Skyline College

Comprehensive Program Review

SKY Dept - Mathematics

Instructional Comprehensive Program Review

Submitter Name:
David Hasson, Rick Hough

BACKGROUND

1.A. DIVISION:
Science, Technology, Engineering, and Mathematics (STEM)

PROGRAM NAME:
Mathematics

1.B. YEAR OF REVIEW:
2025 - 2026

1.D. CONNECTIONS TO THE COLLEGE MISSION/VISION/VALUES:

i. Describe the program, its purpose, and how it contributes to Skyline College's Mission, "To empower and transform a global community of learners."
The Skyline College Mathematics Department serves as a foundational pillar of the institution, offering a comprehensive curriculum that spans from Statistics/Data Science and Quantitative Reasoning to advanced sequences in Calculus, Linear Algebra, and Differential Equations. Designed to serve both General Education students and STEM majors, the program integrates robust support systems like the STEM Center and MESA to ensure student persistence.

The department's primary purpose is to cultivate quantitative literacy and critical problem-solving skills. By implementing modern reforms—such as corequisite support models—the program has shifted from being a "gatekeeper" to a "gateway." It focuses on removing systemic barriers, ensuring that all students, regardless of their starting point, have access to high-level analytical training.

The program directly advances the college's mission to "empower and transform a global community of learners" in three key ways:
* Empowerment: It fosters "math identity," helping students overcome math anxiety and gain the self-efficacy needed to tackle complex intellectual challenges.
* Transformation: It provides the academic rigor necessary for social and economic mobility, opening doors to high-wage careers in technology, science, and engineering.
* Global Community: By teaching the universal language of logic and data, the department prepares a diverse student body to contribute to and lead in an increasingly data-driven global workforce.

Through this intersection of high expectations and holistic support, the Math Department transforms the educational trajectory of its students.

ii. Alignment with the College Values:
Academic Excellence
Student Success and Equity

For each chosen Value, provide a concrete example of how each connects to your program.
Academic Excellence:

The department maintains high academic standards by ensuring that its Calculus sequence - Math 251 (C2210), 252 (C2220), and 253 - and pre upper-division offerings like Linear Algebra (Math 270) and Differential Equations (Math 275) are fully articulated and aligned with the rigorous requirements of top-tier transfer institutions like UC Berkeley and Stanford.

This ensures that a Skyline student isn't just "passing a class," but is developing the deep conceptual understanding and analytical rigor required to thrive in high-stakes university environments. Excellence is measured by the high success rate of Skyline math alumni in their first year post-transfer.

Student Success and Equity:

For a long time, Data Science was a field reserved for those with graduate degrees from elite universities. Bringing this program to Skyline College is an act of educational equity.

In a Data Science course, students can use real-world datasets that reflect their own communities—such as analyzing local housing costs, healthcare access, or environmental quality in San Mateo County.

Economic Mobility: It creates a pathway into one of the highest-paying sectors of the economy for students who are often underrepresented in tech.

Low-Stakes Exploration: By offering these courses at a community college, you allow first-generation students to "test drive" a high-tech career without the crushing debt of a four-year university or a private coding bootcamp.

Representation: It reframes who a "data person" is. When a diverse classroom at Skyline masters data visualization, they are equipped to tell the stories of their own communities through a lens of authority and evidence.

The Big Picture: While traditional math can sometimes feel abstract to students, Data Science and Statistics are "math with a purpose." They bridge the gap between Student Success (getting a job) and Academic Excellence (mastering a complex, modern field).

1.E. PROGRAM PERSONNEL

i. Provide the current Full-Time Equivalent (FTE) of each category of personnel:

ii. Describe any changes in staffing since the last CPR, and how the change(s) have impacted the program. Are there any unmet needs in the program pertaining to program personnel (e.g. staffing, schedule limitations, turnover)? If yes, please specify.

Soodi Zamani and Cindy Moss both retired.

1.F. PROFESSIONAL DEVELOPMENT

i. Summarize key professional development that the program personnel have engaged in since the last CPR to meet both the mission of the program, and the aim of the College to increase equity.

1. Legislative Reform & High-Challenge Pedagogy (AB 705/1705)

In response to California mandates to maximize student completion of transfer-level math, faculty have engaged in intensive training to move away from remedial "gatekeeper" models.

California Acceleration Project (CAP): Faculty participated in CAP workshops to design and refine corequisite support models (e.g., STAT 800/MATH 825). This PD focused on "just-in-time" remediation, which teaches foundational concepts exactly when they are needed for transfer-level work.

Since we are no longer offering developmental classes, several teachers have embedded Khan Academy lessons within the embedded support courses to address targeted gaps in student understanding and fluency.

PD focused on addressing "math anxiety" and "stereotype threat," helping instructors support the psychological well-being of students in accelerated pathways. In addition, faculty support each other emotionally enabling them to be their best selves as they support students.

