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Page 1: I. Program Overview and Update

Q1

I.1 Department(s) Reviewed:

Biology (BIO) & Science (SCI)

Q2

1.2 Lead Author

Kathryn Nette

Q3

I.3 Collaborator(s) - List any person that participated in the preparation of this report

Kim Dudzik, Richard Jimenez, Michelle Garcia, Fabienne Bouton, Christina Burnett

Q4

I.4 Dean/Manager:

Kim Dudzik

Q5

I.5 Program Update: Please summarize the changes, additions, and achievements that have occurred in your program since the last program review was submitted. To access your 2020 program review, visit the Program Review webpage.

This has been an extremely challenging year for Biology due to the requirements to move classes online because of COVID. Because of the hands-on and highly visual nature of Biology courses, this department has always believed (with rare exceptions) that biology students should be taught in a face-to-face, active learning environment. This viewpoint is supported by research by the Community College Research Center (CCRC) that indicates that although online classes may have some advantages for some populations of students, the demographics of our student population does not support teaching most biology courses online. CCRC research has shown that, pre-COVID, students who were successful in online courses tended to be those who were more advantaged, older, more likely to have dependents, more likely to be employed full time, less likely to be ethnic minorities, less likely to be low-income, and less likely to be academically underprepared. The majority of these descriptors do not fit our population of younger students who are highly represented by ethnic minorities, are primarily low income, and are academically underprepared. Consequently, by offering classes in an online format, we have in fact taken a step backwards in efforts to resolve equity gaps that exist in biology.

Additionally, the national digital divide still clearly exists, with one in three Black and Hispanic households not having access to computer technology in their homes; 35% of black households and 29% of Hispanic households do not have broadband Internet access. Our student population appears to be reflected in this situation, with many of our students (~25% based upon informal classroom surveys) not having access to high speed Internet, and with many students working from smart phones rather than computers both of which puts them at great disadvantage. All of these things serve to widen rather than close the equity gaps that exist in the department.

Despite this, in order to allow students to progress through their programs, full and part-time biology faculty did a remarkable job converting face-to-face courses to online during Spring 2020 and Fall 2020. In the Spring 20 semester, there were only 3 biology faculty who had any type of training that would prepare them to convert to online teaching. The majority of the biology instructors were required to try to figure out how to convert extremely complex courses that typically included both lecture and lab components to an online format in 10 days without any training. During the summer of 2020, nearly all biology faculty went through the Canvas training course that was offered by the college. The course was well done, but in retrospect, and after spending a semester learning more about the real needs for online teaching, it is necessary that faculty have far more training and development time in order to build a high quality online course. Even at that, biology faculty do not believe that online could or should become the mode of education in STEM.

Conversion of lecture components of courses was challenging since our goal in the past few years has been to move toward active learning that requires hands-on work in groups. This approach is supported by national research and recommendations of the National Science Foundation and National Academies of Science with recommendations that active learning is the most effective way of learning in science courses. Most of these new exercises that had been developed to increase active learning in the classroom are difficult/ impossible to replicate online. The conversions often required the development of completely new materials in a matter of a few days. The materials that typically are used in many of the Biology courses have taken years of development work, and many of them could not be used at all. For example, for Bio 230, one of the laboratory projects that students worked on each semester was an authentic research project that simply could not be done online and had to be replaced with a non-research project that would be far less impactful on student learning. These authentic research projects are of the type that the National Science Foundation and other scientific organizations indicate are best for student learning, and yet are not possible to do in an online setting. For other projects, students were given data sets that they used to analyze data and write reports. Although this addresses some of the learning objectives of the course, it definitely gives the students an incomplete and lower quality experience than they would receive doing the real hands on lab. With the majority of our instructors being part-time, they all have less experience in teaching in general, and adding the

Our biggest issue this year has been the loss of two of our full-time Lab Techs; our Senior Biology Technician retired (non-SERP) and our Microbiology technician left for a position elsewhere and our technician position for the new building behind the H building was in the hire process and was stopped. At this point, we have one FT technician and one 20 hour technician. These are critical positions, as the Microbiology technician covers our late afternoon and evening classes, and the Senior Biology Technician is responsible for Microbiology and anatomy. The third position is necessary to keep the second building running and is in fact shared between Biology and Chemistry. When we do come back to face-to-face classes, we cannot operate without these positions being filled. We have no one at this point who is trained to prep our microbiology course, and without a properly trained person, we will not be able to offer the course. This will prevent students from transferring to nursing programs, and will also prevent students from earning our Biology Pre-Allied Health degree which typically has about 35 degrees per year.

