

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 Military and Veterans Affairs, Space, and Domestic Security

BILL: SB 1156

INTRODUCER: Senator Altman

SUBJECT: Space Exploration

DATE: March 12, 2013 REVISED: _____

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

I. Summary:

SB 1156 allows 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 bill requires the plan to include a number of elements including enrollment and graduation expectations and a strategy for securing private and federal research funds. Upon approval of the plan by DEO, the Department of Revenue is to distribute \$5 million annually for 10 years 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 10th 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 section 288.993 and substantially amends section 212.20 of the Florida Statutes.

II. Present Situation:

Florida has been a leader in the U. S. space industry since its inception. It is home to a large number of major aviation and aerospace companies as well as other key space industry assets including the National Aeronautics and Space Administration (NASA), Cape Canaveral Air Force Station, and additional U.S. military bases. In addition to its impressive space infrastructure, Florida's geographic location, optimal climate conditions, and exceptionally

knowledgeable technical workforce contribute to the state's ability to be a space industry leader. Florida's expected total aerospace industries sales and revenues is \$17.72 billion for 2013.¹

Around the globe, university-based research and development has proven to be an economic stimulator, in which technologies are developed and transferred into commercialization and, as a result, create job opportunities. Some of Florida's space-related research programs which complement Florida's role in space industry include: the Florida Space Institute, the NASA Florida Space Grant Consortium; the Center for Microgravity Research; and the Federal Aviation Administration's Center of Excellence for Commercial Space Transportation.

The Florida Space Institute²

The Florida Space Institute (FSI) was created in 1996 and currently operates as a consortium of 10 higher education institutions in Florida.³ FSI is physically located at the Kennedy Space Center and its mission is "to support space research, development, and education activities within the University of Central Florida (UCF) and other FSI member institutions in Florida, and secondarily to support the development of Florida's space economy—civil, defense, and commercial."

NASA Florida Space Grant Consortium⁴

NASA has encouraged a voluntary association of seventeen public and private Florida universities, colleges, the Astronaut Memorial Foundation, Space Florida, the Kennedy Space Center, and the Orlando Science Center to support the expansion and diversification of Florida's space industry, through providing grants, scholarships, and fellowships to students and educators from Florida's public and private institutes of higher education.

The Center for Microgravity Research and Education⁵

The Center for Microgravity Research and Education is a joint venture of the University of Central Florida and Space Florida that conducts and facilitates research in microgravity sciences. The Center makes use of parabolic airplane flights, drop towers, suborbital rocket flights, and orbital flights.

Federal Aviation Administration's Center of Excellence and Commercial Space Transportation⁶

The Federal Aviation Administration's (FAA) Center of Excellence and Commercial Space Transportation (Center) allows the FAA to partner with universities and private industry to conduct research in environmental and aviation safety, and other activities to assure a safe and efficient air transportation system. This research will extend to cutting-edge technologies and infrastructure for private human spaceflight and orbital debris mitigation. Florida has a high representation in the Center in that 4 out of the 9 university members are Florida universities –

¹ Center of Economic Forecasting and Analysis, Florida State University; Final Report Phase Two: The Economic Impact of Aerospace in Florida. March 31, 2012.

² The Florida Space Institute, <http://fsi.ucf.edu/about/>

³ FSI members include: University of Central Florida, Florida Institute of Technology, Broward College, Florida A&M University, Florida Atlantic University, University of South Florida, University of Miami, Brevard Community College, University of Florida, Embry-Riddle Aeronautical University.

⁴ NASA Florida Space Grant Consortium, <http://floridaspacegrant.org/>

⁵ The Center for Microgravity Research and Education, <http://microgravity.physics.ucf.edu/>

⁶ FAA's Center of Excellence and Commercial Space Transportation, <http://www.coe-cst.org/>.

Florida Institute of Technology, Florida State University, University of Central Florida, and University of Florida.

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 Schools⁷ and is a member of the Independent Colleges and Universities of Florida.⁸ FIT has five academic divisions with strong emphasis on science, technology, engineering, and mathematics. It is located on a 130-acre campus near KSC and the Florida Tech Research Park. The Research Park is located within the Melbourne International Airport on Brevard County's Space Coast. It represents the largest research, science and technology park located at a FAA approved airport. There are numerous high-tech companies on site.⁹ FIT currently offers baccalaureate, masters, and doctorate degrees in various space science programs.¹⁰

III. Effect of Proposed Changes:

Section 1 creates s. 288.993 F.S., to authorize the establishment of a space exploration research laboratory at FIT.

The bill allows FIT to submit to 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, the following:

- Enrollment and graduation expectations for baccalaureate, masters, and doctorate programs related to space exploration and science, technology, engineering, and mathematics (STEM) disciplines for each of the next succeeding 10 years;
- The number of new faculty and the average salary of newly hired faculty expected for each of 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.

The bill also requires FIT, once approved by DEO to establish the research laboratory, to submit an annual report to the Governor, the President of the Senate, the Speaker of the House of Representatives, and DEO detailing expenditures and accomplishments of the research laboratory, including:

- Enrollment and graduation data for the preceding year and since inception of the research laboratory;
- 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;

⁷ Commission on Colleges of the Southern Association of Colleges and Schools ([SACS](http://www.sacscoc.org/searchResults.asp)), <http://www.sacscoc.org/searchResults.asp>.

⁸ The Independent Colleges & Universities of Florida (ICUF), <http://www.icuf.org/newdevelopment/>.

⁹ Florida Institute of Technology, Florida Tech Research Park (FTRP), <http://www.fit.edu/researchpark/about.php#.UT4vUtaKKuJ>, last viewed March 11, 2013.

¹⁰ Florida Institute of Technology, Academics, <http://www.fit.edu/academics/>, last viewed March 11, 2013.

- 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 of the research laboratory to the Governor, President of the Senate, and Speaker of the House of Representatives based on proof that the research laboratory is making substantial progress. If DEO determines FIT is not making substantial progress in establishing and maintaining a world class space exploration research laboratory, DEO can certify to DOR to cease funding.

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 10th year of operation. If this minimum standard is not met, DEO must certify to the Department of Revenue to cease funding of the research laboratory.

Section 2 amends s. 212.20, F.S., to require DOR to distribute \$5 million annually to FIT after DEO has approved FIT's plan for the space exploration research laboratory. The amount is representative of the amount of 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 certifies FIT's plan, and 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:

None.

B. Private Sector Impact:

None.

C. **Government Sector Impact:**

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 ten years to FIT to fund the research laboratory.

VI. **Technical Deficiencies:**

None.

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.