

# Materials, Services, Facilities and Technology Fee Fiscal Year 2018-2019 Budget Request Form

**DUE: Friday, January 19, 2018**

If you have questions about this form, please contact Gina Matibag at (805) 437-3320  
For additional information please consult the MSFT web page

## ▼ Application

### Project or Activity Title

Quanser Robotics Package for Education and Research

### Requestor

Houman Dallali

### Requestor Phone Number

9062759877

### Requestor Email

houman.dallali@csuci.edu

### Amount of MSFT Funding Requested

43620.50

### Date Funding Needed by

04/01/2018

### Are you a member of the Division of Student Affairs?

- ☒ No  
☐ Yes

### Please select your AVP/Dean

Frisch, Scott - Interim Associate Vice President Academic Programs and Planning

### Will you receive funds from any other source(s)?

- ☒ No  
☐ Yes

### Has this project or activity previously received MSFT funding?

- ☒ No  
☐ Yes

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Please describe how the use of MSFT funds for this project or activity will benefit the CI student body.

Please provide the following in your application. You may attach additional files as needed (applicants may be requested to meet with the committee to discuss proposals)

### 1. Brief Project Description

Describe the project and its benefits to the educational or co-curricular experience of students at CI. Please provide specific information about how MSFT funds will be used and their impact on the campus. Please describe how this project benefits CI students? Please describe items and provide justification if your request includes the purchase of computers, equipment, furniture or other materials. Please provide a timeline for implementation of the proposed project. If physical improvements are requested please describe need, scope and impact of work to be completed. If the project includes provision of services please indicate the type of service, personnel costs and level or quantity of service to be provided with project funds.

### 2. Project/Activity Budget

Please enclose a complete detailed budget of the entire project. Indicate specific items of requested MSFT funding including (where applicable) a schedule and priority of project items to be considered if the project is funded at a reduced level. Were other, less costly, approaches considered when preparing the budget for the project? Are there elements that could be eliminated or deferred if funding is not available for the entire project?

### 3. Project Assessment

Describe how the effectiveness of the project will be assessed and measures that will be used to determine if it has attained its objectives. Please note a report will be due at the end of the semester (or fiscal year for annual projects). If funded, how will the project acknowledge the use of student funds so that students are aware that their student fees made (or helped to make) it possible? If appropriate, indicate how the project or activity promotes sustainability at CI.

### 4. Sources of Project Support

Please list the other sources of funding, and additional support for the activity. If this project or activity has been conducted previously please indicate how it was funded. Please explain if MSFT is the only source of support for the project.

### Brief Project Description

This robotic package comes with 10 virtual seats plus one actual robotic manipulator to let the instructor conduct the entire courseware and curriculum exercises in multiple concurrent groups. Moreover, each student will have access to simulation software to fully understand each task in a virtual environment before testing his or her methods on the actual robotic arm. Having a suitable robotic manipulator at Channel Islands can greatly benefit both computer science and the students attending our new mechatronics program. Knowing the fundamentals of working with a robotic manipulator is one of the key skills that our students need to be successful in their future careers. Please see the attached workbook which introduces students to topics of robot kinematics, coordinate frames, simulation, experimentation, inverse kinematics, trajectory planning, and automation. This robotic manipulator will greatly benefit EMEC 315 - modeling of Mechatronic Systems, EMEC 463 – Feedback Control Systems, and EMEC 499 – Capstone courses. Moreover, this platform can be used to introduce students to the concepts of machine learning which can significantly improve the prospects of our students employment. Currently the computer science department does not have any robotic manipulators which limits the scope of our teaching and research.

### Brief Project Description Additional Documents

[Quanser Robotics Package Workbook \(Instructor\).pdf](#)

### Project/Activity Budget

Please see an official quote from Quanser the provider this robotic packaged attached.

### Project/Activity Budget Additional Documents

[1718-1064.pdf](#)

## Project Assessment

The effectiveness of this project will be assessed by the the learning outcomes and lectures and teaching laboratories that will need a robot manipulator to engage students in learning fundamental robotic theories with a hands on and interactive approach.

This project will be used both in educational laboratories for the mechatronics program and for capstone projects for undergraduate and graduate students in the department of computer science.

During the first laboratory sessions the instructors will acknowledge the fact that the learning experience and acquiring the robotic manipulator was made possible by use of student funds to enrich their learning by use of state of the art facilities in robotics and mechatronics.

## Project Assessment Additional Documents

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## Sources of Project Support

Due to the new nature of our mechatronics and robotic program at CI this project or activity has not been conducted previously. However, it is important to have this equipment for training knowledgeable and competent students in our mechatronics program.

## Sources of Project Support Additional Documents

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### Fiscal Management:

Project sponsor's unit or department may be responsible for incurred over and above what is funded through the MSFT. If support is requested for costs beyond initial award, or for use on activities or materials not included in approved proposals, the project sponsor must seek approval from the MSFT committee. The project sponsor will be responsible for managing purchases and transfers of funds related to approved projects.

Please review MSFT web page for information about the fund and its objectives before submitting your application.