2024-25 Annual Program Update - Math

Program Overview

Please verify your program's mission statement and program's learning outcomes below and make any corrections necessary.

Mission Statement

The COA Mathematics department strives to inspire learners to build mathematical skills, make connections [between mathematics and the world], and contribute to society.

[Program Name] Program Learning Outcomes

[List of degrees and certificates and associated PLOs to be provided here.]

List your program faculty and/or staff and indicate whether they are full-time or part-time.

Dr. Khalilah Beal-Uribe (F)
Dr. Vanson Nguyen (F)
Rich Kaeser (F)
Dr. Farzan Riazati (F)
Phillip Bui (P)
Sue Broxholm (P)
Mike Ghiselli (P)
Chad-Eric Montgomery (P)
Chris Wu (P)
Emmanuel Herrera (P)
Gina Karunaratne (P)
Ely Gwin (P)
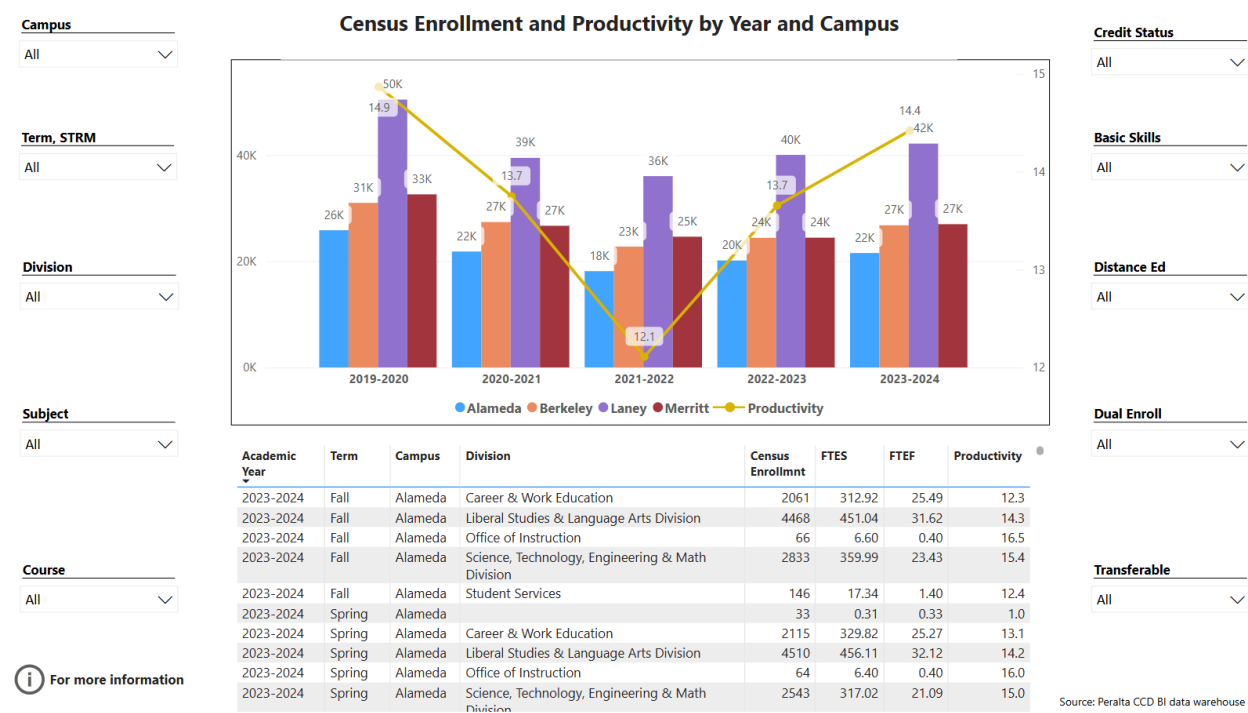*Thanh Thao Nguyen (P)*
Olesia Parasiuk-Zasun (P)

Describe your current use of facilities, including labs and other space.

