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| **Berkeley City College’s mission is to provide our diverse community with****educational opportunities, promote student success, and to transform lives.** |

**Introduction and Directions**

Berkeley City College (BCC), in conjunction with the Peralta community College District, has an institutional effectiveness process which consists of the following components: a District-wide Strategic Plan which is updated every six years; Comprehensive Program Reviews (CPRs) which are completed every three years; and Annual Program Updates (APUs) which are completed in non-program review years.

**TIMELINE**

Annual Program Update (APU) 2022-2023 timeline has been developed for each program and services to guide through the semester. Please review and work with your Deans, Managers, Department Chairs and/or Supervisors to complete this APU.

For BCC, 2022-2023 marks a critically important year as the college is in the process of revising its Educational Master Plan (EMP) for the next 5 years (2024-2028). This college EMP process will inform the District with their planning for their Strategic Plan. This year’s APU will take an especially important role for the EMP process, carrying your analysis, planning and strategies to support our students success, retention, and equitable completion.

The APU is intended to primarily focus upon planning for the subsequent year based on the institutional priorities. While developing the College’s EMP for the next 5 years, the college and the district focused on the [Vision for Success](https://www.cccco.edu/-/media/CCCCO-Website/Files/Communications/101920-ccc-vision-onepager-accessible-final.pdf) identified by the California Community College Chancellor’s office as well as [Student Centered Funding Formula (SCFF)](https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/College-Finance-and-Facilities-Planning/Student-Centered-Funding-Formula) that clearly delineate the categorized outcomes that the Colleges should be focusing. Please use these foci as your reference to prioritize your department and other goals.

**RESOURCE REQUEST**

In this process of making continuous quality improvement, there is an opportunity for each program, student services, and department to request resources that support achieving the stated goals. The APU process directly leads to the institutional resource allocation process and budget planning facilitated by the Institutional Planning and Allocation of Resources (IPAR) Committee for the following academic year (2023-24). The process for this can be found here ([2022-23 APU Timeline](https://drive.google.com/file/d/1xiKMI84yGCETRjx-cNfQRClCAe3Cu63X/view?usp=sharing)). This is an opportunity for each department to request resources that will support your department goals and set outcomes.

**TECHNOLOGY REQUEST**

Finally, for the resource request section, please connect with your Deans, managers, and supervisors regarding your technology needs so that you can be informed about the equipment that is addressed in the BCC Technology Refresh Plan. If your requests are covered in the Refresh Plan, you do not need to request them in this APU.

If you have questions regarding other material in the Annual Program Update, please contact your Dean or Manager. If you have questions regarding data, please contact Dr. Phoumy Sayavong, Senior Researcher and Planning Analyst (psayavong@peralta.edu).

**Please email the completed Annual Program Update to your Dean by November 30, 2022.**

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| **College Profile**  |
| [Click here to view the Berkeley City College Student Demographics Dashboard](https://app.powerbi.com/view?r=eyJrIjoiOWQ0NDc2M2YtZDUyMi00MjdkLTljZTktOWI3MzQyYzdlNDc0IiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9). This 2-page dashboard will provide data on the demographics of our student body from the past two years such as headcount, ethnicity, enrollment status, age group, educational goals, and majors.  |

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| **College Outcomes** | **2018-2019** | **2019-20** | **2020-21** | **2021-22** |
| Full Time Equivalent Students (FTES) | 4,161 | 3,931 | 3,622 | 3,259 |
| Productivity (Avg. Goal = 17.5) | 13 | 13.2 | 13 | 10.9 |
| Success Rate (%) | 69% | 77% | 75%\* | 70%\* |
| Degrees + Certificates Awarded (#) | 948 | 1,109 | 1,027 | 960 |

*\*Excludes “EW” grades*

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**To view prior Program Reviews,** [**click here**](https://drive.google.com/drive/folders/1cJTL936yJGJVKo5P4OGOf2qzsMu3gEqM?usp=share_link)**. To view prior Annual Program Updates,** [**click here**](https://drive.google.com/drive/folders/1NcFLqqL0DhYtaKQ6ntaejh1z7qtGao1F?usp=sharing)**.**

