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Page 1: I. Program Overview and Update

Q1 Department(s) Reviewed:

Chemistry

Q2 Lead Author and Participants: Please list any person who participated in the preparation of this report.

Robert Anness

Q3 Dean/Manager:

Pam Kersey

Q4 Program Update: Please summarize the changes, additions, and achievements that have occurred in your program since your last program review was submitted. To access your 2019 program review, visit the Program Review webpage.

The biggest change to the chemistry program since our last program review is the addition of a third chemistry laboratory classroom in the H-Building annex. We have been operating with only two lab classrooms since the construction of the H-Building, which was sufficient at that time, but became increasingly difficult to manage. We are happy to have high fill rates in our classes, however we have faced some challenges as we've added sections over the last several years to meet the high demand. Additional sections has meant more strain on our facilities, equipment, and especially on our chemistry technicians. With only two chemistry laboratory rooms we've had to schedule lab classes close together, which leaves less time for breakdown and setup between sections. We've also had to get creative with regard to student lab lockers and storage of equipment as we've run out of space in these rooms. Having the new chemistry classroom up and running has meant we could add additional sections in the original two H-Building labs without having them all run back to back. Specifically, we moved all of our entry-level lab classes (Chem 102 and Chem 120) to the new lab room, and added a section each of Chem 141 and Chem 231 for Spring 2020.
These welcome changes have not been without their challenges. The construction of the new lab took months longer than expected and our technicians were not able to begin setting up the lab until the week before the Spring 2020 semester. This left everyone scrambling to get everything done at the last minute. Moreover, adding the new sections of General Chemistry (Chem 141) and Organic Chemistry (Chem 231) has increased the challenges for our chemistry technicians. The new Chem 231 class alone required ordering around $20,000 in glassware and equipment that had to be set up and put in lockers for the students at the same time that similar preparations were being done for the new lab classroom. Also, Spring 2020 is the first time we've ever offered three sections of organic chemistry, let alone two different organic chemistry classes at the same time (one section of Chem 231 and 2 sections of Chem 232). This greatly increases the workload for our technicians as they will have more chemicals to order, more solutions to prepare and additional lab classes to set up.

We have been awarded a new technician that is shared with biology to help out primarily with the new labs (there is one biology lab and one chemistry lab in the new H-Building annex). It was imperative to hire someone for this purpose, but there are still gaps during the evening where these new labs don't have a technician scheduled to cover them. Some of our technicians are graciously filling in to assist with these evening classes for now, but this is not sustainable. In an effort to address this issue as well as the increased workload for our technicians due to the new general and organic chemistry sections, we are requesting an additional part-time technician in this program review.

Working with the Institute for Evidence-Based Change (IEBC) and the campus Institutional Effectiveness Division, STEM majors and cohort student data is being collected and studied to gain an understanding of Cuyamaca STEM student population demographics, implementation of the various interventions, including STEM Counseling, support courses, Faculty Mentorship, STEM cohort science identity, student success, student retention and time to transfer, among others. Early results provided by Institutional Effectiveness are promising. These results compare the success and retention of our STEM cohort students versus STEM students in general with demographics similar to our cohort students. While the majority of the support services mentioned above are available to all of our STEM students, the cohort students are required to take advantage of them and so tracking their progress can give us some indication of the effectiveness of these interventions. The sample size is still pretty small thus far, but the early data shows that 100% of our cohort students persisted in College versus only 74% for the comparison group from the time-period from Fall 2017 to Spring 2019. Retention rates and GPA are also higher for our cohort students versus the comparison group.

Page 2: II. Assessment and Student Achievement

Q5 1. Do you have a course Student Learning Outcome (SLO) assessment plan on file with the Student Learning Outcome and Assessment Committee (SLOAC)?If you have not already done so, you can submit your program's assessment plan to SLO Coordinator, Tania Jabour, at tania.jabour@gcccd.edu.	**Yes**

Q6 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

Q7 2. Please provide an analysis of your Student Learning Outcomes (SLO) findings and what changes, if any, were made as a result.