Classrooms (virtual and in-person), offices, computer labs (virtual and in-person),

The Program Goals below are from your most recent Program Review or APU. If none are listed, please add your most recent program goals. Then, indicate the status of this goal, and which College and District goal your program goal aligns to. If your goal has been completed, please answer the follow up question regarding how you measured the achievement of this goal.

| **Program Goal**	Revisit mission statement and (Program) SLO's
Status: In-Progress or Complete? If complete, give a brief description of how you measured the goal completion.	*In progress*
Which college or district goal is aligned with your program goal?	*Advance COA teaching and learning* *Strengthen data-driven/informed decision making*
Program Goal	Develop departmental programming for math majors
Status: In-Progress or Complete? If complete, give a brief description of how you measured the goal completion.	*In progress*
Which college or district goal is aligned with your program goal?	*Advance COA teaching and learning* *Increase access to college programs/coursework through collaboration with other PCCD colleges in redesigning college schedules and offerings*
Program Goal	Engage department faculty through renewed training and collaboration for online teaching, teaching evaluations, and an internal assessment tool.
Status: In-Progress or Complete? If complete, give a brief description of how you measured the goal completion.	*In progress*
Which college or district goal is aligned with your program goal?	*Advance COA teaching and learning* *Increase community & educational partnerships*

Program Update – Enrollment Trends, Success Rates, and Degrees & Certificates

Census Enrollment and Productivity by Year and Campus

Academic Year	Term	Campus	Division	Census Enrollmnt	FTES	FTEF	Productivity
2023-2024	Fall	Alameda	Career & Work Education	2061	312.92	25.49	12.3
2023-2024	Fall	Alameda	Liberal Studies & Language Arts Division	4468	451.04	31.62	14.3
2023-2024	Fall	Alameda	Office of Instruction	66	6.60	0.40	16.5
2023-2024	Fall	Alameda	Science, Technology, Engineering & Math Division	2833	359.99	23.43	15.4
2023-2024	Fall	Alameda	Student Services	146	17.34	1.40	12.4
2023-2024	Spring	Alameda		33	0.31	0.33	1.0
2023-2024	Spring	Alameda	Career & Work Education	2115	329.82	25.27	13.1
2023-2024	Spring	Alameda	Liberal Studies & Language Arts Division	4510	456.11	32.12	14.2
2023-2024	Spring	Alameda	Office of Instruction	64	6.40	0.40	16.0
2023-2024	Spring	Alameda	Science, Technology, Engineering & Math Division	2543	317.02	21.09	15.0

Source: Peralta CCD BI data warehouse

Enrollment Trends Power BI dashboard

Note: Please consider the most recent years when answering the questions below. Data with default filter is provided below. Use the link above to explore the data further.

Discuss recent enrollment trends. District-wide enrollment trends are shown above for comparison.

Census Enrollment and Productivity by Year and Campus
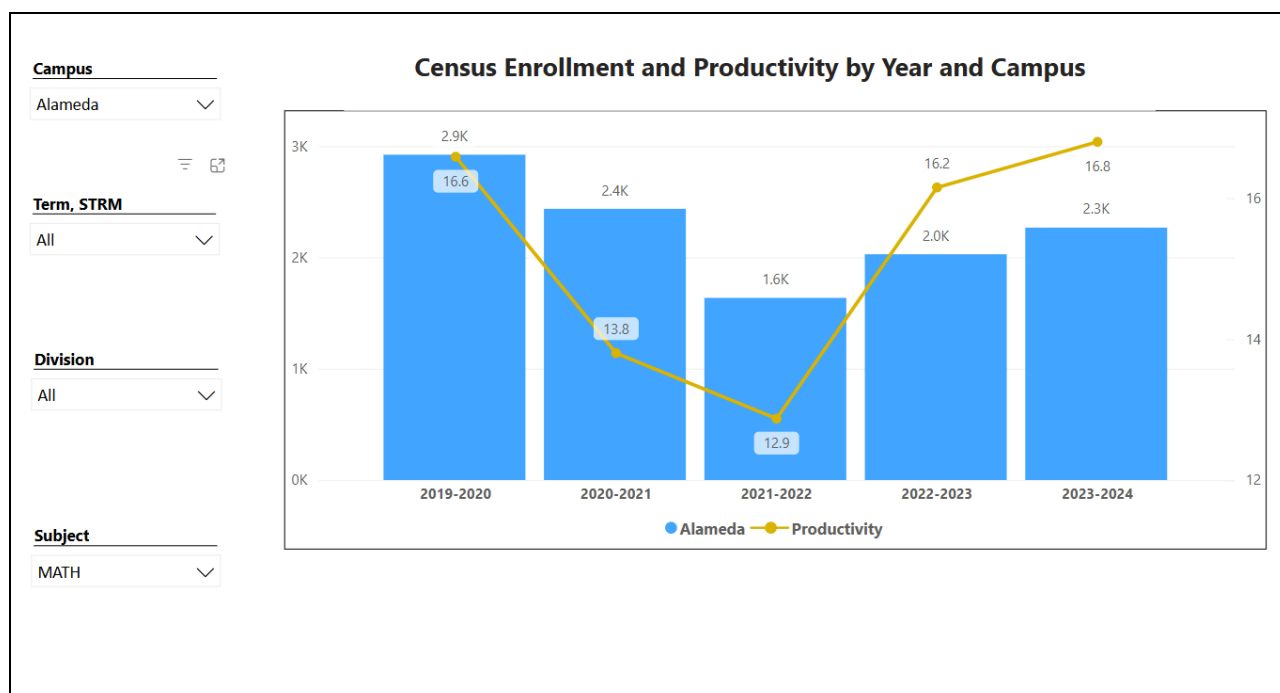
The enrollment trends in Math at CoA reflect the trends across the district. The bounce back from the low in 2021-22 academic year continues up despite an increased number of in-person courses offered from recent years. Productivity remains higher than the district average.

