁶ <http://www.myflorida.com/myflorida/government/governorinitiatives/otted/background.html>

- Aligning research and development efforts with established, statewide economic-development strategies, including an emphasis on identified economic clusters;
- Facilitating value-added job creation through continuous improvement in university research, as well as entrepreneurship and capital-development programs; and
- Establishing Florida as a leading state for entrepreneurship and innovation, with continued commitment to university Centers of Excellence and an expanding base of research and development.

The bill provides the following definitions:

- *A 21st Century World Class Scholar* means a principal researcher/investigator who has high academic credentials, demonstrated competence, and experience that meets the requirements established by the Board for a 21st Century World Class Scholar.
- *Applicant* means any state university, private university located in Florida, or any private or public research center, community college, or training center in this state which coordinates with a state university for purposes of this act.
- *Board* means the Florida Technology, Research, and Scholarship Board.
- *Center of Excellence* means an organization of personnel, facilities, and equipment established at or in collaboration with one or more state universities to accomplish the purposes and objectives of this act.
- *Research center* means an institute, center, or clinic that includes research and development or education as a principal mission of the organization.
- *State university* means a Florida public university as defined in s. 1000.21, F.S.

The bill creates the Florida Technology, Research, and Scholarship Board (Board) within the BOG to guide the establishment of Centers of Excellence and the attraction of world class scholars. The Board will consist of 11 members who must be representative of business leaders, industrial researchers, academic researchers, scientists, and leaders in the emerging and advanced technology sector. Seven members must be appointed by the Governor, one of whom must be a member of the board of directors of Enterprise Florida, Inc., and one of whom must be a member of the BOG. The President of the Senate and the Speaker of the House of Representatives must each appoint two members.

Appointed members may not serve for more than four years and any vacancy that occurs during these appointees' terms shall be filled in the same manner as the original appointment. The Governor must appoint one of his or her appointees as chair of the board. A majority of members constitutes a quorum.

Members of the Board must serve without compensation, but are entitled to receive reimbursement for per diem and travel expenses in accordance with s. 112.061, F.S., while in the performance of their duties. The Board of Governors must provide staff support for the activities of the Board and per diem and travel expenses for board members.

The Board is charged with recommending criteria to the BOG for the 21st Century World Class Scholars Program and with the implementation and administration of the Centers of Excellence Program. The Board, consistent with the provisions of the bill, must solely determine the

qualifications, standards, and requirements for approval of investments in Centers of Excellence under this act. The Board may form committees of its members, and is encouraged to consult with Enterprise Florida, Inc., the Florida Research Consortium, Bio-Florida, IT Florida, the Florida Aviation and Aerospace Alliance, and any other entity whose input may be helpful in determining the requirements and standards for the program.

The 21st Century World Class Scholars Program

The bill allocates resources to attract 21st Century World Class Scholars to state universities by co-funding endowments for salaries and operating funds and co-funding the purchase of equipment in support of the scholar's research. The 21st Century World Class Scholars Program must be used as a tool to develop the state's capabilities in science and high-technology research, emphasizing Florida's identified strengths in science and technology disciplines while also recognizing new technologies as they may emerge.

The Board, in consultation with senior administrators of state universities, state university foundation directors, the Office of Tourism, Trade, and Economic Development, the board of directors of Enterprise Florida, Inc., and leading members of private industry, must approve criteria for the 21st Century World Class Scholars Program. In developing the criteria for the 21st Century World Class Scholars Program, the Board must consider the following guidelines to judge a state university's qualification for an award:

- The presence of distinguished faculty members, including whether the university has a substantial history of external funding, along with the strong potential for attracting a scholar of national or international eminence.
- The presence of academically outstanding graduate students, along with the promise and potential for attracting additional highly qualified students.
- The presence of adequate research and scholarly support services.
- The existence of an academic environment having appropriate infrastructure, including buildings, classrooms, libraries, laboratories, and specialized equipment, which is conducive to the conduct of the highest quality of scholarship and research.
- The demonstration of concordance with Florida's strategic plan for economic development or an emphasis on one or more emerging sciences or technologies that could favorably impact the state's economic future.

At least \$1 million in private funds must be co-invested with state dollars to recruit a 21st Century World Class Scholar. State appropriations may not be used for this purpose. Upon the verification by the BOG that a state university has met the criteria for a 21st Century World Class Scholar, the BOG must immediately release matching funds to the university's endowment in support of the scholar. The state must match private funding one to one. Endowment proceeds may be used for the salary, or to supplement the salary, of the 21st Century World Class Scholar or for individuals directly associated with the scholar's research and for expenses related to the research. The provisions of the bill will not replace or obviate existing programs. Rather, the bill creates an additional resource that is sufficiently funded to accomplish its stated goals.

Centers of Excellence

The purposes and objectives of a Center of Excellence include:

- Identifying and pursuing opportunities for university scholars, research center scientists and engineers, and private businesses to form collaborative partnerships to foster and promote the research required to develop commercially-promising, advanced, and innovative science and technology and to transfer those discoveries to commercial sectors.
- Acquiring and leveraging public- and private-sector funding to provide the totality of funds, personnel, facilities, equipment, and other resources needed to support the research required to develop commercially-promising, advanced, and innovative science and technology and to transfer those discoveries to commercial sectors.
- Recruiting and retaining world class scholars, high-performing students, and leading scientists and engineers in technology disciplines to engage in research in Florida and to develop commercially-promising, advanced, and innovative science and technology.
- Enhancing and expanding science and technology curricula and laboratory resources at universities and research centers in Florida.
- Increasing the number of high-performing students in science and technology disciplines who graduate from universities in this state and pursue careers in Florida.
- Stimulating and supporting the inception, growth, and diversification of science and technology-based businesses and ventures in Florida and increasing employment opportunities for the workforce needed to support such businesses.

