

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

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

Prepared By: The Professional Staff of the Committee on Commerce and Tourism

BILL: SB 1156

INTRODUCER: Senator Altman

SUBJECT: Space Exploration

DATE: April 5, 2013

REVISED: _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Spaulding	Ryon	MS	Favorable
2.	Malcolm	Hrdlicka	CM	Pre-meeting
3.			AED	
4.			AP	
5.				
6.				

I. Summary:

SB 1156 requires the Florida Institute of Technology (FIT) to submit to the Department of Economic Opportunity (DEO) a plan to establish and operate a space exploration research laboratory (research laboratory). The plan must include a number of elements, including enrollment and graduation expectations, faculty salary and National Academy information, and a strategy for securing private and federal research funds. Upon DEO's approval of the plan, the Department of Revenue is required distribute \$5 million annually to FIT to establish and operate the research laboratory.

The research laboratory must generate at least \$20 million annually in non-state revenue by the end of the research laboratory's tenth year of operation. If this minimum standard is not met, DEO must cease the funding of the research laboratory. In addition, DEO may also cease funding of the research laboratory if DEO determines FIT is not making substantial progress in establishing and maintaining the world class research laboratory based on DEO's review of FIT's annual report required by the bill.

The bill creates s. 288.993, F.S., and amends s. 212.20, F.S.

II. Present Situation:

Florida Institute of Technology

The Florida Institute of Technology (FIT) is a private research university located in Melbourne, Florida. It is accredited by the Southern Association of Colleges and Schools¹ and is a member of the Independent Colleges and Universities of Florida.² FIT was founded in 1958 to provide advanced education for professionals working in the space program at Kennedy Space Center.³ FIT has five academic divisions with an emphasis on science, technology, engineering, and mathematics. FIT currently offers baccalaureate, masters, and doctorate degrees in various space science programs.⁴

FIT is located near the Kennedy Space Center and the Florida Tech Research Park. The Research Park is located within the Melbourne International Airport and represents the largest research, science, and technology park located at an FAA approved airport.⁵ It is a collaboration between FIT and the Melbourne International Airport designed to provide tenants enhanced research capabilities through FIT.⁶ There are number of large aerospace companies at the Research Park, including Embraer, General Electric, General Dynamics, Northrop Grumman, and Rockwell Collins.⁷

Aerospace and Space Industry in Florida

Florida is home to a large number of major aviation and aerospace companies and key space industry assets including the National Aeronautics and Space Administration (NASA), Cape Canaveral Air Force Station, and a number of U.S. military bases. In addition to its significant space infrastructure, Florida's geographic location, optimal climate conditions, and technical workforce contribute to the state's ability to be a space industry leader.

According to a 2011 report, the global space economy increased by 7.7 percent in 2010 from 2008 and reached an estimated total of \$276.52 billion in revenue in 2010.⁸ Florida is host to nearly a third of all commercial space activity worldwide.⁹ The majority of space-related businesses are located in or nearby the Cape Canaveral area, but their network of suppliers extends throughout the state. For example, Cecil Field near Jacksonville recently received a federal license to operate a commercial spaceport. Almost every major aerospace company and defense contractor from the U.S. and abroad has operations in Florida. One estimate calculated

¹ See Commission on Colleges of the Southern Association of Colleges and Schools, <http://www.sacscoc.org/search.asp> (last visited April 5, 2013).

² See The Independent Colleges & Universities of Florida, <http://www.icuf.org/newdevelopment/schools/> (last visited April 5, 2013).

³ Florida Institute of Technology, About Florida Tech: 2012-2013 Fact Card, <http://www.fit.edu/about/factcard/> (last visited April 5, 2013).

⁴ Florida Institute of Technology, Academics, <http://www.fit.edu/academics/> (last visited April 5, 2013).

⁵ Florida Institute of Technology, Florida Tech Research Park, <http://www.fit.edu/researchpark/#.UV7NrFe7Gws> (last visited April 5, 2013).

⁶ Florida Tech Research Park at Melbourne International Airport, The Space Coast's Next Great Gateway to Innovation and Economic Growth, available at <http://viewer.zmags.com/publication/b01fc5ab#b01fc5ab/1> (last visited April 5, 2013).

⁷ Florida Institute of Technology, Florida Tech Research Park, <http://www.fit.edu/researchpark/about.php#.UT4vUtaKKuJ>, (last visited April 5, 2013).

⁸ Center of Economic Forecasting and Analysis, Florida State University; *Final Report Phase Two: The Economic Impact of Aerospace in Florida*, 3 (March 31, 2012) (on file with the Senate Committee on Commerce and Tourism).

⁹ *Id.* at 8.

that in 2008, the space industry in Florida accounted for approximately \$20 billion in economic impact, over 65,000 jobs, 2,000 companies, and \$4.7 billion in wages.¹⁰ According to Enterprise Florida, Inc., in 2011, the space research and technology sector employed nearly 2,200 people in Florida.¹¹ The average annual wages for workers in this sector was approximately \$101,000.¹²

Some of Florida's space-related research programs that complement Florida's role in space industry include: the Florida Institute of Technology; the Florida Space Institute;¹³ the NASA Florida Space Grant Consortium;¹⁴ the Center for Microgravity Research;¹⁵ the Federal Aviation Administration's Center of Excellence for Commercial Space Transportation;¹⁶ and Project Alpha.¹⁷

III. Effect of Proposed Changes:

Section 1 creates s. 288.993, F.S., to establish a space exploration research laboratory at the Florida Institute of Technology (FIT). The bill requires FIT to submit to the Department of Economic Opportunity (DEO) a plan to establish and operate a space exploration research laboratory (research laboratory). The plan for the research laboratory must include, at a minimum:

- Enrollment and graduation expectations for baccalaureate, masters, and doctorate programs related to space exploration and science, technology, engineering, and mathematics (STEM) disciplines for the next 10 years;
- The number of new faculty and the average salary of newly hired faculty expected for the next 10 years;
- The number of faculty with a National Academy membership who are expected to be associated with FIT; and
- A strategy for securing private and federal research funds.