Course Completion Power BI Dashboard #1

Course Completion Power BI Dashboard #2

Institutional Set Standards

Consider your course completion rates in recent years (% of students who earned a grade of "C" or better). Data with default filter is provided below. Use the link above to explore the data further.

How does the course completion rate for your program or discipline compare to your college's Institutional Set Standard for course completion (70% with stretch goal of 77%)? Also discuss the retention rate for your program or discipline, compared to the college average shown in data below, as well as what the discipline, department, or program has done to improve course completion and retention rates.
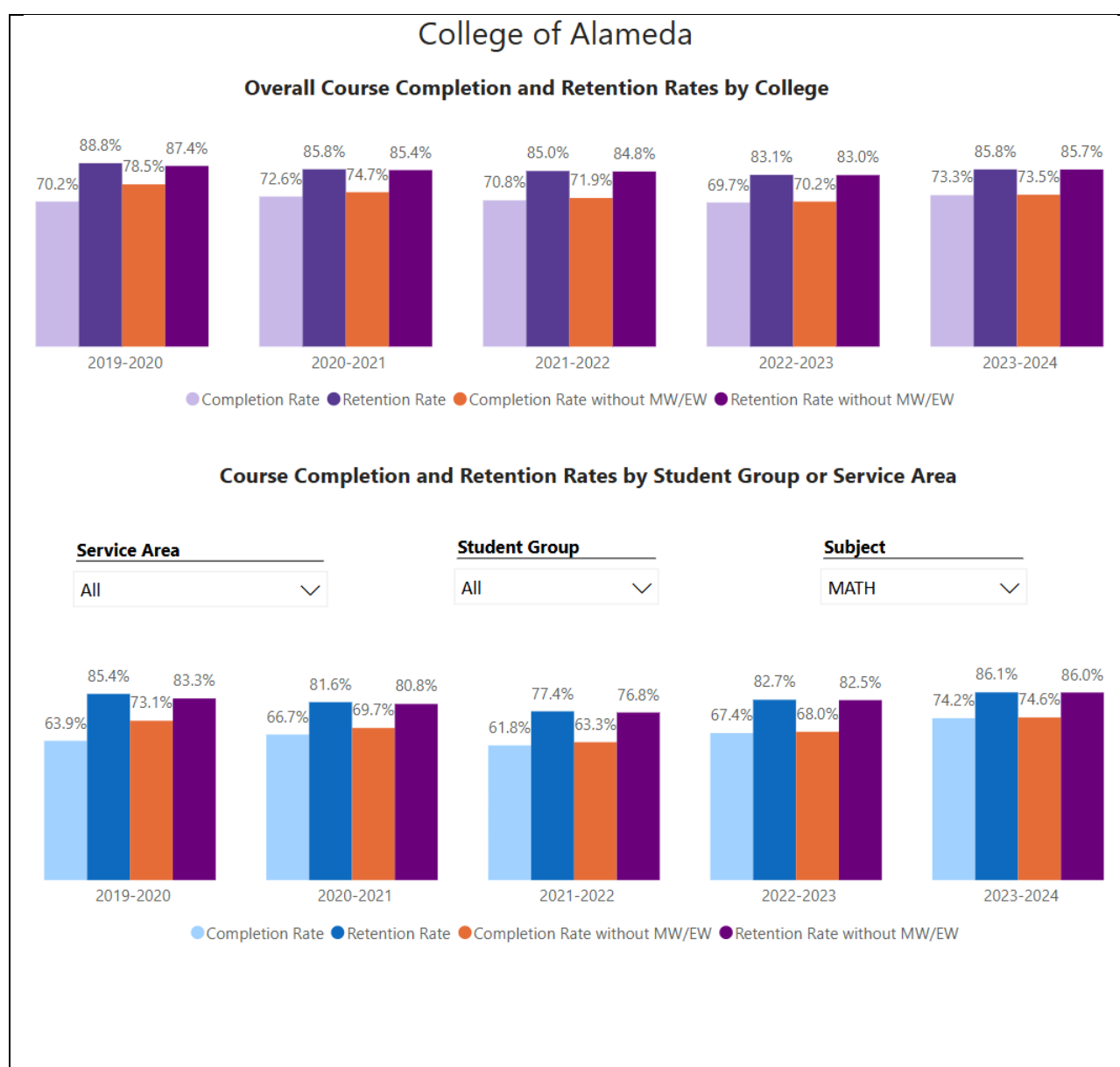
In 2023-24 Academic year, course completion and retention rates were at 5-year highs. During this same 5-year span, the Math department's course completion and retention rates were above the overall college's rates. When looking deeper at the completion and retention data, a few things stand out:

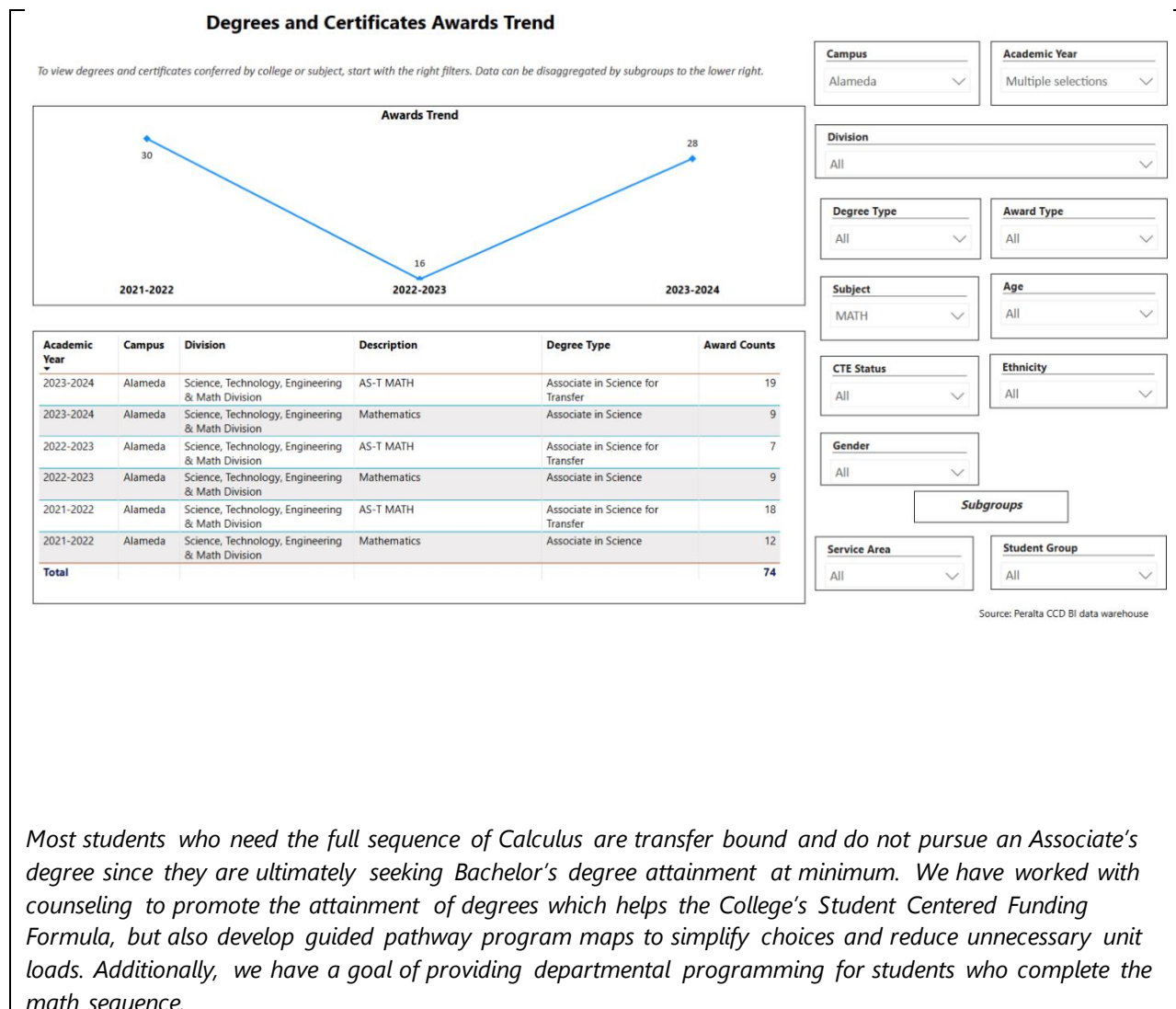| Academic Year	Ethnicity	Headcount	Census Enrollment	Completion Rate	Retention Rate	Completion Rate*	Retention Rate*
2023-2024	American Indian	31	72	60.3%	86.8%	61.2%	86.6%
2023-2024	Asian	2742	7473	85.8%	92.3%	86.0%	92.2%
2023-2024	Black / African American	2015	3983	58.8%	78.8%	59.2%	78.6%
2023-2024	Hispanic / Latino	3086	6240	67.9%	82.5%	68.1%	82.4%
2023-2024	Pacific Islander	39	78	67.5%	84.4%	67.5%	84.4%
2023-2024	Two or More	753	1626	67.6%	81.7%	68.0%	81.6%
2023-2024	Unknown / NR	287	721	77.9%	88.7%	78.3%	88.6%
2023-2024	White	1829	3835	74.6%	87.0%	74.9%	86.9%
Total		**10782**	**24028**	**73.3%**	**85.8%**	**73.6%**	**85.7%**