Q6

II.A.1 Is your program following the assessment plan on file with the SLO Coordinator (or Outcome Assessment Committee)?

Yes, the assessment plan is on file and the program is following the plan

Q7

OPTIONAL: You may upload a copy of your SLO assessment plan for SLOAC here. If you have an Excel sheet, please convert to one of the supported files listed below before submission.

Respondent skipped this question

Page 3: II. Assessment and Student Achievement

Q8

You indicated either 1) the department assessment plan is on file, but work is needed to update the plan, or 2) the department has no assessment plan on file and/or the program is not currently following assessment plan II.A.1a Please describe how your program is adjusting (or developing) its assessment plan to ensure all courses are assessed within the assessment 4-cycle:

Because of COVID, and the fact that we have not been able to run labs and some classes, we have had to adjust the assessment schedule. An updated plan is being submitted to the coordinator that reflects the changes that we need to make and are discussed in this report. In most cases, the assessments are being pushed forward to a time when we will hopefully be back on campus.

Page 4: II. Assessment and Student Achievement

Q9

II.A.2 Please provide an analysis of your Student Learning Outcomes (SLOs) findings over the past year and what changes, if any, were made as a result. This may include, for example, changes to departmental practices, program improvements, and/or professional development opportunities over the past year. *If the department did not complete assessments during the COVID-19 public health crisis, please note that here and provide additional context.

BIO 122 The Secret Life of Plants: SLO 1 was assessed in Fall 2019 utilizing a Scientific Inquiry Lab that spans a week and a half. This interactive assignment was successful with 29 out of 33 passing (87.9%) the SLO. SLO 2 and 4 were assessed Fall 2020. SLO 2 was assessed by evaluating several weeks of plant dissections culminating in a Padlet exercise that demonstrated what they learned. 100% passed this SLO. SLO 4 was assessed with a plant doctor virtual assignment. For SLO 4, 100% of the students passed the SLO. SLO 3 will be assessed FA2021. Hopefully at this time we will be able to run the plant cloning experiment.

BIO 130 General Biology: A substantial amount of work has been done in the last 4 years revising the curriculum for this class; the SLO's need to be revamped further as they are not really addressing the success and equity issues that exist in this course. We did not do any assessment in the last year because of the transition to online; most of the new curriculum that has been developed in the past 3 years is designed for a F2F classroom, and we know based on research that has been done that online is a bad modality for our students (see first part of program review document). Our first cursory look at success results from Fall 2020 indicate that success rates went down and equity gaps got worse instead of better. Very sad.

BIO 131 General Biology Lab: In moving this course online, it was necessary to make changes to the curriculum that do not allow it to truly address the course SLOs. We will be looking at the SLO's in Spring 21 to determine if SLO changes should be made.

BIO 133 Ethnoecology: It was determined that five of the SLO (1, 2, 3, 4, and 9) are redundant and should be re-written as one SLO. These were assessed by a multiple part research project over two months. All of the students passed the 5 SLOs. The plan is to rewrite the SLO to be less cumbersome to assess and eliminate the redundancy. The research project was successful in student learning and this progress and development was tracked over two months. SLO are planned to be rewritten SP2021.

Bio 134: Ethnobotany

All SLO have been assessed previously. No assessment was done Spring 2019 & Spring 2020. Assessments and evaluation of all SLO are scheduled for Spring 2021. Course is only offered in the Spring.

Bio 135: Lab in Ethnobotany and Ethnoecology

All SLO have been assessed previously. No assessment was done Spring 2019 or Spring 2020. Assessments and evaluation of all SLO are scheduled for Spring 2021. Course is only offered in the Spring.

