



The Florida Senate

Local Funding Initiative Request

Fiscal Year 2019-2020

LFIR#: 1449

1. **Title of Project:** Florida International University - Targeted STEM Initiatives

2. **Senate Sponsor:** Manny Diaz

3. **Date of Submission:** 01/31/2019

4. **Project/Program Description:**

FIU's Targeted STEM Initiatives will transform and reengineer STEM programs and courses to optimize the retention, graduation, marketability, and career creation and placement of science, mathematics, engineering and computer science students—thereby launching a new STEM paradigm. The Initiative will 1) integrate best program-of-study practices into STEM programs; 2) deploy state of the art evidence-based instruction and advanced classroom assessment throughout critical STEM courses for all STEM majors; 3) implement interventions that promote mental health and wellness, especially for first generation and millennial students; and 4) develop an Engineering Education Research School to propagate and assess best practices, and provide critical feedback to the stakeholders to facilitate greater efficiencies through shared system resources. The project will deploy evidence-based strategies and impact approximately 11,000 STEM majors at FIU so they may drive the State's economic prosperity.

5. **State Agency to receive requested funds :** Board of Governors

State Agency Contacted? Yes

6. **Amount of the Nonrecurring Request for Fiscal Year 2019-2020**

| Type of Funding | Amount |
|------------------------------------|------------------|
| Operations | 3,898,665 |
| Fixed Capital Outlay | 1,100,000 |
| Total State Funds Requested | 4,998,665 |

7. **Total Project Cost for Fiscal Year 2019-2020 (including matching funds available for this project)**

| Type of Funding | Amount | Percent |
|------------------------------------------------------|------------------|---------------|
| Total State Funds Requested (from question #6) | 4,998,665 | 100.00% |
| Federal | 0 | 0.00% |
| State (excluding the amount of this request) | 0 | 0.00% |
| Local | 0 | 0.00% |
| Other | 0 | 0.00% |
| Total Project Costs for Fiscal Year 2019-2020 | 4,998,665 | 100.0% |

8. **Has this project previously received state funding?** Yes

| Fiscal Year (yyyy-yy) | Amount | | Specific Appropriation # | Vetoed |
|--------------------------|-----------|--------------|-----------------------------|--------|
| | Recurring | NonRecurring | | |
| 2018-19 | | 3,500,000 | 143 | No |



The Florida Senate

Local Funding Initiative Request

Fiscal Year 2019-2020

LFIR#: 1449

9. Is future-year funding likely to be requested? Yes
- a. If yes, indicate non-recurring amount per year. 4998664

10. Details on how the requested state funds will be expended

| Spending Category | Description | Amount |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------|
| Administrative Costs: | | |
| Executive Director/Project Head Salary and Benefits | N/A | 0 |
| Other Salary and Benefits | Administrative Assistant to support project activities (orders, hiring, payments, tracking, etc) | 60,192 |
| Expense/Equipment/Travel/Supplies/Other | Expenses, equipment and supplies for project administration, includes computer for administrative assistant and office supplies. | 5,000 |
| Consultants/Contracted Services/Study | | |
| Operational Costs: | | |
| Salary and Benefits | Salary and benefits for 10 STEM education research and DBER faculty, 10 Faculty Fellows, 20 faculty participating in Faculty Institute, 300 undergraduate LAs, 10 graduate student fellowships, 3 post-doc researchers, & 5 operations staff. | 3,663,473 |
| Expense/Equipment/Travel/Supplies/Other | Expenses, equipment and supplies for project staff and project operations. Includes \$55,000 in travel to bring national leaders in STEM education to FIU, visits to cutting edge programs and facilities, and present outcomes across state and nation. | 170,000 |
| Consultants/Contracted Services/Study | | |
| Fixed Capital Construction/Major Renovation: | | |
| Construction/Renovation/Land/Planning Engineering | Renovation of 4 or more existing traditional classrooms into active learning classrooms targeting STEM students and faculty development. Creation of one LA Commons Hub with informal study space, small teaching labs and one classroom each. | 1,100,000 |
| Total State Funds Requested (must equal total from question #6) | | 4,998,665 |

11. Program Performance:

- a. What is the specific purpose or goal that will be achieved by the funds requested?

FIU's Targeted STEM Initiatives will transform and reengineer STEM programs and courses to optimize the retention, graduation, marketability, and career creation and placement of STEM students--thereby launching a new STEM paradigm. The project will lead to more highly prepared STEM professionals ready to drive the State's economic prosperity through innovation and entrepreneurship.

- b. What are the activities and services that will be provided to meet the intended purpose of these funds?



The Florida Senate

Local Funding Initiative Request

Fiscal Year 2019-2020

LFIR#: 1449

Primary activities: 1) adaptation of best practices across FIU's STEM programs; 2) deployment of innovative evidence-based instruction and classroom assessment throughout critical STEM courses; 3) implementing interventions that promote mental health and wellness, especially for first generation and millennial students; and 4) expand STEM Education Research to assess practices and provide critical feedback to critical stakeholders

c. What are the direct services to be provided to citizens by the appropriations project?

Primary services are transformed educational experience for STEM students. Specifically, critical STEM courses will integrate skills development, evidence-based instruction and mental health support to improve retention and graduation. Classrooms will be renovated to enable optimal collaborative learning. Undergraduate Learning Assistants will be hired to help facilitate the changes. Faculty and staff will measure and disseminate impacts of efforts.

d. Who is the target population served by this project? How many individuals are expected to be served?

FIU undergraduates are primary population being served, including approximately 11,000 STEM majors enrolled at FIU. The project also serves ~300 undergraduates hired to facilitate learning as Learning Assistants as well as ~30 faculty participating in project professional development activities. Secondary populations served include non-STEM undergraduates enrolled in transformed courses as well as businesses hiring FIU graduates.

e. What is the expected benefit or outcome of this project? What is the methodology by which this outcome will be measured?

STEM majors will have improved knowledge, skills sets and persistence, resulting in increased first-year retention and graduation rates, and likely improved employment and first year salaries. Measures will include cognitive instruments and other validated research instruments, grades and GPAs, retention and graduation rates, and employment data. Comparisons will be made to matched sets of students not in the treatment groups.

f. What are the suggested penalties that the contracting agency may consider in addition to its standard penalties for failing to meet deliverables or performance measures provided for in the contract?

Return of unused funds to state

12. The owner(s) of the facility to receive, directly or indirectly, any fixed capital outlay funding. Include the relationship between the owner(s) of the facility and the entity.

Florida International University

13. Requestor Contact Information:

- a. **Name:** Kenneth Furton
- b. **Organization:** FIU
- c. **E-mail Address:** furtonk@fiu.edu
- d. **Phone Number:** (305)348-2151

14. Recipient Contact Information:

- a. **Organization:** Florida International University
- b. **County:** Miami-Dade



The Florida Senate

Local Funding Initiative Request

Fiscal Year 2019-2020

LFIR#: 1449

c. Organization Type:

- For Profit
- Non Profit 501(c) (3)
- Non Profit 501(c) (4)
- Local Entity
- University or College
- Other (Please specify)

d. Contact Name: Kenneth Furton

e. E-mail Address: furtonk@fiu.edu

f. Phone Number: (305)348-2151

15. Lobbyist Contact Information

a. Name: Christopher Cantens

b. Firm Name: FIU

c. E-mail Address: ccantens@fiu.edu

d. Phone Number: (305)348-3505