2. Equity Scholars & Culturally Responsive Teaching

Peer Coaching: Several math faculty members served as or worked with Equity Scholars to undergo one-on-one coaching. This involved a deep dive into culturally responsive pedagogy, ensuring that math problems and classroom environments reflect the lived experiences of Skyline's diverse student body.

Building Thinking Classrooms (BTC): Faculty participated in workshops to transition toward a fundamental restructuring of the classroom environment to move students from passive learning to active thinking. 360 whiteboards were installed in many of the classrooms to accommodate student groups working on vertical non-permanent surfaces while collaboratively solving problems.

3. Curricular Innovation: The Data Science Pathway

As a leader in the community college Data Science movement, the department engaged in specialized PD to launch MATH 211 (Introduction to Data Science).

UC Berkeley Collaboration: Faculty worked with UC Berkeley's Data 8 team to align curriculum and participate in "train-the-trainer" workshops.

4. Open Educational Resources (OER) & ZTC & Low Cost

To address the financial barriers to success, faculty have undergone extensive training through the Center for Transformative Teaching and Learning (CTTL) to adopt Zero Textbook Cost (ZTC) materials.

Math faculty have engaged in PD to identify, curate, and even author high-quality, free digital textbooks, significantly reducing the "total cost of attendance" for students.

5. Technology & Online Excellence

The pivot to remote and hybrid learning (starting in 2020) led to sustained PD in digital instruction.

QOTL training: Faculty training to ensure online math courses meet high standards of accessibility, regular substantive interaction (RSI), and student engagement.

Workshops on using tools like Desmos, and Canvas to make abstract math concepts more interactive and visual for online learners.

This collective PD has transformed the department from a traditional lecture-based model into a more dynamic, equity-minded, and industry-aligned program.

ii. Are there any unmet needs pertaining to professional development, and potential ways to address these unmet needs? Please specify.
The department plans to use meeting time to share best practices and collaboratively design improvements to activities and classroom approaches.

CURRENT STATUS

2.A. ACHIEVEMENTS

Describe the program's achievements since the last CPR.
The last six years (2020–2026) have been a period of profound transformation for the Skyline College Math Department. The department has redefined itself as a "gateway" through innovative curriculum, modern pedagogy, and significant grant-funded initiatives.

SKY Dept - Mathematics

1. Leading the Data Science Revolution

Skyline has emerged as a state leader in democratizing Data Science at the community college level. From reforming Statistics curriculum to creating a Data Science program, Skyline gives students an alternative to traditional STEM tracks.

In 2019, the department created Math 211: Introduction to Data Science modeled after UC Berkeley's Data 8. The class was first offered online in Summer 2020. It has been offered every semester since then.

In 2020, the department was awarded an NSF IUSE grant to build an alternate STEM pathway through statistics and data science. Many of the STAT C1000 courses use the Passion Driven Statistics curriculum which replaces traditional made up statistics exercises with project based learning using real datasets. This was implemented as part of the NSF IUSE grant to make Intro Stats project based – have students work with large real-world datasets and learn to code. Students are encouraged to analyze data that is meaningful and relevant to them.

In 2023, together with CSU East Bay and other area community colleges, Skyline was awarded a Learning Lab Data Science Grand Challenge grant to create an alternate calculus and math pathway for data science. To that end, Math 212: Computational and Applied Calculus was created to rethink the calculus and math required for data science and also as an alternate bridge to engineering calculus.

The department successfully launched a Data Science Certificate of Achievement and a Data Science AS Degree, integrating Math 211 (Intro to Data Science) with Computer Science and Statistics to prepare students for the 21st-century workforce.

As part of the Data Science Initiative, the department hosts a beginner-friendly datathon. On a national level, the department facilitates student participation in both the American Mathematical Association of Two-Year Colleges (AMATYC) edition of the American Statistical Association's DataFest, a national datathon, and DataJam. The DataJam organization provides mentors from universities across the country that meet with teams weekly to coach them on a semester-long project where students analyze open data to look deeper into community issues as part of a competition. Skyline College teams have taken top honors for DataJam two years in a row, and they have also won awards for Best Statistical Analysis and Best Insights.

Faculty Leadership: Professor Denise Hum has gained statewide recognition, including being featured on the Data Science Education Podcast, for her work in creating an inclusive data pathway.

2. "Wall-to-Wall" Thinking Classrooms

The department has physically and pedagogically "defronted" its classrooms by adopting the Building Thinking Classrooms (BTC) framework.

Classrooms have been outfitted with 360-degree whiteboards (Vertical Non-Permanent Surfaces).
Students no longer sit and watch; they stand in Visibly Random Groups to solve high-challenge problems. This "wall-to-wall" engagement makes thinking visible, reduces passive engagement, and creates a high-energy, collaborative atmosphere.
This shift has turned the math classroom into a lab of active discovery, significantly increasing student persistence during the critical "struggle" phase of learning.