BIO 140 Human Anatomy: No assessments were done in Spring 2020 or Fall 2020 since the course was online. We were notified by Grossmont College that they are planning to decrease the unit value of their course from 5 units to 4 units because of requirements of their nursing program. In order to maintain alignment with them, in Spring 21 we plan to change our curriculum to match their 4 units (also aligns with SDSU); this will require that the SLOs are rewritten and once this gets through curriculum, we will start a new assessment cycle the following semester (hopefully Fall 21 if we are back in the classroom).

BIO 141 Human Physiology: All SLO's were assessed in Fall 2018 and all students achieved all of the SLO's for the course. So this year no formal assessments were done. Because of the transition to online instruction, new forms of assessments were explored this year and will continue being explored for the 20/21 academic year. In the spirit of continuous improvement, assessments are being re-evaluated to be ready for the next formal assessment scheduled in F2021.

BIO 141L Human Physiology Lab: SLO's were updated in 17/18 and assessed in Fall 2018 and all student met all of the SLO's. This academic year has been extremely difficult for this course due to the move to online instruction. Students have not had the opportunity to use laboratory equipment that is normally used in the class, nor are the students equipped with the proper computer programs traditionally used to construct graphs. Even asking students to make the graphs by hand and then to send a picture of the graph is beyond the capabilities of some students who do not have the technology to do so. Therefore, as long as the class is held online, there will be some SLOs that will not be able to be properly assessed. Bio 141L should not be allowed to continue completely in the

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there will be some SLO's that will not be able to be properly assessed. BIO 141L should not be allowed to continue completely in the online format beyond Spring 2021; at least some of the lab classes must be able to be offered face-to-face so that students can practice and demonstrate laboratory skills so that those skills can be properly assessed. The updated SLO assessment schedule for this course calls for assessments to start again in Fall 2021 assuming that we are back on campus for classes.

BIO 152: Microbiology : An assessment cycle was started in Fall 2019 and all students passed the SLO's that were assessed; In Spring 2020 since the course was moved online we were unable to continue assessing; and the course was not offered in Fall 2020 and will not be offered in Fall 2021; the assessment cycle will be continued as soon as we are able to get back into the classroom and offer the course again.

BIO 230: Cell & Molecular Biology: A new assessment round was started in Fall 2019. In Spring 20, with the class being moved online, it was decided to hold off further assessment until we get back into the classroom, as many of the SLO's are dependent on being in the classroom or lab in order to come up with valid assessments. Hopefully we will be able to get back on track in Fall 2021.

BIO 240: Organismal Biology: An Acid Soils inquiry lab was used to assess SLO1 in FA19. This was a very successful activity with all of the students passing. However, it was clear that this SLO should be woven into many more assignments throughout the semester.

SLO 2 was assessed using an online virtual activity FA2020. 100% of the students passed the activity.

SLO 3 and 4 will be assessed SP2021

SLO 5 and 6 will be assessed FA2021

Bio 251: Human Dissection; This class is offered Spring only. Next assessment cycle will start Spring 2021 and will assess SLOs 1,3,5,6,7 and SLOs 2 & 4 will be assessed Spring 2022. This all assumes that we are back Face-to-face and are able to acquire funding to obtain the cadavers for the class.

Page 5: II. Assessment and Student Achievement

Q10

II.B.1. What progress has been made in your program to address the institutional goals set around student success and equity? (2019 Equity Plan) If qualitative or quantitative data is available, please summarize any findings.

Faculty in the department have done a variety of things to address equity gaps. Examples include:

- Making textbooks available to students through the HSI-STEM grant office or the library
- Moving to OER/Free textbooks for high enrollment courses
- Faculty participation in outside conferences that support equity (Active Learning Leaders Conference; Cultural Bridge for STEM learning Conference) ; two FT faculty have previously or are currently participating in the EMTLI.
- Participation in STEM Reading Apprenticeship program and incorporating activities into classes that are known to have a positive impact on equity
- Increase active learning and in-class group assignments that have been shown to have a positive impact on student success and equity.
- Incorporated Visible Body software to Bio 140 to allow students access to a model of every anatomical structure student in the course. This allows for every student to gain access to the models 24-hours a day, 7 days a work, which is especially important for working students (Spring 2020 only)

The problem is that it is difficult to determine which of these things might have made any difference when confounded with the move to online instruction, it has been extremely difficult to assess whether any of the things we had plans to change would have made any gains toward closing the equity gaps that exist in the department. At this point, there are equity gaps in most biology courses, and the move online seems to have made them worse rather than better. As explained previously our courses are best taught in an active learning mode, and our student demographics do not support online learning as a best practice for our students.

