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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**

The Annual Program Update (APU) for 2023-2024 marks its 3rd year in the current cycle.

The APU 2023-2024 timeline has been developed for each program and services to guide through the semester. Please review and work with your Deans, Managers, and/or Supervisors to complete this APU.

During 2022-2023, BCC has completed its Educational Master Plan 2024-2028 where we can base our APU review and analysis on the 5 strategies for success and 3 indicators of success that will lead us to achieve our goal of equitable student completion.



The APU is intended to primarily focus upon planning for the subsequent year based on the assessment of the prior year and determine where and how we can improve to support the goal of equitable student completion. It is important to be reminded that the EMP incorporated the State Chancellor's [Vision for Success](https://www.cccco.edu/-/media/CCCCO-Website/Files/Communications/101920-ccc-vision-onepager-accessible-final.pdf) 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) in our five year roadmap and our APU process. 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 ([2023-24 APU Timeline](https://drive.google.com/file/d/1xiKMI84yGCETRjx-cNfQRClCAe3Cu63X/view?usp=sharing)). This is an opportunity for each department to request resources in Fund 01 (General Funds) to IPAR that will support your department goals and set outcomes that support BCC’s goal of Equitable Student Completion.

**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 already 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, 2023.**

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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** | **2019-20** | **2020-21** | **2021-22** | **2022-23** |
| Full Time Equivalent Students (FTES) | 3,931 | 3,622 | 3,259 | 4,024 |
| Productivity (Avg. Goal = 17.5) | 13.2 | 13 | 10.9 | 13.9 |
| Success Rate (%) | 77% | 75%\* | 70%\* | 68%\* |
| Degrees + Certificates Awarded (#) | 1,109 | 1,027 | 960 | 855 |

*\*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 Mission** 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](https://www.berkeleycitycollege.edu/bccpub/about-bcc/). |
| Our mission in the Berkeley City College Mathematics Department is to ensure that every student graduates, transfers or progresses into a career as a disciplined, literate and ethical individual, proficient at using mathematics and quantitative reasoning appropriately to analyze and solve complex problems in the real world.Berkeley City College offers an extensive list of math courses in a variety of formats and times throughout the day to help fit the life and learning styles of all our students.We are very pleased to offer the [Associate in Science Degree for Transfer (AS-T)](https://www.berkeleycitycollege.edu/math/files/2020/06/BCC-2020-2021-MATHMATICS-AS-T.pdf). Upon completion of the AS-T in mathematics, students may transfer to California State University (CSU) system. Completion of the sequence of math courses in the AS-T satisfies the math requirements for transfer to the University of California system (UC) into the Mathematics major |
| **Name(s) of member(s) completing this APU** | **Department**  | **Completion Date** |
| Claudia Abadia | Math | November 26, 2023 |
| **List faculty names with assignments in fall 2023.** |
| Full Time | Part Time |
| Claudia AbadiaShawn McDougalMichael OrkinKelly PernellMark RinkerRick WingDmitriy Zhiv | Naima AzguiLloyd BlandElisabeth ChemouniArash FarahmandLatha GopinathFan Ching KuoYevgeniy RussakovskiiGaston Sanchez TrujilloPreston SmithMichael Valdez |

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| **1b. Department Priorities & Goals** |
| Based on the [Educational Master Plan](https://www.berkeleycitycollege.edu/prm/educational-master-plan-2024-2028-2/), Shared Vision, [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 2023-24? Look at last year’s priorities and goals, review and assess any changes you would like to make for this year. |
| The ongoing mission of the BCC Math department is to increase minority student enrollment to improve the and close the equity gap among our student population. One of the main goals of the department is to get ready for the implementation of AB1705. This involves developing support courses for Math 16A and Math 3A. In addition, the department needs to reactivate Math 15 to be AB1705 compliant. We have also re-activated Math 11 Discrete Math but have been unable to offer the course due to low enrollment.  |