Many faculty hold office hours in the STEM Center. This introduces students to the social and collaborative atmosphere of the STEM Center where students not only get help from tutors but support each other in study groups. It also reduces the feelings of intimidation that can have when meeting a professor in their office.

3. Professional Development (PD) as an Engine for Equity
The department has invested heavily in human capital to support legislative mandates like AB 1705.
Equity Scholars: Multiple faculty members participated in the Equity Scholars Faculty Coaching Program, focusing

on culturally responsive teaching and dismantling "math identity" barriers for marginalized students.

The department co-planned and joined a district-wide series of workshops and "Communities of Practice" to scale the Thinking Classroom model.

Faculty developed and refined corequisite courses (e.g., STAT 800), ensuring that students in transfer-level math receive "just-in-time" support rather than being trapped in remedial loops.

4. Student Success & External Recognition

Skyline's MESA program has flourished, with students consistently representing the college at national conferences like SACNAS.

5. Equity through ZTC/OER/Low Cost:

The department has achieved significant milestones in Zero Textbook Cost (ZTC) offerings, ensuring that the cost of materials is never a barrier to entry for a math degree. In addition, low cost resources for students include embedding Khan Academy and providing pdf versions of the textbooks.

6. Middle College Collaboration

The Middle College partnership represents a vital achievement for the Skyline Math Department, serving as a high-speed lane for students to accelerate through the BSTEM and STATs pathways by completing advanced Calculus and Statistics sequences years ahead of their peers. By immersing these younger learners in the Building Thinking Classrooms (BTC) model, the department fosters early habits of active collaboration and visible thinking on vertical whiteboards, while simultaneously offering the Data Science (Math 211) pathway as a modern, high-interest entry point into tech. This holistic approach—bolstered by a "warm handoff" to support systems like MESA—effectively transforms high schoolers into confident, college-ready scholars, dismantling math anxiety and building academic self-efficacy during their most formative years.

With the passage of AB705, Skyline stopped offering Intermediate Algebra. Many of the Middle College students join the Middle College program without completing Intermediate Algebra at their high school. In response to this student need and in collaboration with the Middle College Director, the department has been able to bring backIntermediate Algebra for Middle College students.

2.B. IMPACTS ON PROGRAM

Describe the impacts on your program (positive or negative) by legislation, regulatory changes, accreditation, grantors, community/school partnerships, college-wide initiatives, stakeholders, and/or other factors.
The Skyline Math program has undergone a dramatic transformation over the last six years, driven by a "perfect storm" of state mandates, innovative grant funding, and a radical shift in pedagogical philosophy.

1. Legislation & Regulatory Changes: AB 705/1705

The most significant impact on the program has been the implementation of Assembly Bill 705 and its successor, AB 1705.
Positive Impact (The Gateway): These laws forced a move away from multi-semester remedial "pipelines to nowhere." Success is now measured by throughput—the number of students completing a transfer-level course in one year. Skyline has successfully implemented corequisite models (e.g., STAT 800), allowing students to enter transfer-level math immediately with support, which has significantly increased completion rates for marginalized groups.

Negative Impact (The Safety Net): The "pendulum swing" of this legislation effectively eliminated foundational pre-algebra, pre-stats and algebra courses. Faculty have expressed concern that returning students or those with severe math gaps are now "fast-tracked" into high-stakes environments without the foundational "ramp" that previously existed. In addition, it is difficult to measure who is not here: students who have decided against a STEM

career or college as a whole feeling like the courses that meet them where they are do not exist.

2. Fueling the Data Science Revolution

NSF IUSE Grant: This National Science Foundation grant allowed Skyline to build an alternate STEM pathway via statistics and data science. It shifted the focus from traditional "pencil-and-paper" math to project-based learning using large datasets and coding to process them, making math feel more like a tool for modern problem-solving than an abstract hurdle.

California Education Learning Labs: In partnership with CSU East Bay, this grant funded the newly created Computational and Applied Calculus (MATH 212). This course will serve as a rigorous, modern alternative to the traditional calculus course, designed to dismantle historical barriers for students who want to enter tech but are intimidated by the algebraically intensive Calculus I. As a dual purpose, the department plans to also use it as an alternative pathway to traditional engineering calculus.

3. College-Wide Initiatives: The Equity Scholars & Redesign

Equity Scholars Project: Funded by the President's Innovation Fund (PIF), this initiative paired math faculty with peer mentors to focus on Culturally Responsive Teaching. This PD was critical in helping faculty redesign syllabi and assignments to be more inclusive, directly contributing to the college's "equity-permeated" culture commended by the ACCJC in the 2019 accreditation report.

