CUYAMACA
· COLLEGE ·

Annual Update Report

Academic - Mathematics (MATH) - (MS&E)

Assess, revise as needed, and continue to improve Math Pathways (Goal 1, spring 2025)

Program Goal: Assess, revise as needed, and continue to improve Math Pathways

The College Strategic Goal that this department goal most directly support is:

Increase persistence and eliminate equity gaps (re-enrolling the subsequent semester or year)
Goal Status: Active

Mapping
2022 - 2028 Strategic Plan: *(X)*

- **Increase Persistence and Eliminate Equity Gaps:** Assess, revise as needed, and continue to improve Math Pathways

  The College Strategic Goal that this department goal most directly support is:

  Increase persistence and eliminate equity gaps (re-enrolling the subsequent semester or year) (**X**)

Summary of Progress or Results

Summary Date: 12/03/2025
Summary of Progress or Results: See action steps below.
Reporting Period: 2025 - 2026
Status: In Progress - will carry forward into next year
What resources, if any, are needed to achieve this goal? (Select all that apply): New faculty position, Supplies, equipment, and/or furniture
Action steps for this academic year.:
Action Steps Summary for Program Review Goal 1: Assess, Revise, and Improve Math Pathways
1. Community of Practice (CoP) and Teacher Mentoring:

- Monthly CuyaMATHa CoP meetings focus on equity-minded teaching, student-centered learning, and just-in-time remediation.
- Ongoing mentoring program for faculty using "Interactive Math on Canvas" textbooks, providing training and resources to improve teaching and student engagement.

2. Integration of Equity-Minded Practices:

- Over 30% of faculty have completed equity-minded training to improve teaching practices. The department chairs continue to promote EMTLI, EPPA, and other communities of practice provided by the campus.
- Developed culturally relevant instructional materials for courses like Statistics, Business Calculus, Calculus I, and Calculus II earning POCR badges for high-quality online standards.
- Expanded equity-focused course redesigns for Calculus II and beyond, aiming to reduce equity gaps through exemplary syllabi and prep

Summary of Progress or Results

modules to fill knowledge gaps.

- The department has hired 8 new PT faculty in the last two years. As such, the department chair has provided Flex week PD for new faculty on topics of equity-minded syllabi and facilitating group work

3. Data-Driven Revisions:
   - Student achievement and equity data are used to refine placement policies and reduce structural biases, improving retention and equity outcomes.
   - Continued reliance on SLO/PLO data and departmental reports to inform pathway improvements.

4. Support for Online, Hybrid, and HyFlex Teaching:
   - Facilitated CoP sessions and training to assist faculty in adopting innovative teaching modalities.
   - Created and shared course-specific Canvas modules and promoted Humanizing STEM courses for faculty development.
   - Expanded HyFlex training to additional part-time faculty and invited interdisciplinary expertise to refine this teaching model.
   - Given recent peer and manager observations in HyFlex classrooms, the department has decided to step back on offering HyFlex classes. While these classes provide a lot of flexibility for student attendance, we do not see much in terms of student learning, persistence, and success. More PD for faculty is needed before continuing to offer HyFlex as an option.

5. Diversity in Faculty Recruitment and Retention:
   - Addressed faculty shortages through hiring and mentoring initiatives to better reflect the student community's diversity. As a result, the math department's part-time faculty is more reflective of the student community's demographics.

6. Increase the Percentage of Students Taking Math in Their First Year at Cuyamaca
   - Work closely with counselors and high school outreach team to encourage students to enroll in math during their first semester.
   - Create a poster campaign to promote student enrollment in the first year. Advertise on Self-Service if possible.
   - Collaborate with the English department, since math and english in the first year is a huge momentum point for students.
   - Collaborate with Puente and UMOJA counselors to connect their special programs with the math department.
   - Send representation to the first year orientation to promote enrollment in math.

These actions collectively strengthen Math Pathways, enhance equity, and support both faculty and students in achieving academic success

Support student success in each Academic and Career Pathway (ACP) (Goal 2, spring 2025)

Program Goal: Support student success in each Academic and Career Pathway (ACP)

The College Strategic Goal that this department goal most directly support is:

Increase completion and eliminate equity gaps (graduating with a degree/certificate, or transferring)

Goal Status: Active

Mapping
2022 - 2028 Strategic Plan: *(X)*

- **Increase Completion and Eliminate Equity Gaps:** Support student success in each Academic and Career Pathway (ACP)

  The College Strategic Goal that this department goal most directly support is:

  Increase completion and eliminate equity gaps (graduating with a degree/certificate, or transferring)
  (**X**)

Summary of Progress or Results

Summary Date: 12/03/2025
Summary of Progress or Results: See action steps below.
Reporting Period: 2025 - 2026
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Summary of New Action Steps for Goal #2

1. Cross-Campus Collaboration for Student Success

- Continue partnering with departments to improve student preparedness, streamline math pathways, and expand access to shared Math Prep Modules.

- Strengthen collaboration with Counseling, Veterans, Umoja, and Puente to better guide students and support disproportionately impacted populations.