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| **1a. Department Description** Please verify the mission statement for your department. If your department has not created a mission statement, provide details on how your department supports and contributes to the College’s mission. |
| The goal of the Biology Program at Berkeley City College is to provide students with the knowledge and skills they will need in order to perform successfully in the next stage of their careers, whether that stage involves transfer to a 4-year institution, entering a professional program of study such as nursing, or entering the workplace in a specialized field such as biotechnology. Another important goal is to build steppingstones to science in order to make careers in science accessible to students who have little or no background in science and math but who have been excited by the news and the potential of interesting jobs in biotechnology and other science related fields.      |
| **Name(s) of member(s) completing this APU** | **Department**  | **Completion Date** |
| Pieter de Haan | Science: Biology | 11/25/22 |
| **List faculty names with assignments in fall 2022.** |
| Full Time | Part Time |
| Barbara DesRochers Ph.D. (Biology and Biotechnology)Pieter de Haan Ph.D. (Biology)Randy Yang Ph.D. (Biology and Biotechnology)Erika Yeh Ph.D. (Biology and Biotechnology)Bio technician (Vacant) | Doug Schmidt Ph.D. (Biology)Linda McPheron Ph.D. (Biology)Julia Chang Ph.D. (Biology)Lili Banihashemi MS. (Biology)Scott Blitch MS. (Biology)Jacob Bertrand Ph.D. (Biology)  |
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| **1b. Department Priorities & Goals** |
| Based on the [Vision for Success](https://www.cccco.edu/-/media/CCCCO-Website/Files/Communications/101920-ccc-vision-onepager-accessible-final.pdf) and [SCFF](https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/College-Finance-and-Facilities-Planning/Student-Centered-Funding-Formula), and your department mission, what are your department’s priorities and goals for 2022-23? |
| The Science department is looking for OER textbooks for the students. BIOL0-1A and 1B are using OPENSTAX books, the BIOL-10 is slowly moving to the OPENSTAX book. Organic Chemistry is also looking for this opportunity for the students.We are also working on more AS-T degrees. Environmental Sciences will be launched in the Fall of 2023. Geography AD-T will probably launch in the Spring of 2024 together with the Physics AS-T degree. We implemented special learning techniques to close the equity gaps in our biology courses. |

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| **2.** [**Student Equity, Success, & Completion**](https://app.powerbi.com/view?r=eyJrIjoiNjk3NDJjOTItNzI5MS00MDhjLWJhN2EtZjcxNzU4OTBiZDBjIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d) |
| **Using the data dashboards provided below, review and reflect upon the outcome trends for your department. Please also review overall BCC’s data linked here.** For assistance with data dashboards, contact Phoumy Sayavong at psayavong@peralta.edu |
| **How are students doing in success and completion in your department, compared to the BCC overall success and completion rate? What are the group of students that need more attention to achieve goals?** |
| For the Biology we need to include the Nursing students too.We see a relative equal success with the following groups over the last 3 years: African Americans, Hispanics, and Asians. The white population is getting smaller. We see the overall success also college wide, except we see an increasing success with the Asian population in Biology. |
| **What do you see as key factors in your department that contributed to positive success and completion rate?** |
| In the major courses we are using teaching techniques we learned at the FLOSS workshops to decrease the equity gap. It seems to work! |
| **What are some improvements your department can make? Identify strategies.**  |
| We always can improve our strategies by fine tuning our teaching techniques. |

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| **3a.** [**Enrollment Trend and Productivity Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiNWJlOWZmYTEtNTY0MC00MDhkLWE5OTAtYmJjZjIxNzJiNWViIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d)\*Note that completion and retention rates are presented with the inclusion and exclusion of excused withdrawals (EW) and military withdrawals.  |
| **What were the enrollment trends in your department in the past three years?**  |
| For Biology the total enrollment declined by 50 students from 908 students in 2018-2019 to 858 in 2021-2022 a decline of 5.5%. This is a smaller decline than the whole College is witnessing. |
| **What strategies would you recommend to increase student enrollment in your department?** |
| I would like to see increased advertisements our college more.Similar we did a few years ago on busses and Bart stations |
| Community Colleges are funded based on the [Student Centered Funding Formula (“SCFF”)](https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/College-Finance-and-Facilities-Planning/Student-Centered-Funding-Formula) which is comprised of the following allocations:

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| **Student Centered Funding Formula: Focus and Priorities** |
| **% Of Allocation** | **Categories**  |
| 70%Base Allocation: FTES (Enrollment) | * Credit FTES
* NonCredit FTES
* Special Admits (Dual Enrollment, etc.)
 |
| 20%Supplemental Allocation | * Pell Grant
* AB 540
* Adult School
* Promise Grants
 |
| 10%Student Success Allocation | * Associate Degrees
* ADTs
* 9 or more CE units
* Transfer
* Transfer level Math and English in the first year
 |

 |
| **List the department’s progress and reflection on what is being done to maintain or increase the base level of full-time equivalent students (FTES = 12 units). Please describe retention (i.e., remain enrolled for a full semester) and persistence (i.e., enroll in consecutive semesters) efforts.**  |
| We are looking in Summer dual enrollment possibilities. We are also looking at NonCredit courses (See Biotechnology).  |
| **Please describe your department’s efforts in identifying Pell Grant recipients, College Promise Grant recipients, Adult Education, and AB 540 students. What processes are in place to accurately report these students each semester?**

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| **College Outcomes** | **2018-2019** | **2019-2020** | **2020-21** | **2021-22** |
| Full Time Equivalent Students (FTES) | 4,161 | 3,931 | 3,622 | 3,259 |
| Pell Grant Recipients | 2,387 | 2,281 | 2,181 | 1,826 |
| College Promise Grant Recipients | 4,373 | 4,143 | 4,011 | 3,500 |
| AB 540 Students  | 74 | 51 | 22 | 69 |

 |
| N/A I don’t understand this process. Who is reporting to whom? |

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| **3b.** [**Course Completion and Retention Rates Dashboard – Instruction**](https://app.powerbi.com/view?r=eyJrIjoiNjc2MDhiNTEtNTJhZi00MDM0LTk5NDItNTRiY2EzMGI1NTZiIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d)\*Note that completion and retention rates are presented with the inclusion and exclusion of excused withdrawals (EW) and military withdrawals. If you need more guidance with this item, click here for additional support.[Click here for additional guidance for how to view and use equity data](https://drive.google.com/file/d/14C9cxxXt_YAzK_LJEVPSD_fJwwcWUVps/view?usp=sharing). If you would like to view BCC’s Equity Plan, [click here](https://drive.google.com/file/d/1CelN9o5mrlTVVx3ibqDDdj11PcATAjfM/view?usp=sharing). |
| **On page 3 of the “Course Completion and Retention Rates by Subject” dashboard, what are the completion and retention trends by gender, age, ethnicity in your department?**  |
| Gender: In Biology there are about 50% more females enrolled than males. The completion rate for both sexes is slightly decreasing, however the difference between Female and Male is diminishing e.g., 87.9% Males 84.4% Females in 2019-2020 to 71.6% Males and 79.9% Females in 2021-2022.Age: Over the last three years the 16-18 years old group showed an increase in completion and retention. The other age groups fluctuated.Ethnicity: A slight decrease in completion of the Asian population is seen from 90% to 85.9% over the last 3 years. Also, for the African American population we see a slight decrease from 79.1% to 72.5% for completion. For the Hispanic population we see a slight increase in completion from 74% to 75.7%. The white population decreased drastically in completion rate over the last 3 years from 93.9% to 79.1%. |
| **When the data are disaggregated by student ethnic groups, gender, and age, how do you plan to address them over the next year?** |
| After fine tuning of our equity reducing learning techniques, we are planning workshops in our department. |
| **What population(s) showed outcomes gains in your discipline(s) and which need more support?**Disaggregate the data and outcomes as far down as a possible then ask: * What trends do you notice when examining course success rates for student populations by ethnicity? Which factors do you believe have the greatest impact (positive or negative) and cause variation between student course success rates in your Program? Describe some specific methods your department is planning or implementing to address these equity gaps. How will you evaluate the efficacy of these interventions?
* How has pivoting to online instruction contributed to potential reductions in student success? Provide some specific examples of practices that faculty in your department have found ineffective in the online environment.