Q11

II.B.2 In light of the goals set in your program review, what are your plans to improve equitable student outcomes (success, retention, persistence, graduation, etc.) in the coming year?

There are two new goals that are directly designed to address student success and close equity gaps.

- 1) Recent research has shown that college students are most successful when they are part of a relationship rich environment (Relationship Rich Education, Felton & Lambert, 2020). Our first goal is to implement a faculty version of Caring Campus that is focused on faculty making behavioral commitments that are designed to increase student success and decrease equity gaps.
- 2) Because so many of our PT faculty have little teaching experience, there is a tendency for them to teach the way they were taught which is most often the classic lecture. There is significant turnover of PT faculty in the biology department for a number of reasons, including low pay, location of the college in East county, and availability of FT positions in other districts to name a few. The second goal is to develop an online learning program for faculty that can be done online, and is focused on not only developing an understanding of active learning techniques that can be used in the classroom, but also the development of a "product" that will be tested in their classroom. The program will be available online through the Vision Resource Center and will be composed of content that will be present on Canvas, and a support/discussion community that will be contained in the VRC; faculty who participate in the program will be able to earn staff development credit.

Page 6: II. Assessment and Student Achievement

Q12

No

Do you offer distance education (online) courses? (excluding emergency remote teaching in 2020)?

Page 7: II. Assessment and Student Achievement

Q13

Respondent skipped this question

II.C.1 If there were differences in success rates for distance education (online) versus in-person sections of program courses in your last comprehensive program review, what has the department done to address these disparities? If online and in-person sections had comparable success rates, please describe what the program did to achieve that.

Q14

Respondent skipped this question

II.C.2 What mechanisms are in place to ensure regular and effective contact? For resources, see Cuyamaca Guide to Best Practices in Online Teaching

Page 8: III. Previous Goals: Update

Q15

Goal 1:

Plans for Development of Cuyamaca College nature preserve. We have been unable to move forward with this goal because the faculty member who is responsible has been on reassigned time and is currently in a temporary administrative role. The goal is to move forward with this project as soon as we have adequate personnel to handle it.

Q16

In Progress - will carry this goal forward into next year

Goal Status

Page 9: III. Previous Goals: Update continued

Q17

Respondent skipped this question

Please describe the results or explain the reason for deletion/completion of the goal:

Q18

Respondent skipped this question

Do you have another goal to update?

Page 10: III. Previous Goals: Update continued

Q19

Action steps for the next year: If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new laptop computers).

Depends on whether we have adequate personnel to move this forward next year or whether we need to continue to carry it forward until we do.

Q20

Yes

Do you have another goal to update?

Page 11: III. Previous Goals: Update continued

Q21

Goal 2:

Continue to meet expectations for HSI-STEM grant projects

Q22

Deleted

Goal Status

Page 12: III. Previous Goals: Update continued

Q23

Please describe the results or explain the reason for deletion/completion of the goal:

This goal is being broken into smaller, more specific components that will show up later as new goals.

Q24

Yes

Do you have another goal to update?

Page 13: III. Previous Goals: Update continued

Q25

Respondent skipped this question

Action steps for the next year: If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new laptop computers).

Q26

Respondent skipped this question

Do you have another goal to update?

Page 14: III. Previous Goals: Update continued

Q27

Goal 3:

Develop and implement active learning curriculum for Bio 240.

Q28

In Progress-will carry this goal forward into next year

Goal Status

Page 15: III. Previous Goals: Update continued

Q29

Respondent skipped this question

Please describe the results or explain the reason for deletion/completion of the goal:

Q30

Respondent skipped this question

Do you have another goal to update?

Page 16: III. Previous Goals: Update continued

Q31

Action steps for the next year: If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new laptop computers).

Because of our necessary foray into teaching online, we have been diverted from this project; the plan is to move this forward as soon as the resources necessary to carry it out are available.