2. Innovative Course Design to Improve Pathways

- Expand Calculus I with support based on strong success data and gradually reduce Precalculus to minimize exit points.

- Continue developing ZTC materials and Prep Modules for the full Calculus sequence and Differential Equations, supported by AB 1705 and ZTC grants.

Summary of Progress or Results

3. Guided Pathways Support

- Maintain staggered-start Statistics options to help students stay on track.
- Encourage proactive student outreach through COP and mentoring activities.
- Keep degree maps accessible and continue refining strategies to help students persist and recover from setbacks.

Program Overview and Update

Lead Author
Rachel Polakoski

Collaborator(s)
Lamia Raffo, Dan Curtis, Annalinda Arroyo, Bryan Elliott, Chris Navo

Please briefly share the ways in which you collaborated with colleagues within and outside of your department to gather input to inform your program review.
We discussed the annual update in monthly department meetings throughout the fall 2025 semester and collaborated asynchronously via email/google docs.

Dean/Manager(s)
Tammi Marshall

Please briefly share the ways in which you collaborated with your Dean on your program review to discuss your vision, goals, and resource needs/requests.
We discussed department goals, resources, and this annual update during one-on-one monthly meetings with the dean. We also collaborated asynchronously via email/google doc.

Please summarize the changes, additions, and achievements that have occurred in your program since the last program review.

Summary of 2024–2025 Program Achievements & Changes

Fall 2024

- Trained seven part-time faculty to teach in the HyFlex modality.
- Offered **Math 280 fully online** for the first time.
- Rachel Polakoski completed **Cuyamaca's Equity Pedagogy and Practice Academy**.
- Terrie Nichols' **Math 180 and 280** courses earned a **POCR Badge**.
- Submitted updated **Stat C1000 COR** to align with the **Common Course Numbering (CCN)** initiative.
- Shared **math preparation modules** with STEM faculty to support student success across disciplines.

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- Secured **presidential funding (2024–2026)** for the COP/Mentoring program.

Spring 2025

- All Math 280 sections adopted the **Interactive Calculus II (ZTC) Canvas textbook**.
- Reintroduced **Math 128**, offered for the first time in many years.
- Developed a **Math Prep Module course** for tutoring with open self-enrollment for students.
- Renamed **Math 060 to Stat 010** to match CCN Stat C1000 changes.
- Rachel Polakoski provided **advocacy for AB 1705/705** at the February 2025 Higher Education Committee hearing.
- Chris Navo's **Math 178 course** earned a **POCR Badge**.
- Lamia Raffo was selected to participate in **CCN Phase III COR template review** in Summer 2025.
- **Discontinued Precalculus with support** and reduced standalone Precalculus to one section to encourage enrollment in **Calculus I with support**.

Annalinda Arroyo began serving as **interim Curriculum Faculty Co-Chair**.

Assessment and Student Achievement

After looking at the SLO information for the past year in Nuventive Improve, are you are on track for the 4-year assessment cycle?
Yes

Which courses have not been assessed in the last 4 years?

Math 076 - Stopped offering spring 2025. Deactivated through curriculum fall 2025
Math 128 - only offering during spring, will assess spring 2026
Math 175 - only taught through CCAP courses. Will assess spring 2026

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Assessing Fall 2025:

- Math 078
- Math 080
- Math 178
- Math 180
- Math 245
- Math 285

If you did not assess in the last year, please share why, including whether your program is experiencing barriers to assessment or data submission, and/or if your program would benefit from outcomes and assessment support.

We did not assess SLOs during the 2024-2025 academic year since we were writing our comprehensive program review. Our SLO assessment cycle is front loaded to the first three years of the program review cycle. We have restarted assessing SLOs again this fall and will follow the same three year cycle leading up to our next comprehensive program review.

Please share any outcomes assessment projects your program has worked on in the last year, including SLOs on Canvas, PLOs by ACP, Equitable Assessment Strategies (innovative collective/common assessments, project-based, work-based learning, student-centered, etc.), or other.

We share our PLOs with the STEM ACP. We assess PLOs by mapping and some courses have direct assessment of PLOs.

This fall, for the first time, almost all courses assessing SLOs will be doing so through Canvas Outcomes. As such, all PLOs that have mapping in place to the SLOs we are assessing this year will also be assessed.

In addition to the data provided on SLOs, the math department regularly submits research requests through our IESE office to review and revise our acceleration efforts.

In our Community of Practice meetings, we often discuss equitable assessment strategies and generous redo/make up policies. Many instructors in the department include these in their course syllabus.

Student Achievement

Please discuss any equity gaps in access or success and share what the program will do to address them.

In reviewing our access data, there appear to be no equity gaps within the math department. Almost all of the student demographics represented in the math program match the representation at the college, with only females (45% in math vs. 54% college-wide) and part-time students (34% in math vs. 55% college-wide) rating slightly lower than the college-wide data. The math department has worked hard to eliminate barriers in access to our classes in our acceleration efforts and Calculus redesign, eliminating the need for students to take remedial math courses and place directly into transfer-level math.