One example of a success story resulted from SLO assessment in our Chemistry 102 class. Chem 102 is an accelerated course which introduces our allied health students to general, organic and biochemistry in one semester. Significant improvement was observed with regard to a particular SLO that dealt with the students' ability to set up and solve dimensional analysis problems. Dimensional analysis is a core skill in chemistry, and one that incoming chemistry students typically find challenging. The SLO was assessed in the Fall 2014 semester with unsuccessful results. Only 51% of students were successful with this SLO based on an exam question used for assessment. To improve student success with this skill, a dimensional analysis practice worksheet was created by the Chem 102 coordinator and distributed to all instructors each semester. In conjunction with this, some laboratory time is now set aside for an active-learning, dimensional analysis workshop that allows students the opportunity to work through problems in the worksheet with the instructor present to answer questions and provide guidance. More generally, over the last few years we have been consistently offering workshops outside of class that are open to all Chem 102 students. In accordance with our SLO assessment plan, this SLO was reassessed in the Fall 2017 semester using an exam question again as the assessment tool. This time around the success rate among students was 76%. We are very happy to see this level of improvement, and confident that some of the changes made in terms of introducing this material contributed to this positive result.

More recently, we have seen low success rates among our chem 102 students with regard to their understanding of gas laws. A gas-law related SLO was assessed in the Fall 2019 semester and only 35.5% of students were successful with the assessment tools (exam questions) provided. Moreover, this is not the first time we've seen low success rates with gas-law problems. Currently this topic is covered in the form of a workshop during a single laboratory period. This is proving insufficient with regard to student comprehension and we began a discussion among instructors at a recent Chem 102 coordination meeting about what we can change to improve these results in the future. Some initial thoughts include spending more time on this topic (which will require a re-working of the lecture schedule), condensing some of the material presented down to the most relevant for our allied health students, revising and/or providing additional practice materials, and incorporating more active learning exercises related to gas-laws.

As a department we are continuing to think up new types of assessment tools that can enrich our understanding of student comprehension of course material or proficiency with laboratory techniques. One new type of assessment was used in our Chemistry 142 class during the Fall 2019 semester. The assessment was done during an experiment that required the students to use a variety of analytical techniques such as volumetric pipetting and the preparation of analytical solutions. Rather than use the lab report for this experiment as the assessment tool, the instructor observed the students as they performed these analytical techniques and assessed them based on their proficiency in accordance with a detailed rubric. Though not without its challenges, this type of evaluation provided us with information that we cannot fully obtain and address based on a lab report alone. The instructor who developed this assessment tool, Robert Dutnall, is in the process of modifying the assessment process to make it less cumbersome for the instructors, and plans to continue using this type of assessment in future semesters.

Q8 3. Does your department or discipline offer any degrees and/or certificates?

Yes

Page 3: II. Assessment and Student Achievement

Q9 4. How are you currently assessing your PLOs?

The chemistry program has three PLOs that we are assessing in accordance with our department's SLO/PLO assessment plan that was updated just prior to the Fall 2019 semester. The first time we assessed one of our PLOs (PLO #3) was in the Fall 2018 semester. The specific PLO related to the Fall 2018 assessment is the following:

"Develop critical thinking skills by predicting interactions between different types of matter, both physical and chemical; analyzing matter in the laboratory both qualitatively and quantitatively; performing mathematical calculations related to the transformation and analysis of matter; and solving qualitative and quantitative problems in connection with the transformation and analysis of matter."

The assessment tool used for this PLO was a laboratory practical exam given to students in our Chemistry 120 class. The practical evaluates the students' ability to employ various laboratory techniques learned in the class to carry out a number of different experimental tasks, and then analyze the results. Due to historically lower scores on this exam we started offering lab practical workshops to our students prior to the exam so they could get more practice. These workshops have been offered for three semesters now and we have been seeing significantly increased lab practical exam scores since their implementation. PLO #2 is set to be assessed during the Spring 2020 semester in our Chemistry 232 (Organic Chemistry 2) class.

When we put together the assessment plan we spent some time to determine which specific class would be best suited to assess a particular PLO. This is our first cycle for PLO assessment so we expect that our plan may be modified in the future as we learn from the process and the results.

Q10 5. Are your PLOs in the catalog an accurate reflection of the department or discipline's current learning objectives?To access the College Catalog Associate Degree Programs and Certificates section, click here.	**Yes**
Q11 6. Are the PLOs mapped onto the course SLOs? If you require assistance, please contact Madison Harding in the IESE Office at madison.harding@gcccd.edu	**Yes**

Page 4: II. Assessment and Student Achievement

Q12 Referencing the last 5 years of data, discuss the changes in course success rate since the last program review (annual or comprehensive) report.