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| **2. Institutional 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.<[Click here to view your Round 5 Assessment Calendar](https://docs.google.com/document/d/1DgVZLRmnKQj1jCNucuCNmTB0Wp1F3vLA/edit?usp=drive_link&ouid=105861965924346219496&rtpof=true&sd=true)> |
| **2a. What action plans did your department identify upon the assessment of each SLOs and/or PLOs?  Based on your SLO assessment, what did you learn that your department is doing well and areas that you need to improve so that student success rates can be improved?** |
| Overall, in most classes students meet, or very closely meet, standards for the SLOs on Calculation and Interpretation.However, in most courses, about half (50%) of students meet standards for Representation, Application/Analysis, and Communication. In advanced courses such as Math 3B and 3C, less than half of students meet standards for these SLOs.In general, students need a lot of help writing up steps to arrive at solutions, drawing graphs and properly labeled diagrams, and following all steps in the problem solving procedure.Below is a list of predominant action plans from each course that instructors are trying to implement to improve SLO results.**Math 1 and 215 Support:** Recommend Instructors implement active learning with supervised classwork to do a word problems, particularly to calculate interest compounded annually, monthly and continuously.**Math 13 and 213 Support:** Recommend Instructors implement active learning instead of lecturing. Create more group work activities with detailed instructions.Hold at least one group in-class activitie that focuses on converting information presented in words to mathematical symbols.Do a short review of tables and graphs during first few meetings of the course.Assign more exercises where students practice differentiating between two different types of probability exercises: one regarding the value of a quantitative variable and the other regarding the mean of a quantitative variable.Add more group/peer activities in class that focus on solving word problems/applications.Add an active learning activity in class that focuses on how to use a calculator to do statistics work.**Math 50:** Recommend instructors dedicate first few classes for algebra review.Also, create more group work activities in class that focus on word problems/applications.**Math 3A and 3B:** Recommend faculty develop in-class activities that can be shared with other faculty. Students need opportunities in class to work on application problems to discover and help eliminate mistakes.Provide students with a rubric to understand the important steps to take in the problem solving process.Develop a 2-unit support class for calculus students. Many students need a lot of support in manipulating precalculus/algebraic expressions, trigononometric expressions. They need a lot of review of functions and their graphs as well.**Math 3C:** This course is being assessed this Fall 2023.**Math 3E:** Application/Analysis is the area of greatest need for improvement.Provide more examples on the theoretical understanding of the dimension of a vector space.Provide more examples, and applications on Eigenvalues and eigenvectors.**Math 3F:** Application/Analysis and Interpretation are the areas of greatest need for improvement.Basic types of first-order differential equations should be reviewed at the beginning of the course.Select more complex calculation-type problems.Create activities for students to work on applications of differential equations.Math 16A and 16B:Recommend Instructors review key points taught in Intermediate Algebra in the first meetings of the course. Emphasize the importance of proper mathematical notation.Add more active learning activities vs lecture on applications/word problems.Develop a 2-unit support class for calculus students. Many students need a lot of support in manipulating precalculus/algebraic expressions and functions and their graphs. They need a lot of just-in-time support on these topics in many areas of these two courses. |
| **2b. Describe the status of SLO and PLO completion in Rounds 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.**  |
| The Math Department will have assessed 100% of its courses by the end of Fall 2023. Currently, it has assessed 12 of its 13 courses (92%).The department has not done a Program Assessment. In order to do one, the department needs to identify how specifically it will assess the program outcomes. The department needs to identify what data to collect. The PLO outcomes should also be reviewed and updated.To improve the accuracy of SLO assessment, more assignments and/or exam questions need to be included in each SLO assessment. To do this, the department is encouraging more faculty to use Canvas to assess SLOs. Math faculty already have access to add rubrics and outcomes to multiple assignments in their courses. This will allow faculty to easily assess SLOs across multiple homework assignments, quizzes, and exams.One concern in the department is that some faculty do not participate in SLO assessment. It is not much of a problem if these faculty teach a course that has multiple sections because the department can do a viable assessment with data from the other sections. However, if they teach a course like Math 50, 16A, 16B, 3C, 3E, or 3F that typically only has one section, it is difficult to get the assessment done. |

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| **3.** [**Student Equity, Success, & Completion**](https://app.powerbi.com/view?r=eyJrIjoiNjk3NDJjOTItNzI5MS00MDhjLWJhN2EtZjcxNzU4OTBiZDBjIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d)(<--click on the link) |
| **Using the data dashboards provided above, 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 |
| **We have focused on equitable completion for Latinx and African/African American students How are African/African American and Latinx students doing in success and completion in your department, compared to the BCC overall success and completion rate?**  |
| We have lower completion and retention rates with Latinx , and African American/Black students. We also notice this trend with non-binary students and students of ages 19-24, ages 30-34 and ages 35-54. |
| **What do you see as key factors in your department that contributed to an increase in success and completion rates of these student groups?** |
| A key factor that contributed to the positive success and completion rate was the implementation of AB705 and the support classes we offered in Pre-Calculus and Statistics. |
| **What are some strategies for improvements your department can make?**   |
| Some strategies that the Math department can implement are to develop more culturally relevant teaching I.e. develop contextualized social justice examples in class. Another strategy the department can consider is adopting equity grading practices like no late penalties, raising the grading floor to 50%, mastery level grading and staggered testing dates.  |

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| **4.** [**Enrollment Trend and Productivity Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiNWJlOWZmYTEtNTY0MC00MDhkLWE5OTAtYmJjZjIxNzJiNWViIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d)(<--click on the link)\*Note that completion and retention rates are presented with the inclusion and exclusion of excused withdrawals (EW) and military withdrawals.  |
|  **The SCFF prioritized 70% of our college’s base allocation on FTES (full-time equivalent student) from enrollment. Review the enrollment trends for your program and describe the strategies you will implement to increase enrollment.** |
| The Math department needs to survey students to determine the best course modalities. Once our district implements a degree audit system the department will be able to determine how many sections will be needed for our courses. The department will offer various modalities (in-person, hybrid, asynchronous, etc) in order to maximize enrollment.  |
| 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 & Certificates (??)
* ADTs
* 9 or more CE units
* Transfer
* Transfer level Math and English in the first year (AB 1705)
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| **College Outcomes** | **2019-2020** | **2020-21** | **2021-22** | **2022-23** |
| Full Time Equivalent Students (FTES) | 3,931 | 3,622 | 3,259 | 4,024 |
| Pell Grant Recipients | 2,281 | 2,181 | 1,826 | 1,837 |
| College Promise Grant Recipients | 4,143 | 4,011 | 3,500 | 3,991 |
| AB 540 Students  | 51 | 22 | 69 | 89 |

