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**COMPLETE**

**Collector:** Live Link (Web Link)  
**Started:** Monday, February 11, 2019 9:17:28 PM  
**Last Modified:** Monday, February 11, 2019 9:23:16 PM  
**Time Spent:** 00:05:47  
**IP Address:** 160.227.129.196

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Page 1: Please submit one form per request.

**Q1 Contact Person**

Name **Kathryn Nette**  
Email Address **kathryn.nette@gcccd.edu**

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**Q2 Department**

Science & Engineering

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**Q3 Fiscal Year of Request** **2018-2019**

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**Q4 Title of Request**

Expand the ability of instructors to use active learning techniques across the discipline in order to increase student success, retention and equity. (This is a Science & Engineering Department-wide goal, not just for Biology).

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**Q5 Location of Request**

F408

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**Q6 Description** Please provide a brief description of the space or items being requested.

Upgrade of F408 to active learning classroom.

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## Facilities Request Form

**Q7** Please provide the justification for the request, discussing the following: How will the request (and associated program review goal) support the College's mission and strategic priorities? Does the request address any health, safety, or security issues? If so, please describe them. What do program or service area data indicate with regard to growth in increased demand for services? How will the request advance the continuous quality improvement of the department or work area?

Much broad-based research in STEM (and other disciplines) has shown that active-learning is the most effective type of learning for students. A meta-analysis of 225 research papers and published in the Proceedings of the National Academy of Sciences (PNAS) in 2014, provided documentation that "active learning leads to increased performance that would raise average grades by half a letter grade, and that failure rates under traditional lecturing increase by 55% over the rates observed under active learning."

<https://www.pnas.org/content/pnas/111/23/8410.full.pdf>. Unfortunately, the majority of classrooms at Cuyamaca are set up to support old-style "lecture" based instruction, rather than active learning. Although some see the use of "clicker" style delivery systems within programs such as PowerPoint as adequate for active learning, the active learning process requires much more student interaction than that provide by a simple clicker-type system.

The HSI-STEM grant provided funding to set up a single active learning classroom to support working being done for the grant. A room was set up that provided furniture that allows students to work in groups of 2-8 students, and also provided technology that facilitates interactions among students. Instructors are very happy with the classroom, even though we are currently still getting all of the technology operational since the room was not completed on the planned schedule. However, it is already apparent that the new room layout has many advantages over its previous one where there was little ability for students to interact, and little ability for the instructor to move around the room to interact with the students. Many instructors are already asking for the ability to teach in this room, and it has already become obvious that we are only going to be able to put a small fraction of the number of classes we have in biology and chemistry into that room. Knowing that the research shows the benefit of active learning, and having been told by administrators at Cuyamaca that it will likely be many years before the F building is rebuilt, it is time that we start to modify at least some of the classrooms to an active learning mode.

We are suggesting that F408 be modified. As it is, this room is an absolutely terrible learning environment. Students constantly complain about the desks, not being able to see things written on the board, and there is a complete inability for the instructor to walk around the room, and to have students do any group work. This would increase our ability to move to active learning based curriculum and would be expected to have a significant increase on student success in STEM.

Should we end up with a new building anytime soon, all of this furniture and equipment could easily be removed and reinstalled in the new building.

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**Q8** What is the estimated one-time cost of the request?

61115

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**Q9** Contact Person

Respondent skipped this question

**Q10** Department

Respondent skipped this question

**Q11** Fiscal Year of Request

Respondent skipped this question

## Facilities Request Form

**Q12** Title of Request

Respondent skipped this question

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**Q13** Location of Request

Respondent skipped this question

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**Q14** Description Please provide a brief description of the space or items being requested.

Respondent skipped this question

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**Q15** Please provide the justification for the request, discussing the following: How will the request (and associated program review goal) support the College's mission and strategic priorities? Does the request address any health, safety, or security issues? If so, please describe them. What do program or service area data indicate with regard to growth in increased demand for services? How will the request advance the continuous quality improvement of the department or work area?

Respondent skipped this question

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**Q16** What is the estimated one-time cost of the request?

Respondent skipped this question

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