

Budget Detail Request - Fiscal Year 2016-17

Your request will not be officially submitted unless all questions and applicable sub parts are answered.

1. Title of Project: Robotics & Data Analytics Program at Miami Dade College
2. Date of Submission: 01/12/2016
3. House Member Sponsor(s): Erik Fresen

4. DETAILS OF AMOUNT REQUESTED:

- a. Has funding been provided in a previous state budget for this activity? No
If answer to 4a is ?NO? skip 4b and 4c and proceed to 4d
- b. What is the most recent fiscal year the project was funded?
- c. Were the funds provided in the most recent fiscal year subsequently vetoed? No
- d. Complete the following Project Request Worksheet to develop your request (Note that Column E will be the total of Recurring funds requested and Column F will be the total Nonrecurring funds requested, the sum of which is the Total of the Funds you are requesting in Column G):

FY:	Input Prior Year Appropriation for this project for FY 2015-16 (If appropriated in FY 2015-16 enter the appropriated amount, even if vetoed.)			Develop New Funds Request for FY 2016-17 (If no new Recurring or Nonrecurring funding is requested, enter zeros.)			
	Column: A	B	C	D	E	F	G
Funds Description:	Prior Year Recurring Funds	Prior Year Nonrecurring Funds	Total Funds Appropriated (Recurring plus Nonrecurring: Column A + Column B)	Recurring Base Budget (Will equal non-vetoed amounts provided in Column A)	INCREASED or NEW Recurring Requested	TOTAL Nonrecurring Requested (Nonrecurring is one time funding & must be re-requested every year)	Total Funds Requested Over Base Funding (Recurring plus Nonrecurring: Column E + Column F)
Input Amounts:					0	2,612,729	2,612,729

- e. New Nonrecurring Funding Requested for FY 16-17 will be used for:
 Operating Expenses Fixed Capital Construction Other one-time costs
- f. New Recurring Funding Requested for FY 16-17 will be used for:
 Operating Expenses Fixed Capital Construction Other one-time costs

5. Requester:

- a. Name: Victoria Hernandez
- b. Organization: Miami Dade College
- c. Email: vhernand@mdc.edu
- d. Phone #: (305)298-4878

6. Organization or Name of Entity Receiving Funds:

- a. Name: Miami Dade College
- b. County (County where funds are to be expended) Miami-Dade
- c. Service Area (Counties being served by the service(s) provided with funding) Miami-Dade

7. Write a project description that will serve as a stand-alone summary of the project for legislative review. The description should summarize the entire project's intended purpose, the purpose of the funds requested (if request is a sub-part of the entire project), and most importantly the detail on how the funds requested will be spent - for example how much will be spent on positions and associated salaries, specifics on capital costs, and detail of operational expenses. The summary must list what local, regional or statewide interests or areas are served. It should also document the need for the funds, the community support and expected results when applicable. Be sure to include the type and amount of services as well as the number of the specific target population that will be served (such as number of home health visits to X, # of elderly, # of school aged children to receive mentoring, # of violent crime victims to receive once a week counseling etc.)

Robotics and Data Analytics Project

Employment opportunities for data analysts are abundant in both public and private sectors, including healthcare, business, finance, manufacturing, energy, education, government and science. A 2011 report by the McKinsey Global Institute (Big Data: The Next Frontier for Innovation, Competition, and Productivity) placed the big data growth rate at 40 percent each year with wide applications in all economy sectors. Robotics plays a very important role in Science, Technology, Engineering and Mathematics (STEM) education as a unique, integrative discipline that brings together basic science, applied engineering and creative thinking. Additionally, the demand for qualified robotics engineers is poised to grow by as much as 13 percent through 2018 (U.S. Bureau of Labor Statistics). As per FL Department of Economic Opportunity, the current job openings in these two identified sectors for the Workforce Region 23 are estimated at above 2,500 positions, with projected 1,000 annual openings for the next five years.

Data Analytics

As computers systems continue to permeate our way of life, the amount of data we routinely collect will increase exponentially, offering unparalleled opportunities for data-driven discovery and decision-making in virtually every arena of human endeavor. The need for data analysts to prepare and analyze large data sets (big data) exists across all modern industries. A major impediment to the widespread use of big data is the lack of workers with the appropriate training and skills. Through the cross-disciplinary training, participants will learn to clean, organize, analyze, and interpret unstructured data, to derive knowledge and communicate discoveries using sophisticated visualization techniques. Training participants will demonstrate competence with fundamental algorithmic approaches to analyzing large data sets.

Robotics

Robotics is a blend of multiple disciplines, including computer science, computer engineering, mechanic and electrical engineering. The training in Robotics will focus on robotics for manufacturing systems. Trainees will be able to learn classification of robots, robot kinematics, motion generation and transmission, end effectors, motion accuracy, sensors, robot control and automation using data analytics methods.

Summary of Implementation Cost

Data analytics and robotics both require specialty consideration and equipment. From privileged access rights on machines to execute security to the attainment of contained and independent network systems, ETCOTA will be a cutting-edge facility. Specialty equipment as well as specialty furniture and software will be included. The following tables summarizes the estimated cost for the development of data analytics and robotics laboratory that would support training learning outcomes through hand-on activities.

Project Implementation Cost Summary

Item	Data Analytics	Robotics
Computer Hardware and Equipment	\$682,613	\$1,930,116
Grand Total:	\$2,612,729	

Program Results

Miami Dade College's School of Engineering and Technology will awarded 380 degrees and certificates each academic year. (250) data analytics and (80) in robotics training per academic year. This yearly output of graduates will help fill the gap for the current employment needs in the data analytics and robotics industry.

8. Provide the total cost of the project for FY 2016-17 from all sources of funding:

Federal: 0

State: 0 (Excluding the requested Total Amount in #4d, Column G)

Local: 0

Other: 0

9. Is this a multi-year project requiring funding from the state for more than one year?

No