There were a handful of courses through ASAA in China, thus increasing the headcount of Asian students. The increased numbers also had a higher completion and retention rate resulting in the overall department's completion and retention rates to increase. Below is similar data for the 2022-23 year

Academic Year	Ethnicity	Headcount	Census Enrollment	Completion	Completion*	Retention	Retention*
2022-2023	Asian	430	599	77.8%	77.8%	89.3%	89.3%
2022-2023	Black / African American	218	279	48.2%	48.9%	75.9%	75.6%
2022-2023	Hispanic / Latino	381	500	52.8%	53.5%	75.5%	75.2%
2022-2023	Two or More	98	133	61.7%	62.6%	80.5%	80.2%
2022-2023	Unknown / NR	32	38	84.2%	84.2%	100.0%	100.0%
2022-2023	White	192	253	78.1%	78.1%	86.1%	86.1%
Total		**1351**	**1802**	**65.3%**	**65.7%**	**82.5%**	**82.4%**

When comparing year over year, we see an increase in completion for African-American as well as Latinx students. However, a significant equity gap is present amongst African-American, Latinx and Pacific Islander populations. I also suspect if disaggregated, Southeast Asian students would show an equity gap. Although numbers have improved, we still have work to do.

Degrees & Certificates Power BI dashboard

Please provide an update on the degrees and certificates offered by the discipline, department, or program. Below data shows the number of degrees and certificates awarded by year, for the past three years. Use the link above to explore the data further.

Most students who need the full sequence of Calculus are transfer bound and do not pursue an Associate's degree since they are ultimately seeking Bachelor's degree attainment at minimum. We have worked with counseling to promote the attainment of degrees which helps the College's Student Centered Funding Formula, but also develop guided pathway program maps to simplify choices and reduce unnecessary unit loads. Additionally, we have a goal of providing departmental programming for students who complete the math sequence.

Describe any significant changes in the recent years and discuss what the changes mean to your program.