The average success rate for all chemistry classes over the past five years is 64%. However, the last 4 semesters for which we have data (Fall 2017 – Spring 2019) have averaged a bit higher at around 68%. These four semesters have also been the most consistent in terms of the average rate over the past five years, with no major spikes up or down as can be clearly seen on Chart 1 (These semesters ranged from 67-70%). These semesters also coincide with the implementation of many student support services made possible by funds from our HSI-STEM grant. Three of the six chemistry courses that we currently offer have success rates that are relatively high. These are our three highest level courses and their average success rates over the past five years are as follows: Chem 142 = 81%, Chem 231 = 84%, Chem 232 = 83%. Our Chem 141 class has an average success rate of 72%, though the rate has consistently risen over the last four semesters, with rates of 81% and 86% in the Fall 2018 and Spring 2019 semesters, respectively. However, our overall success rate across all courses is only 64% as previously mentioned. The average is largely pulled down by lower success rates in our entry-level chemistry courses (Chem 102 and Chem 120), of which we offer the most sections compared to any of the other courses. Chem 102 has showed a relatively consistent success rate of the past five years, averaging 64%. Our lowest success rates have been in our chem 120 class with a five year average of 48%. Despite this low rate it is promising to see that the last four semesters (Fall 2017-Spring 2019) have averaged ten percent higher (55% vs. 44%) than the previous six semesters (Fall 2014-Spring 2017), with no major spikes in either direction.

Q13 Considering the college's 2024 goal of increasing course success rates to 77%, discuss how your department/discipline will help meet that goal.

As mentioned previously, our three highest level chemistry courses that we currently offer have average success rates higher than 77%. However, our overall success rate across all courses is only 64%. Since our lowest success rates are in our entry-level chemistry courses (Chem 102 and Chem 120), we have put a large emphasis on support for students in these specific classes. Currently we offer pre-semester Gear Up For Success workshops for our incoming Chem 102, Chem 120, and Chem 141 students, which are our three lowest level chemistry courses. The Gear Up workshops for the entry-level courses focus on study skills and math skills that will be important for these classes. Moreover, we offer dedicated workshops during the semester for both Chem 102 and Chem 120 that are available to all students in these classes, and typically occur twice a week. Data has shown that students that take advantage of these workshops are on average 25% more successful than the general student population enrolled in these classes.

Q14 Please describe any equity gaps, in which specific groups (e.g., by gender and ethnicity) have success rates lower than that of the department or discipline overall.

Both male and female chemistry students have tended to have success rates that are very close to the overall success rate in chemistry over the past five years as shown in the graph. However, female students tended to have success rates that were slightly higher than the average success rate in any given semester, while male students tended to be slightly lower (see Chart 2).

To analyze chemistry success rates by ethnicity, a graph was created that looks at success rates of particular groups as a percent difference from the average rates (see Chart 3). Comparing our two largest groups first (White, Non-Hispanic and Hispanic), there is a clear difference in success rates. While white, non-Hispanic students had higher success rates than the overall rate (averaging 10% above average) during every semester over the past five years, Hispanic students had lower success rates each semester (averaging 16% below average). Other ethnic groups tended to fluctuate above or below the average success rate depending on the semester. This is most likely due to the fact that these groups represent a much smaller percentage of overall enrollment in chemistry, and so the sample sizes are pretty small. However, it should be noted that while the success rates for Asian students tended to be above the average most semesters (averaging 12% above) and Filipino students fall right around the average overall, African-American students had below average success rates in all but two semesters over the past five years (averaging 29% below average).

Q15 What department/discipline (or institutional) factors may be contributing to these lower success rates for these groups of students?

The consistently lower success rates for Hispanic and African-American students (as compared to White, Non-Hispanic students) are glaring and disheartening. These rates reflect national trends and point to the fact that these communities have been disproportionately impacted by multiple forms of discrimination and other factors. This means that students from these communities are more likely to be low-income, first-generation college students facing greater challenges in their personal lives, and with regard to navigating the college terrain. While our institution cannot overcome all of this on our own, an equity-minded focus from the college and its individual programs is crucial to mitigating these hurdles for our students. If we can address our own deficiencies and create a welcoming environment with multiple levels of support, we should be able to have a positive impact in this regard.

Q16 What specific steps will the department of discipline take to address these equity gaps in the 2020/21 academic year?