Specifics:

Bio 240 Requests:

These animal specimen are to address the issues that arose from evaluating SLO data for this course. Currently, the specimen that are used during lab are over 20 years old and literally falling apart. The preserved animals are missing parts of their anatomy or are reduced to pieces floating in the preservation fluid. This makes it impossible for students to be able to use. These specimen will be utilized to further enhance project-based learning exercises to increase student success in the invertebrate and vertebrate identification for the organismal component of this course. These specimen will not be able to be obtained with existing funds. They are a one-time purchase that will be utilized for the next 20+ years and do not fit into the regular budget within the Biology Department.

The supply request falls under the category of Critical Need (or replacement?). The current curriculum requires students to have an understanding of invertebrate and vertebrate identification and evolution. Students will utilize the specimen to learn about these organisms.

Currently the evolution and identification of 8 different animal phyla is very difficult for students to understand. This critical need was clear when assessing SLO data. The instructors for this course discussed solutions to this critical need for our students. One of the biggest impediments to the student's understanding is old materials that are impossible to identify. Being able to visually see and compare different animal groups from sponges to sea stars major will give our students the ability to fully understand the concept of descent with modification by seeing the changes in these organs from one species to the next with these preserved specimen.

Microscope slides are also needed, as the stains fade over time. As a number of these slides are 15+ years old, the images are faded or gone and students no longer of the ability to view the organisms or anatomical features of these organisms.

Due to the redevelopment of Bio 240, new materials are needed to support the new, more active activities that are being implemented. Through SLO evaluation, we found students really struggling to understand animal physiology and the different tissues comprising animal organs., A laboratory exercise was developed to allow students to learn the material utilizing a hands-on approach to view and understand the four different types of animal tissues. However, we do not have the materials required to make this lab fully successful (we were borrowing slides for Anatomy, which are not the right slides that we need). This request is for microscope slides that represent the four tissue types of animals in order to support student success

The SLO data for this course shows that the most successful student outcomes correlate with material that is taught utilizing active learning strategies. This supports the need for continuation and development of innovative active learning strategies to teach the evolution of these organs and organisms within Kingdom Animalia.

Preserved Animal Specimen

1. Echinoderm Collection: 4 different representative classes of echinoderms (<https://www.carolina.com/preserved-starfish-and-sea-urchins/echinoderm-collection-preserved/226000.pr>)

- 8 sets are needed (32 students/4 per group)
- \$280.00 (\$35.00/set * 8)

2. Animal Survey Set: 21 different preserved animal specimen from sponges to fish (<https://www.carolina.com/multi-organism-dissection-kits/animal-survey-set-1/221285.pr?question=Animal+kingdom+specimen+set>)

- 8 sets are needed (32 students/4 per group)
- \$1,296.00 (\$162.00/set * 8)

Microscope Slides

1. Grantia Sponge Choanocyte slides (<https://www.carolina.com/animal-microscope-slides/grantia-near-median-ls-microscope-slide/305842.pr>)
 - 16 slides needed
 - \$134.40 (\$8.40/slide)
 2. Animal Tissue Sets (<https://www.carolina.com/basic-science-microscope-slides/all-about-me-microscope-slide-set/311960.pr>)
 - 8 sets
 - \$376.00 (\$47.00/set)
 3. Motor nerve ending slides (<https://www.wardsci.com/store/product/8881935/motor-nerve-endings-in-muscle-reptile>)
 - 4 slides
 - \$86.60 (\$21.65/slide)
-

Q32

Yes

Do you have another goal to update?

Page 17: III. Previous Goals: Update continued

Q33

Goal 4:

Develop and implement new active learning botany curriculum for Bio 122, 134, 135 & 240.

Q34

In Progress-will carry this goal forward into next year

Goal Status

Page 18: III. Previous Goals: Update continued

Q35

Respondent skipped this question

Please describe the results or explain the reason for deletion/completion of the goal:

Page 19: III. Previous Goals: Update continued

Q36

Action steps for the next year: If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new laptop computers).

Because of the requirements to go online with our courses, we were unable to move forward with this project; additionally, the funding was not allocated which would allow us to meet these goals.

Bio 122, 134, 135, 240 Requests:

Through evaluating the SLO for this course, students struggle with understanding the plant anatomy and classification. One of the issues is the lack of supplies available to students. For a class of 32 students, there may be only one microscope slide available. When this happens, students are unable to perform the active learning exercise and struggle to understand the material and meet the SLO. Below is a list of slides that are needed or need to be replaced. These slides will be utilized in Bio 122, Bio 240, Bio 134 and Bio 135.

