SKYLINE PRU Report

SKY Dept - Mathematics

Jing Folsom

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01/19/2024

Program Information

Assessment Unit Information

Program Type

Instructional

Division

Science, Technology, Engineering and Math (STEM)

Assessment Contact

Rick Hough, David Hasson

Comprehensive Program Review

2025 - 2026

Program Review Update

Fall 2021,Fall 2023

2023 - 2024

SKY Instructional Program Review Update

Submitter Name:

David Hasson, Rick Hough, Denise Hum

Submitter Date:

10/28/2023

DIVISION:

Science, Technology, Engineering, and Mathematics (STEM)

PROGRAM NAME:

Mathematics

YEAR OF REVIEW:

2023-2024

1. STUDENT LEARNING OUTCOMES

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 in the last three years?

Number of Course SLOs:

0

Percentage:

0

ii. Which course(s) were assessed in the last three years?

na

iii. Degree-bearing programs are expected to assess Institutional SLOs, ideally during each ISLO's featured year. List which course(s) were assessed for which ISLOs in the last three years.

Math 200 was assessed for the communication ISLO

iv. Drawing from course and institutional SLOs results, what notable conclusions were drawn? Which results led to action(s) that were planned or taken, if any, to enhance student learning in those courses?

Coming out of the pandemic, we started to assess 1/3 of our courses but hit a snag and had to start fresh this Fall semester. We are currently assessing half of our courses (with results analyzed in Spring 2024) and the rest assessed next Fall.

2. CURRICULUM

Please indicate whether the following tasks have been completed:

Submitted a current assessment calendar with all active courses to the Office of Planning, Research, and Institutional Effectiveness

Yes

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

Yes

Updated the program website with new and/or changed PSLOs after they are published in the College Catalog

Yes

Reviewed, updated (as needed), and submitted degree and certificate maps to the Curriculum Committee

Yes

3.   ADDITIONAL INFORMATION

Please note anything else that has not been captured above that is relevant to program accomplishments, challenges, and resource needs. Explain and document your response as needed.

The math department continues to learn and grow while we work to serve all students after the AB705 and AB1705 legislation. Our main struggle is to serve students whose background in math makes it difficult for them to follow the flow of the courses. We have implemented co-requisite courses in Math 200, Math 130, Math 222, Math 225 and Math 241 with successes especially noted in math 200. Currently we are gearing up for a district wide extensive professional development series including workshops, communities of practice and instructional aid support to learn a research based pedagogical approach called Building Thinking Classrooms.

4.   The last step is to review the multi-year program goals, update their status, and add resource requests as needed. You can access program goals from the hamburger menu in the upper-left hand corner, Step 2: Goals and Resource Requests.

GOAL

SLAM Pathway

Goal and Desired Impact on Students

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

Mapping

 - SKY Strategic Goals: (X - Hightlight Selected)
- Student Support and Resources: X
- Thriving Environment: X

STATUS

Goal Status Date

10/28/2023

Academic Year Updated

2023 - 2024

Goal Status

On Schedule

Goal Status Narrative

Regular meetings to discuss and adjust curriculum on-going.

GOAL

B-STEM Pathway

Goal and Desired Impact on Students

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

2021 - 2022

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 Strategic Goals: (X - Hightlight Selected)
- Antiracist and Equitable Institution: X
- Increased Student Enrollment: X
- Student Support and Resources: X
- Thriving Environment: X
- SKY College Values: (X - Selected)
- Academic Excellence: X
- Campus Climate: X
- Open Access: X
- Social Justice: X

- Student Success and Equity: X
- Sustainability: X

STATUS

Goal Status Date
10/28/2023

Academic Year Updated
2023 - 2024

Goal Status
On Schedule

Goal Status 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)

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

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GOAL

Recruit for MESA other support services

Goal and Desired Impact on Students
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

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

GOAL

Student Resource Satisfaction Survey

Goal and Desired Impact on Students

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

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

STATUS

Goal Status Date

10/20/2022

Academic Year Updated

2022 - 2023

Goal Status

Discontinued

Goal Status Narrative

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