Please review the [video from the RP Group](https://www.youtube.com/watch?v=T4wQVq5a71U&feature=youtu.be) acknowledging the interrogation De Anza Community College committed to in their analysis of course completion and success rate. |
| The labs were a disaster during the pandemic. Biotech and Biol-1A produced home kits for students to do certain labs at home. This was successful. Coming back to in person labs it became clear that we needed to put a lot of time into instructing certain lab techniques. We are going back to in person teaching, especially with the lab courses. |
| **How do these outcome trends in your department compare to the college average?**  |
| The Hispanic group college wide shows a slight decrease in completion, In Biology we see a slight increase. The African American population college wide shows much smaller completion rate than we witness in Biology. Similar trend is seen in the Asian population. We also see a decline in the White population but not as drastically as in Biology.  |
| **How will these outcome trends you identified in this section affect your department goals and plans for the next year and what are your strategies to shift to move the trend towards a positive direction?** |
| We are looking for a balance between online and in person classes. Eventually, alss lab classes will be back in the classroom.  |

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| **3c.** [**Degrees and Certificates Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiZjU2M2M5MzItOTcwZi00Y2U1LWJmODUtYTc0YjlhZGI2ZDhjIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSectionde32556e136b0a8caccd) |
| **On page 1 of the “Degrees and Certificate Awards Trends” Dashboard, what are the award trends for your department (e.g., overall, by gender, age, and ethnicity)?**  |
| The overall trend of the last three years is 14 graduates per year. Most graduates are between 19-24 years old. More Asian, African Americans, and Hispanics are graduating with a BIO-AST degree. The white population is minimal. More female students than male students received a degree in Biology. |
| **On page 4, what population(s) award trends showed gains in your program area and which populations need more support?**  |
| Gains are seen in the CTE areas, Veterans, and Adult Education. Decline in the Low-Income area. This will probably increase for this year when the college is free for the spring again. We are also getting more courses in our department which are using free text books. |

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| **3d.** [**Transfer Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiZmJlODJiODktZjM0OC00ZWIwLWIzNDMtN2Y1Yzc3ZGFhNGRhIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9) |
| **This dashboard does not provide data by subject. Reflect on what you can do to affect student transfer. How may your department help to support BCC student transfer?** (e.g., serve on panels, strengthen GP in your dept, change curriculum, increase number of AD-Ts, etc.) |
| We worked to increase the increase the number of AD-T degrees in our department: Right now, we have the following AD-T degrees launched in Curricunet: Environmental Science, Geography, and Physics. We are participating in the college wide Guided Pathway Development. We brainstormed to design the student experience within BCC’s Academic and Career Communities. |

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| **3e. Curriculum based on Guided Pathways** |
| View the department’s curriculum through the lens of student equity outcomes.  |
| 1. **What intentional effort is your department making to create and present clear pathways for students through curriculum?**
 |
| With the increase in our AS-T and AD-T programs we make it for the students easier to follow pathways. |
| 1. **What are your plans for revising and/or creating new pathways supported by labor market information (LMI) and student demands?** Using [Vision for Success](https://www.cccco.edu/-/media/CCCCO-Website/Files/Communications/101920-ccc-vision-onepager-accessible-final.pdf) and [SCFF](https://www.cccco.edu/About-Us/Chancellors-Office/Divisions/College-Finance-and-Facilities-Planning/Student-Centered-Funding-Formula) focus, please indicate rationale and how the plans directly support student success and equitable completion.
 |
| With the launch of the Environmental Science and the Geography program we heard from the students. A lot of students these days would love to study more in the environmental sciences and remote sensing areas. |

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| **4. Dual Enrollment**  |
| **As continued decline in overall enrollment for college going population, it is important for us to look at who will be coming to BCC in the next 5 years. Reviewing the data provide here, what strategies would your department employ to address bringing more students to BCC?** |
| From this data we can see a decline in High School students. We as a department should go into the high schools to talk about the benefits of taking science courses at BCC. |