The Chemistry Discipline at Cuyamaca College is continuing work to develop and enhance existing parts of a comprehensive network of student support for STEM students. This work is being carried out with the goal of providing significant assistance to disproportionately impacted students. The work has been bolstered by the award of a Department of Education Title III HSI-STEM grant entitled STEM Guided Pathways and Transformational Teaching Practices. The grant was awarded in October of 2016 and it has an annual budget of $1.2 million for a 5-year period. This grant project addresses key challenges as well as opportunities for innovation and improvement. There is a focus on building and supporting a STEM Guided Pathway in the Science & Engineering Departments, the creation and development of programs and interventions intended to become sustainable, the development of curriculum in the sciences that will serve to increase retention and success, and enhanced collaboration with partners on campus while creating additional STEM transfer degrees. Student support structures offered via the grant project include faculty mentorship and 2-week STEM Summer Boot Camp for STEM cohort students, dedicated STEM academic advising, science games in the STEM Center (e.g. Periodic Table bingo, chemistry relay team game, chemistry card game & biology jeopardy), quiet study areas, a science & engineering tutoring area, study skills workshops and course-specific workshops for students in our entry-level chemistry and biology classes. We will also continue to host a variety of panel discussions, presentations and events related to STEM careers and summer research opportunities for students.

Faculty training related to the grant goals is ongoing and has included reading apprenticeship philosophy and techniques, active learning techniques in science, and faculty mentorship training. In the Spring of 2019, a day-long, grant-sponsored STEM Teaching & Learning Institute was presented to interested faculty in all STEM disciplines in an effort to incentivize faculty to adopt new and innovative teaching strategies. Additional faculty training was held during Staff Development workshops in the Spring and Fall of 2019. Moreover, grant funds were used to convert Room F-606 into an active learning classroom to facilitate the use of these modern teaching methods.

Q17 How do these steps inform the long-term department or discipline goals that you are setting in this annual program review?

With the help of the Institute for Evidence-Based Change (IEBC) and the campus Institutional Effectiveness Division, we are collecting data to measure the effectiveness of our student support interventions. Ongoing data reports will be used to shape our support interventions over the long-term to best increase success and retention among STEM students.

Q18 In what way does your department/discipline work across instruction and student services to advance the college's student success & equity goals?

We have been working in collaboration with faculty from biology, physics and engineering to design and implement various aspects of our student support network and to provide training for faculty (e.g. active-learning workshops, reading apprenticeship).

With resources secured through grant funding, we have worked with student services to provide dedicated STEM counselors. In addition, we've shared our various STEM course sequence cards with the counseling office, and have provided counseling staff with resources to run workshops for students on how to apply for Associates Degrees in STEM. This particular workshop was held twice during the Fall 2019 semester and is planned again for Spring 2020.

The Veterans Services Office at Cuyamaca College held a workshop in the STEM Center during the Fall 2019 semester entitled "Veterans in Stem: A Workshop for VA benefits and STEM Majors." The workshop provided veteran students with information about University transfer priority, STEM extensions for Education Benefit users, and vocational rehabilitation.

Q19 OPTIONAL: If you would like to attach any charts or additional documentation (aside from the program review report prepared by the IESE Office), please upload it using the button below.

Charts for Chemistry Annual Update 2019-2020.docx (24.9KB)

Page 5: II. Assessment and Student Achievement

Q20 Do you offer distance education (online) courses? **No**

Page 6: II. Assessment and Student Achievement

Q21 Are there differences in success rates for distance education (online) versus in-person sections? **Respondent skipped this question**

Q22 If there are differences in success rates for distance education (online) versus in-person sections, what will the discipline or department do to address theses disparities? **Respondent skipped this question**

Q23 What mechanisms are in place to ensure regular and effective contact within online courses across the discipline or department? **Respondent skipped this question**

Page 7: III. Previous Goals: Update (If Applicable)

Q24 Would you like to provide an update for your previous program review goal(s)? **Yes**

Page 8: III. Previous Goals: Update (If Applicable) continued

Q25 Previous Goal 1:

Success in STEM Presentations/Workshops/Interventions

Q26 Which College Strategic Goal does this department goal most directly support? **Guided Student Pathways**

Q27 Please describe how this goal advances the college strategic goal identified above.

This activity serves as a series of interventions to promote increased STEM participation and academic success, and is part of our Guided Pathways Project funded by the U.S. Department of Education.