4. Community & School Partnerships: Extending the Pipeline

MESA & STEM Center: The Mathematics Engineering Science Achievement (MESA) program acts as a vital stakeholder. MESA, the STEM Center and the Math Quad provide a dedicated "Home Base" for math students, where peer tutoring and "Academic Excellence Workshops" reinforce the rigor of the department's curriculum. In addition, many math faculty hold office hours in the STEM Center helping to build the STEM community and to create a community of learners.

5. Acknowledging the online environment

Providing an online alternative to face to face classrooms gives students choice and allows students who cannot come to campus at our class times the opportunity to be in college. There are many challenges in online math instruction including students using AI tools like Photomath and Chat GPT to get answers.

ACCESS

3.A. PROGRAM ENROLLMENT

What enrollment trends do you observe, and what may account for these trends?
Overall enrollment declined during the pandemic from 4,518 in '20-'21 to a low of 3,191 in '22-'23, a 29.4% decrease in overall enrollment. It increased back some to 3,433 in '24-'25 but is well below pre-pandemic levels. The largest drop in enrollement is in Statistics.

3.B. EQUITABLE ACCESS

Provide an analysis of how students, particularly historically disadvantaged students, are able to access the program. Specific questions to answer in your response:

i. PROGRAM ACCESS: How do your program enrollment demographics compare to that of the College as a whole and/or Division? What differences, if any, are revealed? What program, institutional, and/or external factors may have impacted equitable access, whether positively or adversely?
While the college has more female students than male (54% to 43%), the math department is closer to 50-50 (47% to 50%). When broken down by ethnicity, math classes have very similar proportions of students to the college as a whole, despite the fact that many STEM fields are still disproportionately white and Asian. The math department has worked

hard to make the math classroom accessible and welcoming and continues to innovate classroom practices to improve on our successes.
College:
Asian - 21.4%, Black Non-Hispanic - 2.7%, Hispanic/Latino - 31.1%, White Non-Hispanic - 21%
Math:
Asian - 24.6%, Black Non-Hispanic - 2.0%, Hispanic/Latino - 29.3%, White Non-Hispanic - 16.3%

ii. COURSE ACCESS: Provide analysis of enrollment trends for each course. Which course(s) have declining enrollment, and why might that be the case? What insights do you gain from the impact of course offering patterns?

Course	Su 20 - Sp 21	Su 24 - Sp 25	Percent Change
MATH 130	345	172	-50.14%
STAT C1000	1366	980	-28.26%
MATH 201	62	33	-46.77%
MATH 211*	69	80	15.94%
MATH 222	301	183	-39.20%
MATH 225	147	207	40.82%
MATH 241	157	167	6.37%
MATH 242/243	54	38	-29.63%
MATH 251	397	511	28.72%
MATH 252	242	281	16.12%
MATH 253	165	97	-41.21%
MATH 270	140	110	-21.43%
MATH 275	89	157	76.40%
* MATH 211 started in SU21.			

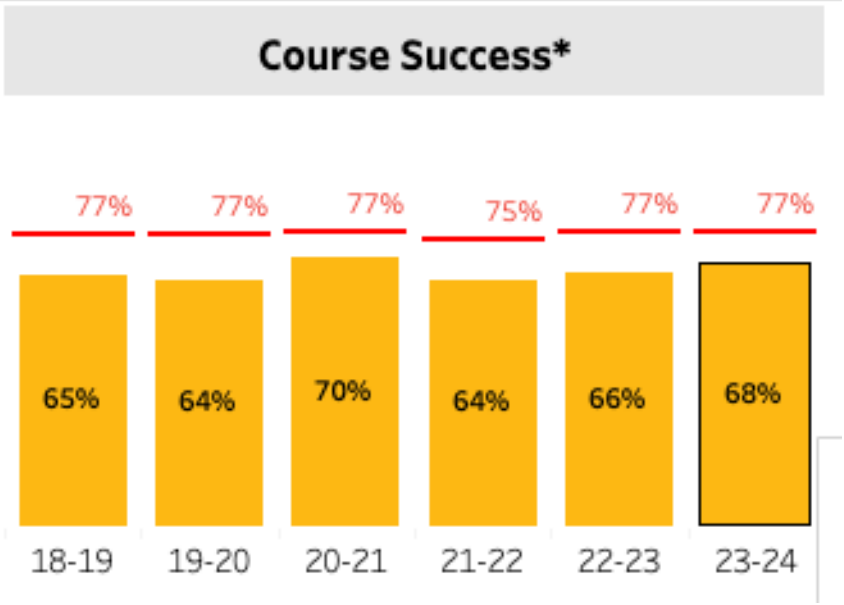
- Enrollment dropped across the board during the pandemic. It has come back in some cases.
- In a short time, MATH 211 is already showing strong growth
- As the AB1705 placement rules change allowing more students to enroll directly into calculus
- Data is showing fewer are making it through the entire calculus series
- Offering MATH 275 online has allowed students outside the local community to enroll
- MATH 201 enrollment has been shrinking, possibly due to the type of class not being suited to online instruction. We are shifting the modality to face-to-face.

iii. What efforts, if any, have been made to increase equitable access to your program? If more is needed, consider making it one of your program goals in the Action Plan.
Math faculty work to create welcoming and inclusive environments in classes and where possible provide various modalities and various time and day offerings in our courses.