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| **5. Facility Utilization Needs**  |
| **Assess your facilities utilization (including labs, support for online learning, and other spaces) and for next year, indicate if the space is sufficient or not. If not, what are the needs and why? Work with your Dean to check on your needs prior to responding to this section.** |
| We need more space when we return to in person teaching. Especially Lab space is needed. We are using all Lab spaces in our building. Lectures are held in different lecture rooms. The tiered classroom 431 is always used for double sections. We need more of these tiered classrooms! Lunch seminars are also held in the tiered classroom. Evening seminars utilize the auditorium.We need a Biotech Center and a dedicated Biotech lab that needs to be sterile to grow stem cells. We have plans for the expansion to the 4th floor to increase dedicated labs for Physics, Geography, and Geology.  |

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| **6. Assessment** |
| Berkeley City College is committed to a culture of assessment to improve instruction, services, and institutional planning.  Findings from SLO, PLO, ALO assessments, and program review data are used to direct resources for areas that are institutional priorities that are articulated in the Educational Master Plan and BCC Strategic Plan.  Due to the critical role that course and program assessments play in our institutional planning and to be in compliance with the Accreditation requirements, assessments must be completed to qualify for the APU resource allocation requests. |
| **6a. What action plans did your department identify upon the assessment of each SLOs and/or PLOs? For courses with multiple sections in the program, please list the main action plans.   Please be as detailed as possible.** |
| BIOL-AST Degree based on BIOL-1A and BIOL-1B Outcomes:1. Demonstrate skills in the scientific methods used in the biological sciences.* Action Plan: (Students have difficulty understanding simple concepts of observation, hypothesis and test. Given an assignment to write down an observation, and hypothesis and test, student will routinely give a hypothesis instead of an observation.) Assignments / exercises to specifically require students to submit Observation / hypothesis / tests are implemented.

2. Explain core concepts of biology: chemical makeup of biomolecules and their importance in the structure and function of the cell; functions of organelles, cellular processing, including respiration, photosynthesis, mitosis, meiosis, transcription/translation, and fundamental biological concepts in classical and molecular genetics, and molecular biology; classification, life cycles, physiology, anatomy and development of animals, Plants, Fungi, Protista and prokaryotes.* Action Plans: More questions on bonding patterns are implemented. The lab portions dealing with meiosis visualization have increased. This is combined with more practice problems to focus on crucial aspects of inheritance. Specifically, comparing independent assortment, and homologous recombination, and how distance leads to increased rates of homologous recombination and non-parental phenotypes. Flash cards to drill tissue identification are implemented. Study guides are updated.

3. Explain the core concepts of evolution and ecology.* Action plan: a comparison is made with and without the use of Courselets.org. Courselets.org proved to be working to overcome the learning gaps!

BIOL-10: |
| **6b. Describe the department’s progress on the Actions Plans identified for course Student Learning Outcomes (SLOs). If your department offers a degree or certificate, please describe the department’s progress on the Action Plans for Program Learning Outcomes (PLOs).** |
| BIOL-AST Degree based on BIOL-1A and BIOL-1B Outcomes:1. Demonstrate skills in the scientific methods used in the biological sciences.* Action Plan: (Students have difficulty understanding simple concepts of observation, hypothesis and test. Given an assignment to write down an observation, and hypothesis and test, student will routinely give a hypothesis instead of an observation.) Assignments / exercises to specifically require students to submit Observation / hypothesis / tests are implemented.

2. Explain core concepts of biology: chemical makeup of biomolecules and their importance in the structure and function of the cell; functions of organelles, cellular processing, including respiration, photosynthesis, mitosis, meiosis, transcription/translation, and fundamental biological concepts in classical and molecular genetics, and molecular biology; classification, life cycles, physiology, anatomy and development of animals, Plants, Fungi, Protista and prokaryotes.* Action Plans: More questions on bonding patterns are implemented. The lab portions dealing with meiosis visualization have increased. This is combined with more practice problems to focus on crucial aspects of inheritance. Specifically, comparing independent assortment, and homologous recombination, and how distance leads to increased rates of homologous recombination and non-parental phenotypes. Flash cards to drill tissue identification are implemented. Study guides are updated.