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| **5. Dual Enrollment**  |
| **As continued decline in overall enrollment for college going population from high school to college (see Service Area Enrollment Pipeline below), it is important for us to look at who will be coming to BCC in the next 5 years. Reviewing the data provided below, what strategies would your department employ to address bringing more high school students to BCC?** |
| The Math department currently has a DE agreement with Oakland School of the Arts (OSA), in the past with Berkeley High School and Life Academy. We need to continue these relationships and need to facilitate a smooth transition of these students to BCC. We must also perform outreach work with Susan Truong and Gail Pendleton. The department also needs to offer all the courses that are AST applicable.  |

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| **6.** [**Equitable Student Completion**](https://app.powerbi.com/view?r=eyJrIjoiNjk3NDJjOTItNzI5MS00MDhjLWJhN2EtZjcxNzU4OTBiZDBjIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSection86d6f65e2fb41a73da4d)(<--click on the link)\*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?**  |
| The completion rates have been fairly constant from year to year for the last 20 years. As usual, we need to improve the completion rates and rates of retention for students of color (Latinx and African American/Black)  |
| **Describe which activities and/or strategies your program used to contribute to the gains? What support does your program need to accelerate or improve these outcomes?** |
| Perhaps more students should be enrolling in the courses with support. This can be accomplished through counselor involvement and counselor knowledge of the general issue at hand.  |
| [**Degrees and Certificates Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiZjU2M2M5MzItOTcwZi00Y2U1LWJmODUtYTc0YjlhZGI2ZDhjIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9&pageName=ReportSectionde32556e136b0a8caccd)(<--click on the link) |
| **Review the data 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 sample size is very small. In any given year the department has awarded between 13 and 22 AST degrees in Mathematics. Mostly Male students are awarded the AST in Mathematics. There were 8 men and 5 women awarded AST degrees in Mathematics last year. |
| **Describe which activities and/or strategies your program used to contribute to the gains? What support does your program need to accelerate or improve these outcomes?** |
| The Math department updated the AST to include more electives. This was also done to be consistent with our sister colleges in the district.  |
| [**Transfer Dashboard**](https://app.powerbi.com/view?r=eyJrIjoiZmJlODJiODktZjM0OC00ZWIwLWIzNDMtN2Y1Yzc3ZGFhNGRhIiwidCI6ImVlYTE2YTE2LTQ4YWYtNDc3Yi05MTEzLTA1YjFjMDExMjNmZiIsImMiOjZ9)(<--click on the link) |
| **Review the data on the “Transfer” Dashboard.****What are the award trends for your department (e.g., overall, by gender, age, and ethnicity)?**  |
| The sample was very small. The number of AST degrees awarded decreased from 22 to 13. |
| **Describe which activities and/or strategies your program used to contribute to the gains? What support does your program need to accelerate to improve these outcomes?** |
| We need to ensure that our students have the proper tutoring services available, both in-person and on zoom, so that the success ratio can be improved.  |

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| **7. Curriculum based on Pathways for Equitable Completion**  |
| Based on the curriculum mapping and planning of your program answer the following questions.  |
| **What specific plans does your department have for sequencing degrees and programs to ensure students successfully complete the programs in the least amount of time?** |
| We need to make sure that we offer all AST relevant courses. Ideally, we should offer multiple sections.  |

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| **8. 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.** |
| Claudia Abadia serves as department chair. She attends any committee meeting where her attendance is required/requested. Kelly Pernell serves as the secretary of the academic senate and is the college Assessment coordinator. Mark Rinker is on the academic senate as the senator for the math department. Dmitriy Zhiv served on the curriculum committee and was the liaison for the department. We are searching for a replacement. Claudia Abadia and Michael Orkin serve on the faculty advisory support team for tutoring. |
| 1. **Discuss how the collaborations with other support services, programs, departments, or administrative units helped your department achieve its goals?**
 |
| The Math department needs to increase their collaborations with the LRC. The goal is for the department to take ownership of math tutoring. Math supports other support services like SAS.  |

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| **9. Prioritized Resource Requests** |
| **In the 2022-23 APU, 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 resource 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?) | Mathematica License (yearly) | 1000 |
| Books, Magazines, and/or Periodicals |  |  |
| Instructional Supplies | Need to increase supply budget especially as we increase the number of in person sections | 2000 |
| Non-Instructional Supplies | Printer supplies and technology supplies (cables, adapters, flash drives and portable hard drives) | 1000 |
| **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 | Adapter for new iPad | 500 |
| Replacement | iPad Pro with Apple pencil and accessories X 4 (Abadia, Pernell, Orkin and Rinker) | 8000 |
| **Facilities** |
| Classrooms |  |  |
| Offices |  |  |
| Labs |  |  |
| 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, 2023**