EFFECTIVENESS

4.A. OVERALL AND DISAGGREGATED COURSE SUCCESS RATES
Comment on course success rates and with particular attention to any observed equity gaps. Specific questions to answer in your responses:

i. How do the overall course success rates compare to the College and/or Division success rates?



The disparity between math success rates and the overall college average is a documented historical challenge we are committed to solving. Rather than accepting this gap as an inevitability, the department continues to implement contemporary best practices like BTC and corequisite support models, analyzing these rates through an equity lens. Our current initiatives—such as the transition to Data Science and the adoption of low-stakes, high-engagement instructional methods—aim to dismantle the 'gatekeeper' effect and bring our success rates into closer alignment with the broader Division.

ii. What have you learned from reviewing the overall and disaggregated course success data? Choose disaggregations which are most relevant to programming decisions (e.g. ethnicity, gender, age, enrollment status, and/or disaggregations that are unique to your program).
While many interventions have been made, the ethnicity success gaps are still prominent in many of our courses. Here are summaries of course sucess rates by ethnicity for a few of our highly enrolled courses:

	Afric Amer	Asian	Filipino	Hispanic	White
MATH 200	46%	82%	63%	50%	67%
MATH 225	52%	78%	75%	55%	68%
MATH 251	54%	83%	66%	62%	77%
MATH 252	43%	81%	75%	60%	72%
MATH 253	83%	90%	83%	75%	86%
MATH 270	*	81%	79%	61%	77%
MATH 275	*	83%	78%	74%	83%

- Success rates for African American and Hispanic students continue to be low showing the need for systemic change
- In Staticstics, although the project based learning and using real data can be engaging and motivating for students, the heavy use of technology is a potential barrier for students without a background in technology. The department has is taking the approach to the next stage, looking for ways to make the teachnology use more accessible.
- For African American and Hispanic STEM students, the trend seems to be the few who survive the lower levels do well as they advance.

iii. If outcomes reveal inequity, what may be contributing factors at the program, college, and/or district level?
One factor that is difficult to analyze is socio-economics. Most math courses have some kind of online component whether the modality face to face or online and often the software used (whether Canvas or course specific) doesn't work as easily on the mobile devices that most of our students have. The laptops that students can borrow are better than a phone, but take training to use properly and require the use of the Google suite to save and create files, something that the most disadvantaged students aren't always experienced with. This digital divide could be a contributing factor.

4.B. INDIVIDUAL COURSE SUCCESS RATES

Provide analysis of success rates for each active course. Is there a minimum success rate that you consider acceptable, and if so, what is it and why? Which courses are not at the acceptable minimum success rate? Which exhibit a success rate over time that fluctuates fairly dramatically? Which other courses are of concern to you, and why?
The confounding part of AB1705 is that the legislation focusses on throughput rate rather than pass rate. In the CAP training, faculty were told to expect individual transfer level course success rates to hover between 50%-60% but that this was better than having students take several semesters of preperatory work, often giving up before reaching the end even if they passed one of the prep classes. Implementing support courses helps a little, but it is hard to replace developed math maturity.

Given all of this, an expectation of overall all success rates between 55%-65% is reasonable with an expectation that at least 65% of our students succeed.

4.C. COURSE AND PROGRAM SLO RESULTS

What notable conclusions were drawn from the assessment results? If available, note any differences in assessment results by key disaggregations (e.g. modality, learning communities, etc.). What have been the implications for the program? Specific questions to answer in your response:

i. What percentage of course SLOs have been assessed during the past five years?

Number of Course SLOs:
64

Percentage:
96.9

ii. How well is the program meeting its PSLOs?
Overall PSLO success rates:
Critical Thinking: 70.3%
Multiple Representations: 50.3%
Productive Persistence: 68.8%

Low overall success in the Multiple Representations PSLO suggests the need for hightened emphasis.
In STEM (calulus and above) the program is consistently meeting its SLOs/PSLOs at a high rate.

In STEM prep there are mixed results, with higher results more recently. In addition, the Mupltiple Representations PSLO has the lowest success rate.

SKY Dept - Mathematics

In Statistics and Liberal Arts Math there is work to be done. While the transition to Passion Driven Statistics has improved the relavancy of the class, the department needs to collaborate to make the technology requirements more accessible for students so that they can focus more on the content.

iii. Are the PSLOs still relevant to your program? If not, what changes might be made?