In reviewing our success rates, two groups stand out with equity gaps in retention and success - African-American/Black and Hispanic/Latino.

Race/Ethnicity	Retention - Fall 2024	Success - Fall 2024
Overall - Math	88%	75%
African American/Black	83% (equity gap)	65% (equity gap)
Hispanic/Latino	86%	67% (equity gap)

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Additionally, although the semester n's are small, the four year averages for American Indian/Alaskan Native students and Pacific Islander students indicate equity gaps persist.

Race/Ethnicity	Retention - 2020-2024 avg	Success - 2020-2024 avg
Overall - Math	86%	71%
American Indian/ Alaskan Native	71% (equity gap)	53% (equity gap)
Pacific Islander	63% (equity gap)	46% (equity gap)

Strategies for address these equity issues:

- Looking to partner with our Puente & Umoja colleagues to create a math pathway
    - Hire new FT Faculty to support this work
- Develop Interactive Math on Canvas Textbooks that are fully integrated into Canvas and are free of cost to the students. Students have burden-free access to these materials on day one of the semester.
- Developing prep modules for our courses that provide just-in-time review/instruction to support students in learning target course concepts.
- Promote EMTLI, especially for new PT faculty
- Promote EPPA for our online teachers
- Promote equitable grading strategies
- Increase RSI strategies in our online classes
    - Promote summer/winter camp offered by DE coordinator & Instructional design specialist
- Hiring diverse faculty - recent PT faculty hires are closely representative of our student body

We are happy to report that during the fall 2024 semester, we closed a persistent equity gap for students of multiple races/ethnicities (retention = 91%, success = 83%).

Please describe any enrollment changes (increases/decreases) over the past year and the context for these changes.

Math class enrollment data remains consistent for the past three years. Additionally, FTEF has remained steady and the efficiency has remained strong, rising to 19.156 in fall 2025.

Semester	Enrollment
Fall 2022	1,545
Fall 2023	1,538
Fall 2024	1,556

Distance Education Course Success (If Applicable)

If your department offers distance education classes, how do you ensure Regular and Substantive Interaction (RSI) is being implemented?

How the Math Department Ensures Regular and Substantive Interaction (RSI) in Distance Education Courses

Our department implements multiple structures and practices to ensure Regular and Substantive Interaction across all online and HyFlex courses:

- **Departmentwide RSI Training:** We conducted a full?department RSI training during Fall 2025 Flex Week to ensure shared understanding and consistent implementation.
- **Mentorship for New Online Instructors:** New faculty teaching online are paired with experienced mentors for guidance in effective online pedagogy and RSI practices.
- **Professional Development Encouragement:** Faculty are encouraged to participate in EPPA, the Online Teaching Conference, and other ongoing professional development opportunities.
- **Interactive Canvas Textbooks:** Our Interactive Math on Canvas textbooks are intentionally designed with built-in RSI, including structured peer reviews and student-to-student interactions in discussion boards.
- **Humanizing STEM Practices:** Several faculty completed the Humanizing STEM Academy and shared their learned practices with the department to support more engaging and humanized online instruction.
- **Active Facilitation of Discussions:** Faculty facilitate group discussion boards by not only posting prompts but actively responding to students' questions and guiding dialogue.
- **Timely, Individualized Feedback:** Instructors regularly respond to student work with meaningful comments and feedback through SpeedGrader for assignments and exams.
- **Proactive Student Outreach:** Faculty follow up with students who fall behind, stop attending, or become inactive in Canvas to support retention and success.
- **Early Engagement Strategies:** Some instructors administer an orientation or syllabus quiz in Week 1 to verify student engagement and intervene early when participation is lacking.
- **Sharing Best Practices:** RSI strategies are shared and refined during monthly Community of Practice (COP) meetings.
- **Collaborative Learning:** Several instructors incorporate group projects into their online courses to promote student interaction and engagement.
- **Addressing Sticky Points**: To address sticky points in student learning, some faculty record short 2-3 minute videos to clarify and explain the complex topics and connect it to what students have already learned.

Program Goals

Program Goals Status
I have updated the progress on my previous goals.

Program Goals Mapping
Mapping for all active Program Goals complete.

Program Review response is complete and ready for review.
Yes - Response complete and ready for review

Dean Approval and Feedback

I have reviewed the program review with the author and provided feedback.
Yes - Review and feedback complete

Feedback
Excellent work on the Annual Update.
- The summary of program achievements and changes is quite a list. This department continues to shine!
- Great that assessment is up to date and the department is working on PLO assessments through mapping.
- I would love to see the PLOs assessed with projects in some of the capstone classes.
- The department's overall achievements are outstanding. While achievement gaps persist, there has been and continues to be a lot of work on this and many of these gaps have been eliminated. This is to be commended.
- Enrollment continues to be strong with more and more students taking calculus based classes.
- How the Math Department ensures RSI in their online classes is a testament to the COP and work done across the department for several years.