Overall, completion and retention rates improved in many areas. Some of the improvement can be attributed to the influx of contract education courses through ASAA. Despite completion and retention rates improving, major equity gaps exist for African-American, Latinx and Pacific Islander students. AB705 was implemented over 5 years ago so the current data should better reflect the longer-term effects of that law. We do not know how many more students have completed their math requirements by initially enrolling in Statistics (Math 13) or Math for Liberal Arts (Math 15) for their degrees whether transfer or Associate's and that data isn't captured here. What will be impacted moving forward is the implementation of AB1705 where

STEM students will begin their math journey in the first course indicated in their program map: Math 3A Calculus 1. We expect an initial decrease in success rates, particularly for Math 3A, and an eventual increase in math degrees awarded. We have created a co-requisite support course and will be in compliance with the state regulations by 2025.

Describe the department's progress on Student Learning Outcomes (SLOs) and/or Service Area Outcomes (SAOs) since the last Program Review/APU.

The department is in year 1 of a new 3-year process. Through an SLO workgroup, a plan is developed to assess all SLO's with courses being assessed each semester. Since our last Program Review/APU, we have been active in assessment. However, we still have six SLO that have never been assessed.

In the past, our emphasis has been on determining SLO and creating corresponding assessments. Our most pressing areas of growth continue to be around consistency in assessment across sections and documenting reflection and response on results. We seek to increase participation in the cyclical assessment process among faculty members. We've been working to improve these by providing faculty training on SLO assessment techniques. Our goal for the next year is to have 70% of our courses assessed, to analyze the assessment results, and respond to both the aggregated and disaggregated data. Further, it is imperative that our response be equitable.

Describe the outcomes and accomplishments from previous year's funded resource allocation request. If your program did not receive any allocations, leave the boxes blank.

Brief description of funded request	Source (any additional award outside your base allocation)	Total Award Amount	Outcome/Accomplishment

Prioritized Resource Requests Summary

In the boxes below, please add resource requests for your program. If there are no resources requested, leave the boxes blank.

Resource Category	Description/Justification	Full-Time Equivalent Percentage	Salary Grade (if applicable)
Personnel: Classified Staff			
Personnel: Student Worker			
Personnel: Part Time Faculty			
Personnel: Full Time Faculty			
Personnel: Full Time Faculty, future anticipated need			

Resource Category	Description/Justification	Total Estimated Cost
Professional Development: Department wide PD needed	Description: Data-Informed Instruction PD, Supporting Developmental and Gateway Math Success PD, Math-Specific Technology and Digital Tools PD with Stipends for Part-Timer Participation Justification: positive impact of student success and institutional effectiveness preparedness for AB1705 compliance; roughly 12 instructors routinely teach math courses in/for the department	$24000
Professional Development: Personal/Individual PD needed	Description: Workshop (e.g. NCTM) and Conference (e.g. AMATYC, UMOJA), attendance	$4000

	Justification: positive impact on student success and maintaining currency in our field; roughly 6 instructors estimated to engage in individual PD, in-person and/or online	

Prioritized Resource Requests Summary - Continued

Resource Category	Description/Justification	Total Estimated Cost
Supplies: Software	Description: Wolfram Mathematica, SPSS Justification: technology in STEM education is correlated positively with student success; two individual licenses for each	$600
Supplies: Books, Magazines, and/or Periodicals	Description: subscriptions *The American Mathematical Monthly*, *Mathematics Teacher*, or *Notices of the American Mathematical Society* + specialized or newly released books (non-textbooks) and supplementary teaching materials Justification: maintaining currency and promotion of student success	$1000
Supplies: Instructional Supplies	Description: standard classroom (in-person and online) supplies, visual aids and manipulatives Justification: student success	$1200
Supplies: Non-Instructional Supplies		
Supplies: Library Collections		

Resource Category	Description/Justification	Total Estimated Cost
Technology & Equipment: New	Description: computing devices (tablets, laptops or desktops, monitors, hard drives, misc.) Justification: online teaching; video creation and storage; teaching with technology in-person	$8000
Technology & Equipment: Replacement		

Prioritized Resource Requests Summary - Continued

Resource Category	Description/Justification	Total Estimated Cost
Facilities: Classrooms	Description: Classroom dry-erase board and updated projector for two classrooms in STEM Annex that are used to teach math classes Justification: Current classroom items are broken	$14000
Facilities: Offices		
Facilities: Labs		
Facilities: Other		

Resource Category	Description/Justification	Total Estimated Cost
Library: Library materials		
Library: Library collections		

Resource Category	Description/Justification	Total Estimated Cost
OTHER	Description: Love and Support Justification: student success	free