Another issue students have been facing as witnessed during SLO assessment, is an understanding of plant life cycles. This has been an issue noted in three courses: Bio 240, Bio 122 and Bio 134 and Bio 135. Growing and running experiments on C-ferns, from spores in petri to full sized plants is incredibly successful in assisting in student learning as it provides both an active learning and inquiry based approach to meet the student learning outcomes. The issue to growing these specimen has been that they need to be grown at 80 degrees with a required level of humidity and a constant source of light. Currently, we do not have the equipment to do this properly. An environmental growth chamber with a heating/humidity system is required in order to grow enough of these plants for four courses: Bio 122, 134, 135 and Bio 240.

Microscope Slides

1. Eudicot and Monocot Root Comparison Slides (<https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-roots-cs-12-um-microscope-slide/301892.pr?question=dicot+slides>)
 - 16 slides needed
 - \$130.40 (\$8.15/slide)

2. Eudicot and Monocot Stem Comparison Slides (<https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-stem-slide-c-s-12-um/302642.pr?question=Monocot+stem>)
 - 16 slides needed
 - \$131.20 (\$8.20/slide)

3. Eudicot and Monocot Leaf Comparison Slides (<https://www.carolina.com/plant-microscope-slides/typical-monocot-and-dicot-leaves-cs-12-um-microscope-slide/303514.pr?question=monocot+leaf+slide#>)
 - 8 slides needed
 - \$132.00 (\$8.25/slide)

Plant Growth Chamber (we desperately need this as we have increased our botany offerings over the past 10 years from 0 to 3 courses -Bio 122,134, 135)

1. Plant environmental growth chamber (<https://www.carolina.com/growing-systems/carolina-plant-environmental-chamber/666806.pr>)
 - \$2,236.15

Page 20: IV. New Goals

Q37

Yes

Would you like to propose any new goal(s)?

Page 21: IV. New Goals continued

Q38

New Goal 1:

Caring Campus for Faculty

Q39

Student Validation and Engagement

Which College Strategic Goal does this department goal most directly support? (Check only one)

Q40

Please describe how this goal advances the college strategic goal identified above.

This is really to support the college's equity goals. Recent research has shown that college students are most successful when they are part of a relationship rich environment (Relationship Rich Education, Felton & Lambert, 2020; Creating a Data-Informed Culture in Community Colleges, Phillips & Horowitz, 2017)). Our first goal is to implement a faculty version of Caring Campus that is focused on faculty making behavioral commitments that are designed to increase student success and decrease equity. gaps.

Q41

Please indicate how this goal was informed by SLO (student learning outcome) assessment results, PLO (program learning outcome) assessment results, student achievement data, or other qualitative or quantitative data (from any source):

Just as with most disciplines in the college, student achievement data for the biology department shows significant equity gaps present in most courses. The research in these books has shown that faculty commitment to implement about six behavioral steps can result in significant increases in student success and decreases in equity gaps. A great advantage to this system is that it is a zero cost process.

Q42

Action steps for this year:If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new computer hardware).

1. introduce concept to Biology faculty and set up contracts with interested faculty to implement the behavioral steps.
 2. monitor and provide support to faculty
 3. look at data from classes that implemented vs those that did not to determine if success rates increased or equity gaps closed.
 4. Disseminate results
 5. If successful, Repeat the process the following semester
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Q43

How will this goal be evaluated?

This goal will be evaluated by looking at results of student success and equity gaps for the classes that implemented the process vs those that did not.

Q44

Yes

Do you have another new goal?

Page 22: IV. New Goals continued

Q45

New Goal 2:

iSTEM Faculty Training Program

Q46

Student Validation and Engagement

Which College Strategic Goal does this department goal most directly support?

Q47

Please describe how this goal advances the college strategic goal identified above.

iSTEM will be set up using systems that are already in place at the college and will not cost additional money to implement for the college; it therefore becomes sustainable into the future. The project will use two systems that are already in place; 1) Canvas 2) Vision Resource Center (Cuyamaca Community) to deliver faculty training materials and to support discussion in a community in the VRC. The implementation by faculty of new active learning techniques in the classroom should increase student success and close equity gaps.