The Board must develop criteria for approving proposals to create or expand a Center of Excellence. Such criteria must consider:

- The maturity of the applicant's existing programs relating to a proposed Center of Excellence.
- The comprehensiveness and effectiveness of site plans relating to a proposed Center of Excellence.
- The existing amount of the applicant's resources dedicated to activities relating to a proposed Center of Excellence.
- The regional economic structure and climate.
- The degree to which the applicant identifies and seizes opportunities to collaborate with other public or private entities for research purposes.
- The presence of a comprehensive performance and accountability measurement system.
- The use of an integrated research and development strategy using multiple levels of the educational system.
- The ability of the applicant to raise research funds and leverage public and private investment dollars to support advanced and emerging scientific and technological research and development projects.
- The degree to which the applicant transfers advanced and emerging sciences and technologies from its laboratories to the commercial sector.
- The degree to which the applicant stimulates and supports the creation of new ventures.
- The existence of a plan to enhance academic curricula by improving communication between academia and industry.

- The existence of a plan to increase the number, quality, and retention rate of faculty and graduate students in advancing and emerging science and technology-based disciplines.
- The existence of a plan to increase the likelihood of faculty and graduate students pursuing private-sector careers in the state.
- The ability of the applicant to provide capital facilities necessary to support research and development.

The Board must periodically solicit proposals for Centers of Excellence. The Board may issue broad solicitations for applicants to establish a Center of Excellence, including entities other than state universities. All applicants must submit and demonstrate coordination with one or more state universities in order to be eligible for funding. The Board may solicit proposals for a more defined Center of Excellence that is intended to meet identified needs or capitalize on perceived technology and research opportunities. The Board must notify the president of each state university and applicable research centers in this state of the call for proposals.

The Board must approve and fund only those proposals meeting its criteria, and must grant approvals in its sole discretion, subject to the provisions of the bill. The Board must require any Center of Excellence receiving funding under the bill to provide at least annual reports concerning its achievement of objectives as identified and presented in the approved proposal. If no proposal is judged worthy of approval during a solicitation cycle, an approval need not be made. The bill does not establish a limit for an investment amount; however, any approval for a single Center of Excellence exceeding \$20 million must be documented to have superior prospects for success in its field of research and offer outstanding opportunities to leverage state dollars.

Annual Report

By December 31 each year, the Board, in cooperation with the BOG and the state universities or research centers receiving investments under the bill, must present to the Governor, the President of the Senate, and the Speaker of the House of Representatives an annual report of the activities conducted. The annual report must include the accomplishments and overall economic benefits to the state, the number of 21st Century World Class Scholars attracted, the number of Centers of Excellence created or expanded, the success of collaborations with related industries, and the success of these programs. The annual report also must include a copy of an independent audit of the board and a review of the progress of programs administered by the Board.

The bill provides that s. 1004.226, F.S., which is created by this bill, will expire on June 30, 2011.

The bill will take effect July 1, 2006.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Economic Impact and Fiscal Note:**A. Tax/Fee Issues:**

None.

B. Private Sector Impact:

The development of commercially promising, innovative science and technology could lead to private sector development.

Private sector donations will help fund the 21st Century World Class Scholar Program.

C. Government Sector Impact:

The bill appropriates \$100 million to the 21st Century World Class Scholars Program and \$100 million to the Centers of Excellence Program for FY 2006-2007. Any unexpended balance from this appropriation must be carried forward at the end of each fiscal year until FY 2009-2010. At the end of the FY 2009-2010, any remaining balance of this appropriation, which has not been disbursed by the BOG, must revert unallocated to the General Revenue Fund.

Additionally, the bill appropriates \$399,437 to the BOG for FY 2006-2007 to implement the Act. The appropriation the BOG will provide:

- Two full-time equivalent positions and \$130,000 in approved annual salary rate;
- \$162,959 from recurring general revenue funds for salaries and benefits;
- \$101,892 from recurring general revenue funds for expenses;
- \$3,800 from nonrecurring general revenue funds for operating capital outlay; and
- \$786 from recurring general revenue funds for transfer to the Department of Management Services for the Human Resource Services Statewide Contract.

VI. Technical Deficiencies:

On page 5, line 23, the bill requires the board to consult with “the Florida Aviation and Aerospace Alliance.” The title of the organization is the Florida Aviation Aerospace Alliance.

In the appropriations made in Section 3 of the bill, a dollar symbol is missing from the figure of 130,000 in approved annual salary rate. A technical amendment is required to add the dollar symbol on page 11, line 29.

VII. Related Issues:

None.

This Senate staff analysis does not reflect the intent or official position of the bill's introducer or the Florida Senate.

VIII. Summary of Amendments:

Barcode 764434 by Education:

The amendment corrects the title of the Florida Aviation Aerospace Alliance.

Barcode 872444 by Education:

The amendment adds a dollar symbol to the figure of 130,000 in approved annual salary rate.

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