We instituted some changes during this year to make the SLOs more clear to students. The results were higher this year in general. The program will continue to monitor and adjust if needed. The PSLOs themselves are fine, but since we roll up SLO data we have focused on updating them.

iv. Drawing from the last six years of course SLO assessment, which course(s) and/or course SLO(s) are of concern (e.g., not met or inconclusive results, those with action plans)?

While the program will continue to work to improve STEM offerings, the SLO analysis brought to light the need to focus efforts on Statistics instruction. We are planning to share and redesign strategies for making the technology component more accessible for students.

4.D. COURSE ENHANCEMENTS

Which course(s) are of concern due to their course success rates, SLO results, and/or other reasons? What efforts, if any, have been made to enhance student learning in those courses? If more is needed, consider which changes may be submitted to the Curriculum Committee in the Fall, and/or making it one of your program goals.

We are focussing on Statistics instruction upgrades to enhance course success and SLO attainment.

4.E. DEGREES AND CERTIFICATES

List each of the degrees and certificates separately. Comment on the number and trends in degrees/ certificates awarded by your program. Specific questions to answer in your responses:

i. What do the data reveal about degree and certificate completion? time to completion?

	18-19	19-20	20-21	21-22	22-23	23-24	total
Math AS-T	21	36	29	29	22	37	174
AS-T terms	8	10	8	9	9	8	Ave = 9
MATH AA	6	<=5	<=5	<=5	<=5	<=5	20
AA terms	13	*	*	*	*	*	Ave = 11

Although the local AA in math is not very well used, the math AS-T attainment is strong and steady. We have recently developed an AA and COA in Data Science and are eager to see how well students do.

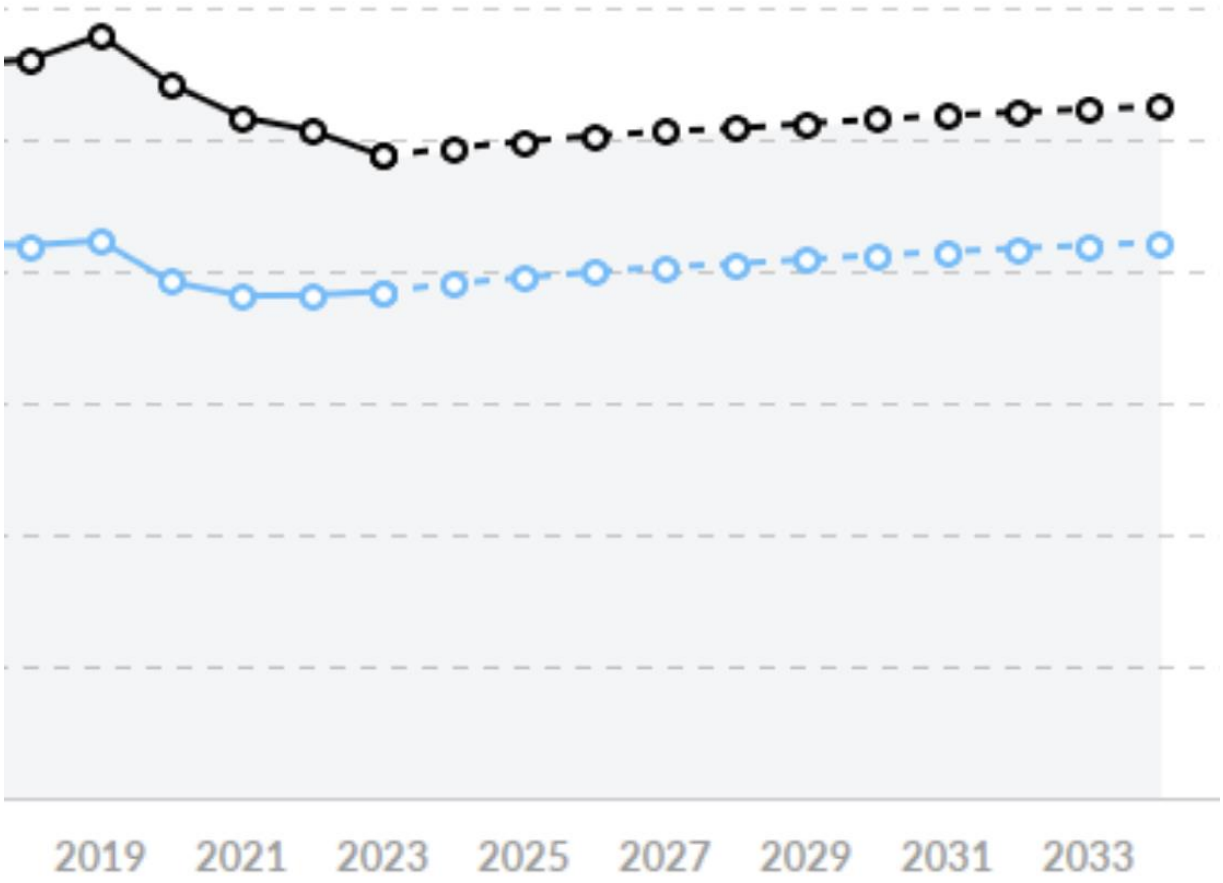
ii. What changes do the data suggest are necessary for the program to explore?

