

# #17

**COMPLETE**

**Collector:** Web Link 1 (Web Link)  
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Page 1: Please review the following:

## Q1

Contact Person:

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

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## Q2

Department:

Surveying

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## Q3

Title of Request:

Equipment - DJI Mavik 3E Drone purchase

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## Q4

Location of Request:

Cuyamaca College

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## Q5

Type of Request (Select one):

**Equipment: Tangible property with a purchase price of at least \$200 and a useful life of more than one year. Technology related items such as hotspots, computers, tablets should be requested through the College Technology Committee**

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**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 building a drone certificate program in surveying based upon our Industry Advisory Board's (IAB) recommendation. Hence, we need to procure drones so our students can learn to fly a drone, collect data, and process the data. BEAD, a member of our IAB, recommended we purchase DJI Mavic 3E drones for our needs. Based on a classroom size of 30 students, having the students work in groups of 2-4 students, and potentially having 3 courses needing access to the drones, we are requesting 16 drones. If we had full enrollment in all 3 courses, we would need 23 drones to serve student group composed of 4 members. We are requesting the DJI Mavic 3E Worry-Free Plus Combo as it provides 3 batteries each to keep the drones flying during class and 1-year of unlimited free repairs upto the coverage limit.

**Q7**

Estimated Cost:

From the DJI website - 1 - DJI Mavic 3E Worry-Free Plus Combo costs \$5,326  
 This comes to \$85,216 + tax for 16 drones. Our industry partner, BEAD, has a direct connection/seller that may be able to sell the drones to us for cheaper. (sourced from dji.com)

**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.

Initial Cost of Item	<b>\$85,216 + tax 16 Drones from DJI</b>
Service Agreements/Warranties	<b>\$10,544+tax If we want to extend coverage an additional year</b>
Maintenance	<b>\$8,944 DJI Premium Service for lifetime of drone</b>
Replacement Costs	<b>Maintenance plans cover replacement of warn parts</b>
Total	<b>\$104,704+tax</b>
Amount available in department budget to support this request Smarkey:	<b>1456601 - \$100 (Our total budget)</b>
Remaining requested amount	<b>\$104,604 +tax</b>

**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::

Our Industry Advisory Board (IAB) has recommended we expand our program to include a drone certification to meet the surveying industry needs. One of the IAB members, Birds Eye Aerial Drones (BEAD), has been working closely with us to develop the new certificate. We have outlined 3 courses that will be included in the certificate; 1) Learning to fly a drone 2) Collecting data with a drone 3) Processing the data collect from a drone. Critical Need The backbone of the certificate will require students to have access to drones! BEAD has recommended we purchase the DJI Mavic 3E drones as the Mavic 3E, and similar drones, are commonly used in industry. Hence, this purchase will ensure our program is relevant to industry needs. Program Expansion The drone certificate itself will expand the program. However, an additional inspiration is to increase enrollment in the surveying program through 2 pathways: 1)The appeal of drones and working with drones for a living will draw high school students to our program 2) Our certificate program will allow working professionals to enroll in our drone certificate program to learn the relatively new use of drones in the surveying industry to advance themselves in industry. Impact On Student Success and Access By buying the DJI Mavic 3E drones, we are providing access to industry-relevant technology to our students that is normally inaccessible to students unless they are wealthy or are well-connected. Students will be able to earn our drone certificate and immediately pursue work in industry knowing they are familiar with industry relevant technology. Innovation The use drones for mapping in the surveying industry is, in its' itself, a relatively new innovation. The incorporation of the drone certificate and access to drones will also help innovate our program, as we will now be able to collect larger datasets and access remote areas to create new projects and experiences for our other surveying courses ensuring all of our courses are staying current with the needs of industry.

**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 - Provide students with training on equipment and technology used in the field

The use of drones in surveying is relatively new and innovative. By providing our students access and knowledge of this technology, our students will be even more competitive in an industry that already has a high demand for surveying professionals. The incorporation of drones into our program will impact non-drone courses as well, as we will have the ability to collect new and innovative data sets that our students can process and analyze in their courses, even if the students themselves do not pursue the drone certificate themselves. The incorporation of drones into our program will elevate the program to serve the advanced innovative needs of industry.

Goal 2 - Create apprenticeship program to create opportunities for program graduates

One of our industry advisors, BEAD, has been working closely with us to help us create the drone certificate and is interested in collaborating with us through the Learning-Aligned Employment Program to hire interns and assist them in finding employment in industry. Caltrans is also looking to create an internship pathway through Cuyamaca and is excited about the prospect that our students will be able to integrate drone use into surveying practices. By ensuring our program is on the innovative side of industry needs, we will be able to develop and foster more of these internship pathways.

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