

LFIR # 1833

1. **Project Title** FIU - Targeted STEM Initiatives

2. Senate Sponsor Manny Diaz

3. Date of Request 12/11/2019

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; building a culture of transformation. The Initiative will 1) integrate best program-of-study practices informed by industry; 2) train and support faculty to deploy evidence-based instruction and assessment; 3) implement interventions that promote mental health, resilience, and, especially for first generation and millennial students; 4) develop Technology Enhanced Active Learning; and 5) Utilize micro-credentialing to support improved marketability and career placement in Florida through greater industry alignment with faculty and industry developed badges and modularized learning opportunities. 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

Department of Education

State Agency contacted?

 Yes
 No

6. Amount of the Nonrecurring Request for Fiscal Year 2020-2021

Type of Funding	Amount
Operations	3,500,000
Fixed Capital Outlay	1,500,000
Total State Funds Requested	5,000,000

7. Total Project Cost for Fiscal Year 2020-2021 (including matching funds available for this project)

Type of Funding	Amount	Percentage
Total State Funds Requested (from question #6)	500000	100.0 %
Matching Funds		
Federal	00	0 %
State (excluding the amount of this request)	00	0 %
Local	00	0 %
Other	00	0 %
Total Project Costs for Fiscal Year 2020-2021	5,000,000	100 %

8. Has this project previously received state funding? • Yes No

If yes, provide the most recent instance:

Fiscal Year	Amount		Specific	
(уууу-уу)	Recurring	Nonrecurring	Appropriation #	Vetoed
2019-20		2,500,000	147	No

9. Is future-year funding likely to be requested? • Yes • No

If yes, indicate nonrecurring amount per year.

5,000,000



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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	N/A	0
Operational Costs: Oth	ler	
Salary and Benefits	Salary and benefits for 8 STEM education research/visiting instructor lines, 5 Faculty Fellows, 100 faculty participating in Faculty Institute(s), 300 undergraduate LAs, 10 graduate student fellowships, 3 post-doc researchers, & 2 operations staff. STEM micro-credentialing fellows to fund curricular and badge development; mental health counselors to support STEM students through progression, completion and career development.	3,000,000
Expense/Equipment/ Travel/Supplies/Other	Expenses, equipment and supplies for project staff and project operations. Expenses include travel to bring national leaders in STEM education to FIU, visits to cutting edge programs and facilities, and present outcomes across state and nation, developing and facilitating mental health programming targeted directly to student and support micro-credentialing development and assessment, training sessions and programming.	434,808
Consultants/Contracted Services/Study	N/A	0
Fixed Capital Construc	tion/Major Renovation:	
Construction/Renovation/ Land/Planning Engineering	Renovation of 4 or more existing, lower-enrollment traditional classrooms into active learning classrooms targeting STEM students and faculty development.	1,500,000
Total State Funds Re	equested (must equal total from question #6)	5,000,000



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11. Program Performance

a. What specific purpose or goal 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. The project will lead to more highly prepared STEM professionals ready to drive the State's economic prosperity through innovation and entrepreneurship.

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

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, resilience, and wellness; 4) expand STEM Education Research and faculty professional development to deploy and assess practices, and to provide informed feedback to critical stakeholders; and 5) design micro-credentials aligned to needed STEM industry skills.

c. What direct services will be provided to citizens by the appropriation 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 and use of technologies found in STEM careers. Undergraduate Learning Assistants will be hired to help facilitate the changes. Faculty and staff will receive training and support to measure and disseminate impacts of efforts. Badges will be issued that support STEM sector needs in Florida.

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 ~100 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



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

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