The local AA degree is not as popular speaking to the level of education needed to obtain a job in math. An AA and Certificate of Achievement in Data Science have both been developed as they are more well suited to students who want to go directly into the workforce.

4.F. LABOR MARKET CONNECTION

If appropriate for your program, given labor market data related to your program, discuss current labor trends and how your program is addressing them. How are you incorporating any of the following into program planning: Labor Market and Trends (e.g., Centers of Excellence, Burning Glass), Performance for CTE Programs (Launchboard), and/or Advisory Boards? Report out on whichever source(s) are relevant to your program.

Looking at labor market data for careers using math, they predominanty are in government and education and require at least a 4 yr degree. The number of hires in the area took a steep turn down during the pandemic but has been steadily increasing a trend that is expected to continue.



4.G. STUDENT FEEDBACK

4.H. CURRICULUM

Programs are required to update all curriculum and secure approval by the Curriculum Committee. Please indicate whether the following tasks have been completed.

Secured approval of updated courses by the Curriculum Committee

Yes

Updated the Improvement Platform with new and/or changed SLOs, after approval by the Curriculum Committee

Yes

KEY FINDINGS

Using key findings based on the analysis from this CPR cycle, develop a multi-year plan designed to improve program effectiveness and promote student learning and achievement. Commit to three-to-five new and/or ongoing goals total. Enter goals via Step 2: Goals and Resource Requests.

5.A. CHALLENGES AND CONCERNS

Goals & Resource Requests

SLAM Pathway

In Fall 2019, the department envisioned a future in which our students have a SLAM pathway that leads Society & Education as well as Arts, Language, & Communication Meta Majors into Data Science. We're looking to see an increase in first year transfers.

We need continued 0.2 FTE allocation for SLAM coordination and a designated computer lab or laptop cart classroom with reliable wifi for maxed out class cap.

Year Initiated
2023 - 2024

Goal Status
Active

Mapping
- SKY Strategic Goals: *(X - Highlight Selected)*

- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

UPDATE

Goal Update Date
03/04/2026

Academic Year Updated
2024 - 2025

Goal Update
Completed

Goal Update Narrative
Passion Driven Statistics is integrated into most of the Stats courses. New goal to build off of this one coming.

UPDATE

Goal Update Date
10/28/2023

Academic Year Updated
2023 - 2024

Goal Update
On Schedule

Goal Update Narrative
Regular meetings to discuss and adjust curriculum on-going.

B-STEM Pathway

In Fall 2019, the department envisioned a future in which our students have a B-STEM pathway that leads Science, Technology, & Health as well as Business, Entrepreneurship, & Management Meta Majors through Calculus and into Career Success.

25% of the goal has been completed but we still need to analyze first year transfer level math completion longitudinally. Rick Hough and David Hasson have worked together to create a ZTC hyflex Math 120 Intermediate Algebra curriculum using Canvas, Khan

Year Initiated

Goals & Resource Requests

2021 - 2022

Goal Status

Active

Implementation Step(s) and Timelines

In Spring 2022, David Hasson will pilot the ZTC hyflex curriculum for Math 225. In Fall 2022, he will form a community of practice in the hopes of scaling its adoption.

Mapping

- SKY College Values: *(X - Selected)*

- **Social Justice:** undefined (**X**)
- **Campus Climate:** undefined (**X**)
- **Open Access:** undefined (**X**)
- **Student Success and Equity:** undefined (**X**)
- **Academic Excellence:** undefined (**X**)
- **Sustainability:** undefined (**X**)

- SKY Strategic Goals: *(X - Highlight Selected)*

- **Antiracist and Equitable Institution:** Be an antiracist and equitable institution (**X**)
- **Increased Student Enrollment:** Increase student enrollment by being responsive to communities we serve (**X**)
- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

UPDATE

Goal Update Date

03/05/2026

Academic Year Updated

2025 - 2026

Goal Update

On Schedule

Goal Update Narrative

SLO results are strong in calc and above STEM classes. Equity gap in success rates still exists in calculus and is less in higher level courses.

UPDATE

Goal Update Date

10/28/2023

Academic Year Updated

2023 - 2024

Goal Update

On Schedule

Goal Update Narrative

ZTC curriculum has been developed and piloted for math 200 and 222. In addition, David and Rick are piloting using Building Thinking Classrooms pedagogy.