According to the professional development coordinator, faculty want to do professional development projects that produce value added products; something that they can actually put to use in teaching a class rather than just general information.

The reality is that in the long term these topics about active learning can be implemented for any discipline; do not need separate topics for each discipline; considering how small we are as a college, the more faculty there are to participate the better (similar to what we have done with SCI100).

The grant indicates that that participants will be paid for this training; however, once the grant runs out, payment will not be an option; since all faculty need to do staff development work every semester and are paid as part of their salary for their staff development work, this seems to be the best way to sustain this work into the future, especially with the Community College budget crisis in California.

In the short term, the goal will be to think about projects that can be implemented for online courses, but then can be easily used in Face to Face classes once we get back into the classroom.

How this will work:

1. Select a project area that you want to work on this semester. Ideally the project should be small and manageable; do not try to rebuild a whole course or an entire unit that contains a large number of sub-topics; start small and see what works and then build upon it in the future.
2. Read the background material and look at the example projects about the topic of interest; as you are reading, think about how you could implement a project about this topic in your class; think about developing a project as you go.
3. Write a short description of the project that you plan to work on for the semester; go to the community discussion area and write a short description of your plan and invite others to engage in a discussion about the plan.
4. Put the project together and implement it in the classroom. Pick a project that can be completed in the first 2/3 of the semester so that it can be implemented in the class, and student feedback obtained, and completed for staff development credit.
5. Post your project results in the community forum for discussion with other faculty in the community.
6. When project is complete, staff development coordinator will post credit for the project.
7. Different projects can be done every semester.

Q48

Please indicate how this goal was informed by SLO (student learning outcome) assessment results, PLO (program learning outcome) assessment results, student achievement data, or other qualitative or quantitative data (from any source):

This goal was informed by student achievement data that clearly shows low success rates and significant equity gaps

Q49

Action steps for this year: If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new computer hardware).

1. Develop a series of training modules and curriculum examples in Canvas that faculty can use to develop interventions for their own classes.
 2. Work with the professional development coordinator to create a Cuyamaca STEM learning community in the VRC that will be used as a part of each faculty project.
-

Q50

How will this goal be evaluated?

For this year, the goal will be evaluated based on the presence of a minimum of 4 training modules and the presence of the tied learning community in the VRC.

Q51

No

Do you have another new goal?

Page 23: IV. New Goals continued

Q52

Respondent skipped this question

New Goal 3:

Q53

Respondent skipped this question

Which College Strategic Goal does this department goal most directly support?

Q54

Respondent skipped this question

Please describe how this goal advances the college strategic goal identified above.

Q55

Respondent skipped this question

Please indicate how this goal was informed by SLO (student learning outcome) assessment results, PLO (program learning outcome) assessment results, student achievement data, or other qualitative or quantitative data (from any source):

Q56

Respondent skipped this question

Action steps for this year:If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new computer hardware).

Q57

Respondent skipped this question

How will this goal be evaluated?

Q58

Respondent skipped this question

Do you have another new goal?

Page 24: IV. New Goals continued

Q59

Respondent skipped this question

New Goal 4:

Q60

Respondent skipped this question

Which College Strategic Goal does this department goal most directly support?

Q61

Respondent skipped this question

Please describe how this goal advances the college strategic goal identified above.

Q62

Respondent skipped this question

Please indicate how this goal was informed by SLO (student learning outcome) assessment results, PLO (program learning outcome) assessment results, student achievement data, or other qualitative or quantitative data (from any source):

Q63

Respondent skipped this question

Action steps for this year:If you are requesting resources in order to achieve this goal, please list them below as action steps and specify the type of request (e.g. submit technology request for new computer hardware).

Q64

Respondent skipped this question

How will this goal be evaluated?

Page 25: V. Resources Needed to Achieve Goal(s)

Q65	Classified Resource Needs,
What resources is your program requesting this year to achieve the program's goal(s)?	Supplies/Equipment and Other Resource Needs

Page 27: Final Check

Q66	I am ready to submit my program review
Are you ready to submit your program review?If you would like to go back and review a section, select a section a click "Next."	