Q28 Goal Status **In Progress - will carry this goal forward into next year**

Page 9: III. Previous Goals: Update (If Applicable) continued

Q29 Please describe the results or explain the reason for deletion/completion of the goal: **Respondent skipped this question**

Q30 Do you have another goal to update? **Respondent skipped this question**

Page 10: III. Previous Goals: Update (If Applicable) continued

Q31 Please describe action steps for the year:

Many of the action steps are detailed in Section II.B of this report and include Chem 102 and Chem 120 Workshops, science games in the STEM Center, STEM Counseling, Faculty Mentoring, as well as presentations related to scholarships, research opportunities, STEM careers and internships.

Q32 How will this goal be evaluated?

With the help of the campus Institutional Effectiveness Division, we are collecting data to assess the effectiveness of our student support activities. We will use these results to help shape our STEM presentations, workshops and other interventions. See Goal 2 in this section of the report for more details.

Q33 Do you have another goal to update? **Yes**

Page 11: III. Previous Goals: Update (If Applicable) continued

Q34 Previous Goal 2:

Measurement of Effectiveness of the STEM Guided Pathways Project through Data Collection and Analysis.

Q35 Which College Strategic Goal does this department goal most directly support?

Guided Student Pathways

Q36 Please describe how this goal advances the college strategic goal identified above.

A host of new and unique student support activities and interventions have been implemented since the start of the HSI-STEM grant project. The grant work is designed to support guided pathways for STEM students with a focus on increasing the retention and success of first-entering students, low-income students, first-generation college students and disproportionately impacted students. Collecting data related to the effectiveness of these types of interventions will provide information that can help us continually improve upon them.

Q37 Goal Status

In Progress-will carry this goal forward into next year

Page 12: III. Previous Goals: Update (If Applicable) continued

Q38 Please describe the results or explain the reason for deletion/completion of the goal:

Respondent skipped this question

Q39 Do you have another goal to update?

Respondent skipped this question

Page 13: III. Previous Goals: Update (If Applicable) continued

Q40 Please describe action steps for the year:

Working with the Institute for Evidence-Based Change (IEBC) and the campus Institutional Effectiveness Division, STEM majors and cohort student data is being collected and studied to gain an understanding of Cuyamaca STEM student population demographics, implementation of the various interventions, including STEM Counseling, support courses, Faculty Mentorship, STEM cohort science identity, student success, student retention and time to transfer, among others. Early results provided by Institutional Effectiveness are promising. These results compare the success and retention of our STEM cohort students versus STEM students in general with demographics similar to our cohort students. While the majority of the support services mentioned above are available to all of our STEM students, the cohort students are required to take advantage of them and so tracking their progress can give us some indication of the effectiveness of these interventions. The sample size is still pretty small thus far, but the early data shows that 100% of our cohort students persisted in College versus only 74% for the comparison group over the time-period from Fall 2017 to Spring 2019. The class retention rate for cohort students was 97.7% versus 88% for the comparison group. The average GPA of the cohort students is 3.05 versus 2.76 for the comparison group. Data like this will continue to be collected and analyzed.

Q41 How will this goal be evaluated?

The Chemistry Department and other STEM disciplines involved in the grant project will use the collected data to assess the activities that we have carried out so far and to improve upon them where necessary. We will also use this information to help us decide on new types of student support interventions that could be implemented.

Q42 Do you have another goal to update?

No

Page 14: III. Previous Goals: Update (If Applicable) continued

Q43 Previous Goal 3:	**Respondent skipped this question**
Q44 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q45 Please describe how this goal advances the college strategic goal identified above.	**Respondent skipped this question**
Q46 Goal Status	**Respondent skipped this question**

Page 15: III. Previous Goals: Update (If Applicable) continued

Q47 Please describe the results or explain the reason for deletion/completion of the goal:	**Respondent skipped this question**
Q48 Do you have another goal to update?	**Respondent skipped this question**

Page 16: III. Previous Goals: Update (If Applicable) continued

Q49 Please describe action steps for the year:	**Respondent skipped this question**
Q50 How will this goal be evaluated?	**Respondent skipped this question**
Q51 Do you have another goal to update?	**Respondent skipped this question**

Page 17: III. Previous Goals: Update (If Applicable) continued

Q52 Previous Goal 4:	**Respondent skipped this question**
Q53 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q54 Please describe how this goal advances the college strategic goal identified above.	**Respondent skipped this question**
Q55 Goal Status	**Respondent skipped this question**