Resource Request

Division Name

Science, Technology, Engineering, and Mathematics (STEM)

Goals & Resource Requests

Year of Request
2023 - 2024

Resource Type
Instructional Equipment

Resource Name
Whiteboards

Resource Description
Continue to identify math classrooms that have wall space without a whiteboard and install quality whiteboard to fill that space. 4 ft by 6 ft Magnetic Porecelain. $430 per board. Estimating we need about 15 more.

Funds Type – Mark all that apply.
One-time Cost

Briefly explain how this request helps to advance the goals and priorities of your program, the College, the District, and/or the California Community College Chancellor's Office.
The Building Thinking Classrooms pedagogy requires enough erasable vertical surface space to accommodate a full classroom of students in groups of three. Ideally, the class size is at most 30 so that there are only 10 groups, but if possible have whiteboard space to accommodate 13 groups (39 students).

Cost
6,450

Level of need, with 1 being the most pressing
1

FOR ADMINISTRATIVE USE ONLY

Recruit for MESA other support services

As math is often a first semester course for students, the immediate impact of support services on their success is critical. As MESA is being revitalized and coordination with the STEM Center is on-going, coordination and mutual support is needed to connect students with the services and with each other.

Year Initiated
2022 - 2023

Goal Status
Active

Implementation Step(s) and Timelines
1. Create fun and easy quizzes on the subject of MESA and other campus resources; 2. Collaborate with MESA to design a recruitment strategy to connect students with MESA including classroom visits; 3. Coordinate more faculty office hours in MESA, the STEM Center and the MATH quad

UPDATE

Goal Update Date
03/05/2026

Academic Year Updated
2024 - 2025

Goal Update
On Schedule

Goal Update Narrative
MESA program leveraging STEM clubs, internships, Science in Action and social events to increase involvement in MESA. Math faculty hold office hours in the STEM Center and actively recruit for MESA and other activities to increase student awareness of STEM support services.

Goals & Resource Requests

Student Resource Satisfaction Survey

In Fall 2019, the department envisioned a future in which our students have the technological resources they need to succeed in 21st century mathematics. This can be assessed through a student resource satisfaction survey of all our math students.

25% of the goal has been implemented but we still need to begin a student resource satisfaction survey cycle. We need a computer lab devoted to using cloud based mathematical software for both the B-STEM and SLAM pathways. So far, we received 30 laptops.

Year Initiated
2021 - 2022

Goal Status
Inactive

Implementation Step(s) and Timelines
By Fall 2022, we need a laptop cart in classrooms with reliable wifi for a maxed out class-cap. Alternatively, we need an ethernet math computer lab with class caps matched to the number of computers in the lab.

Mapping
- SKY College Values: *(X - Selected)*

- **Social Justice:** undefined (**X**)
- **Campus Climate:** undefined (**X**)
- **Open Access:** undefined (**X**)
- **Student Success and Equity:** undefined (**X**)
- **Academic Excellence:** undefined (**X**)
- **Sustainability:** undefined (**X**)

- SKY Strategic Goals: *(X - Highlight Selected)*

- **Antiracist and Equitable Institution:** Be an antiracist and equitable institution (**X**)
- **Student Support and Resources:** Ensure that all students have the support and resources needed to achieve their educational goals (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

UPDATE

Goal Update Date
10/20/2022

Academic Year Updated
2022 - 2023

Goal Update
Discontinued

Goal Update Narrative
Laptops have been obtained and are being used by some faculty. Discontinued to shift focus to using current resources.

SLAM Pathway: Update Passion Driven Statistics

Update PDS instruction methods to make technology more accessible to increase student success rates and SLO attainment.

Year Initiated
2025 - 2026

Goals & Resource Requests

Goal Status
Active

Implementation Step(s) and Timelines
26-27 Collect baseline data; Share best practices and analyze what needs revision

27-28 Research revision options and pilot

28-29 Implement revisions program wide

29 - 30 Gather data to measure effectiveness

Mapping
- SKY Strategic Goals: *(X - Highlight Selected)*

- **Antiracist and Equitable Institution:** Be an antiracist and equitable institution (**X**)
- **Increased Student Enrollment:** Increase student enrollment by being responsive to communities we serve (**X**)
- **Thriving Environment:** Foster a thriving learning and work environment (**X**)

Student Survey 2026+

A series of short student surveys throughout the semester will provide information for timely, accurate, and culturally responsive instruction and engagements for students in and outside the classroom. Intended to increase retention and success and shrink equity gaps in particular for Latinx, Black/African American and first generation students.

Designed to:
Explore what is working/not working for individual students
Identify problems and interventions before a student withdraws
Get a sense of what is in our locus of control and what is not

Year Initiated
2025 - 2026

Goal Status
Active

Implementation Step(s) and Timelines
2025-2026 Gather and analyze initial data

2026-2027 Identify and pilot interventions; continue to gather and and analyze data