#19

COMPLETE

Collector:	Web Link 1 (Web Link)
Started:	Thursday, January 11, 2024 11:29:14 AM
Last Modified:	Thursday, January 11, 2024 11:33:47 AM
Time Spent:	00:04:32
IP Address:	99.43.4.221

Page 1: Please review the following:

Q1

Contact Person:

Name	**Keenan Murray**
Email Address	**keenan.murray@gcccd.edu**

Q2

Department:

Engineering

Q3

Title of Request:

Supply Budget Augmentation

Q4

Location of Request:

Cuyamaca College

Q5

Type of Request (Select one):

Miscellaneous: All non-operational requests and requests that do not fall under staffing, technology, or facilities requests are considered other requests. For department operational needs, please discuss with your Deans office. Please specify miscellaneous request::
Increase our supply budget from $3,000 to $10,000

Q6

Description of Request:Please provide a description of the supplies, equipment, furniture or other request. When making your request, please be as specific as possible and include information such as make, model, manufacturer, color, quantity, etc.

We are asking for a $7,000 increase in our supply budget to cover the

maintenance/repair expenses of our 5 Raise3D Pro2 Plus 3D printers and our supply

needs for our project-based learning and hands-on curriculum.

Q7

Estimated Cost:

$7,000

Q8   **Respondent skipped this question**

Please attach quote, if available

Q9

Total Cost of Ownership:Your requested item may incur ongoing expenses.What are the ongoing expenses associated with your request? If there are ongoing expenses, please detail how you plan to support these costs with your existing budget by completing the text boxes below.

Other	**$7,000 Supply Budget Augmentation**
Total	**$7,000**
Amount available in departmentbudget to support this requestSmarkey:	**1455801 - $0**
Remaining requested amount	**$7,000**

Q10

Justification of Request:The justification of the request is a key area to focus on. The ROC encourages you to strengthen your request by providing a robust rationale detailing all relevant criteria. When writing the rationale, keep in mind that those reviewing the justification may not be familiar with your department and needs. Providing detailed information and context can help clarify the need for your request.Please select the applicable criteria(s) and provide the details of how the criteria(s) relate to your request.

Critical need,

Program expansion,

Impact on student success and access,

Innovation,

Provided details::

The engineering supply budget is $3,000 while other fields of STEM have supply budgets of $6,036-$51,979. Additionally, our engineering budget is significantly lower than other engineering programs while, simultaneously, we are the second largest feeder of transfer engineering students to SDSU. We want to continue to be innovative in our course content to encourage student enrollment and engagement and expand our course offerings to provide articulated pathways for our students. Hence, we are asking for financial backing of our endeavors. We hypothesized implementing project-based learning and hands-on experiences would help us close enrollment and success equity gaps. Over the past few years, we have closed our race/ethnicity access equity gaps and want to continue our work to close our success equity gaps. With our development of project-based curriculum, our supply budget has become very restrictive. For instance, our new Full-time Faculty, Carlos Perez, wanted to purchase electrical engineering supplies valued over $6,000 to implement projects in each of his courses and we had to tell him we could only fund a portion of his requests. We have also been running our 5 3D printers for a total print time of 341 days the past semester. This increase of use is resulting in worn/damaged print surfaces/plates and the need to replace the hot ends (the part where the printing material comes out). If we plan and prepare to replace the 3D printers' build surfaces 3 times a year, the build plate once a year, and the hot end once a year, the cost is approximately $400 a year. For 5 3D printers, that is $2,000.

Q11

Program Goal:Please identify the program goal(s), as stated in your current annual or comprehensive program review, that this request would help your program achieve. Provide a brief explanation of how it would do so.

Goal 1: Increase student success in sophomore-level engineering courses through increased support for ENGR 100 and all other lab classes

Goal 2: Create Maker Space to support labs, student projects, engineering club, and national competition teams

Our 3D printers are used extensively in our ENGR 100 Introduction to Engineering & Design course for projects such as derby car races, reproduction of historical structures, and designing cell phone holders. We hypothesized that project-based learning and hands-on experiences in the first engineering course would help us engage students and provide them with the knowledge and confidence to be successful in future engineering courses. We believe these projects are part of the reason behind our success in closing access equity gaps, but we still have significant work to improve our success equity gaps. Hence, we are asking for a supply budget augmentation to cover the cost of maintenance/repair of the 3D printers and allow us to further implement project-based learning and hands-on curriculum in our program.