Page 18: III. Previous Goals: Update (If Applicable) continued

Q56 Please describe the results or explain the reason for deletion/completion of the goal: **Respondent skipped this question**

Q57 Do you have another goal to update? **Respondent skipped this question**

Page 19: III. Previous Goals: Update (If Applicable) continued

Q58 Please describe action steps for the year: **Respondent skipped this question**

Q59 How will this goal be evaluated? **Respondent skipped this question**

Q60 Do you have another goal to update? **Respondent skipped this question**

Page 20: III. Previous Goals: Update (If Applicable) continued

Q61 Previous Goal 5: **Respondent skipped this question**

Q62 Which College Strategic Goal does this department goal most directly support? **Respondent skipped this question**

Q63 Please describe how this goal advances the college strategic goal identified above. **Respondent skipped this question**

Q64 Goal Status **Respondent skipped this question**

Page 21: Copy of page: III. Previous Goals: Update (If Applicable) continued

Q65 Please describe the results or explain the reason for deletion/completion of the goal: **Respondent skipped this question**

Page 22: Copy of page: III. Previous Goals: Update (If Applicable) continued

Q66 Please describe action steps for the year: **Respondent skipped this question**

Q67 How will this goal be evaluated? **Respondent skipped this question**

Page 23: IV. New Goals (If Applicable)

Q68 Would you like to propose any new goal(s)?	**No**

Page 24: IV. New Goals (If Applicable) continued

Q69 New Goal 1:	**Respondent skipped this question**
Q70 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q71 Please describe how this goal advances the college strategic goal(s) identified above.	**Respondent skipped this question**
Q72 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 data:	**Respondent skipped this question**
Q73 Action steps for this year:	**Respondent skipped this question**
Q74 How will this goal be evaluated?	**Respondent skipped this question**
Q75 Do you have another new goal?	**Respondent skipped this question**

Page 25: IV. New Goals (If Applicable) continued

Q76 New Goal 2:	**Respondent skipped this question**
Q77 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q78 Please describe how this goal advances the college strategic goal(s) identified above.	**Respondent skipped this question**
Q79 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 data:	**Respondent skipped this question**
Q80 Action steps for this year:	**Respondent skipped this question**

Q81 How will this goal be evaluated?	**Respondent skipped this question**
Q82 Do you have another new goal?	**Respondent skipped this question**

Page 26: IV. New Goals (If Applicable) continued

Q83 New Goal 3:	**Respondent skipped this question**
Q84 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q85 Please describe how this goal advances the college strategic goal(s) identified above.	**Respondent skipped this question**
Q86 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 data:	**Respondent skipped this question**
Q87 Action steps for this year:	**Respondent skipped this question**
Q88 How will this goal be evaluated?	**Respondent skipped this question**
Q89 Do you have another new goal?	**Respondent skipped this question**

Page 27: IV. New Goals (If Applicable) continued

Q90 New Goal 4:	**Respondent skipped this question**
Q91 Which College Strategic Goal does this department goal most directly support?	**Respondent skipped this question**
Q92 Please describe how this goal advances the college strategic goal(s) identified above.	**Respondent skipped this question**
Q93 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 data:	**Respondent skipped this question**

Q94 Action steps for this year:	**Respondent skipped this question**
Q95 How will this goal be evaluated?	**Respondent skipped this question**

Page 28: V. Resources Needed to Fully Achieve Goal(s)

Q96 Is the program requesting resources this year to achieve this program goal(s)? (Faculty Resource Needs, Classified Staff Resource Needs, Technology Resource Needs, Supplies/Equipment Resource Needs, Facilities Resource Needs or Other Resource Needs)	**Yes**

Page 29: VI. Faculty Resource Needs

Q97 Are you requesting one or more Faculty Positions to achieve this program goal(s)?	**No**

Page 31: VIII. Classified Staff Resource Needs

Q98 Are you requesting one or more Classified Positions to achieve this goal?	**Yes**

Page 33: X. Technology Resource Needs

Q99 Are you requesting technology resources to achieve this goal?	**Yes**

Page 35: XIV. Supplies/Equipment Resource Needs

Q100 Are you requesting supplies and/or equipment resources to achieve this goal?	**No**

Page 37: XVI. Facilities Resource Needs

Q101 Are you requesting facilities resources to achieve this goal(s)?	**No**

Page 39: Final Check

Q102 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."	**I am ready to submit my program review**