3. Explain the core concepts of evolution and ecology.* Action plan: a comparison is made with and without the use of Courselets.org. Courselets.org proved to be working to overcome the learning gaps!
 |
| **6c. Describe the status of SLO and PLO completion in Rounds 4 and 5 of the Assessment Cycle. Identify the percent of completion. Briefly describe what needs to be done to reach 100% completion. Identify issues or concerns that may prevent your department from completing assessments of SLOs and/or PLOs.**  |
| In round 4 all the courses were assessed. We are now in the fifth round and most courses are getting assessed. The Program Learning Outcomes are being assessed now. |
| **6d. Besides your syllabi, where are the program level outcomes published? If on a website, please specify the URL.** |
| The Program level outcomes are listed on the Syllabi, Canvas page (e.g. <https://peralta.instructure.com/courses/44552/assignments/syllabus>) and of course in curricunet (e.g. <https://peralta.curricunet.com/Form/Program/Index/693>). |

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| **7. Engagement** |
| **Discuss how faculty and classified staff have engaged in institutional efforts such as committees, presentations, and departmental activities. Please list the committees that full-time faculty participate in.** |
| Science Faculty are engaged in the following committees:Academic SenateAssessment CommitteeChair CommitteeDepartment MeetingsFacility CommitteeGuided Pathway CommitteeHiring CommitteesRoundtableTech Committee |
| **Discuss how faculty and staff have engaged in community activities, partnerships and/or collaborations.** |
| The faculty reported during the department meetings about the different committees. |
| **Discuss how adjunct faculty members are included in departmental training, discussions, and decision-making.** |
| If adjunct faculty are present at the department meetings, they are included in department training, discussions, and decision making. Julia Chang will take on the assessment liaison job for our department. |
| 1. **Discuss the relationship and engagement with other support services, programs, departments, or administrative units and how these relationships/collaboration support meeting your departmental goals.**
 |
| The Science department is a large department with many different disciplines (Astronomy, Biology, Biotechnology, Chemistry, Geography, Geology, Physics, and Physical Sciences) that use the tutor services in the LRC. Some faculty hold their office hours in this space for a more relaxed atmosphere. |
| **Are there areas where you feel that your department can benefit more by increasing collaboration and partnership? How?** |
| We are in contact with Multimedia Arts to promote our programs (advertising). |

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| **8. Prioritized Resource Requests** |
| **During the 2021-22 Comprehensive Program Review process, you have provided your resource requests which went through the IPAR process.  In this section, include resource requests from last year that are still needed and/or new resources that have emerged.  Provide justifications. If there are no resources requested, leave the boxes blank.** |

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| --- | --- | --- |
| **Resource Category** | **Description/Justification** | **Estimated Cost** |
| **Personnel** |  |  |
| Classified Staff |  |  |
| Student Worker |  |  |
| Part Time Faculty |  |  |
| **Professional Development** |
| Department wide PD needed |  |  |
| Personal/Individual PD needed |  |  |
| **Supplies** |
| Software (for whom or role?) |  |  |
| Books, Magazines, and/or Periodicals |  |  |
| Instructional Supplies |  |  |
| Non-Instructional Supplies |  |  |
| **Technology & Equipment**Description/Justification (*Before you list your technology request,* [*click here to view the latest Technology Refresh Plan*](https://drive.google.com/file/d/14FnMslW2ebA23iZl8NlAzk_2OjjGeOu8/view?usp=sharing) *to verify whether it has already included.)* |
| New |  |  |
| Replacement |  |  |
| **Facilities** |
| Classrooms |  |  |
| Offices |  |  |
| Labs | Change the existing projectors in labs 513, 514, 518, 521, and 522, with LED projectors. They are much cheaper in the long run, because the bulbs, if they fail, are very costly. Also, laptops should replace desktops, because the desktops block the view to the screen and whiteboard.  | $20,000 |
| Other |  |  |
| **Library** |
| Library materials (including streamline media needs) |  |  |
| Library collections |  |  |
| OER |  |  |
| **Other** |  |  |
| OTHER Description |  |  |

**Thank you for your time and effort in completing the Annual Program Update!**

**Please email the completed Program Review to your Dean by November 30, 2022**