¹⁰ *Id.* at 9.

¹¹ Enterprise Florida, Inc., *Statistical Profile: Companies, Employment, Wages, 2011*, available at http://www.eflorida.com/IntelligenceCenter/download/AA/FF_Industry_Employment_Wage.pdf (last visited March 4, 2013).

¹² *Id.*

¹³ The Florida Space Institute, <http://fsi.ucf.edu/about/> (last accessed April 4, 2013). The Florida Space Institute is a consortium of 10 higher education institutions in Florida to support the development of Florida's space economy. It is also part of the Space Research Initiative, a joint program between the University of Central Florida and the University of Florida.

¹⁴ NASA Florida Space Grant Consortium, <http://floridaspacegrant.org/> (last visited April 4, 2013). The Florida Space Grant Consortium (FSGC) was created by NASA as a voluntary association of 17 public and private Florida universities and colleges and includes Space Florida and the Kennedy Space Center. FSGC provides grants, scholarships, and fellowships to students and educators from Florida's public and private colleges and universities.

¹⁵ The Center for Microgravity Research and Education, <http://microgravity.physics.ucf.edu/> (last visited March 4, 2013). The Center for Microgravity Research and Education is a joint venture between the University of Central Florida and Space Florida that conducts and facilitates research in microgravity sciences. A goal of the center is to attract the next generation of commercial launch providers to the Space Coast.

¹⁶ FAA's Center of Excellence and Commercial Space Transportation, <http://www.coe-cst.org/> (last visited March 4, 2013). The Federal Aviation Administration's (FAA) Center of Excellence and Commercial Space Transportation allows the FAA to partner with universities and private industry to address current and future challenges for commercial space transportation. Four out of the nine university members are Florida universities.

¹⁷ Space Florida, FY 2012 Annual Report, 10 (on file with the Senate Committee on Commerce and Tourism). Earthrise is the only Florida-based team in the Google Lunar X PRIZE competition, which offers \$30 million in prize money to teams that are able to land and operate a privately-funded lander on the Moon's surface by the end of 2015. In 2012, Space Florida continued to provide matching funds for the rover prototype, which is being constructed at UCF, in cooperation with Embry Riddle University.

The bill also requires FIT, once approved by DEO to establish the research laboratory, to submit an annual report by February 1 to the Governor, the Legislature, and DEO detailing expenditures and accomplishments of the research laboratory, including:

- Enrollment and graduation data;
- Information on newly hired faculty for the research laboratory;
- The amount and type of private and federal research funds secured during the previous year;
- The total research expenditures in space exploration;
- The number of new start-up companies formed;
- The number of patents and licenses issued; and
- The amount of royalty income generated.

DEO must review FIT's annual report and make an annual recommendation to continue funding the research laboratory to the Governor and the Legislature based on proof that the research laboratory is making substantial progress in establishing a world-class space exploration laboratory. If DEO determines FIT is not making substantial progress, DEO must certify to the Department of Revenue (DOR) that funding must cease by June 30.

The bill requires FIT to enter into a contract with DEO agreeing to create a world class space exploration research laboratory that generates at least \$20 million annually in non-state revenue by the end of the research laboratory's tenth year of operation. If this minimum standard is not met, DEO must certify to DOR to cease funding of the research laboratory by June 30.

Section 2 amends s. 212.20, F.S., to require DOR to distribute \$5 million annually from state sales tax revenues to FIT after DEO has approved the plan for the research laboratory. The bill states this "amount represents sales and use taxes generated by visitor activity at the Kennedy Space Center and the Cape Canaveral Air Force Station." DOR must make the distribution 60 days after DEO's initial certification of FIT's plan, and DOR must make an annual distribution of \$5 million on the anniversary date of the initial distribution for 10 years.

Section 3 provides an effective date of July 1, 2013.

IV. Constitutional Issues:

A. Municipality/County Mandates Restrictions:

None.

B. Public Records/Open Meetings Issues:

None.

C. Trust Funds Restrictions:

None.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

Upon DEO's approval of FIT's plan to create a space exploration research laboratory, the bill requires DOR to distribute \$5 million annually for 10 additional years (for a total of 11 years of funding totaling \$55 million)¹⁸ to FIT to fund the research laboratory.

B. Private Sector Impact:

None.

C. Government Sector Impact:

According to DOR, the bill will have an insignificant operational impact on the agency.¹⁹ Additionally, DEO believes it may need additional staff and resources to monitor the long-term contract with FIT.²⁰

VI. Technical Deficiencies:

The bill requires the contract between FIT and DEO for the research laboratory to last 10 years; however, the bill requires DOR to fund the program for a period of 10 years after the initial distribution for a total of 11 annual distributions and \$55 million in funding. Accordingly, under the bill the research laboratory would receive the final \$5 million distribution after the 10-year contract with DEO expired.

VII. Related Issues:

None.

VIII. Additional Information:**A. Committee Substitute – Statement of Substantial Changes:**

(Summarizing differences between the Committee Substitute and the prior version of the bill.)

None.

B. Amendments:

None.

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

¹⁸ See "Technical Deficiencies" below.

¹⁹ Department of Revenue, *Agency Bill Analysis: SB 1156*, (March 7, 2013) (on file with the Senate Committee on Commerce and Tourism).

²⁰ Department of Economic Opportunity, *Agency Bill Analysis: SB 1156* (February 27, 2013) (on file with the Senate Committee on Commerce and Tourism).