Mathematics

Progress Update (Past Two Years)

1. Provide an update on your program or department's progress on your last objectives or action plans:

Progress Update Past Action Plans

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What type of program review did you last submit?

- ☐ Old annual
- ☐ Old six-year
- ☐ PU
- ☑ CPR

What is the status of your last program review action plan/objective?

- ☑ Completed
- ☐ In Progress
- ☐ No Longer Pursuing

Discuss the progress made on the goals in your action plan(s) (if last program review was a PU or CPR) or annual objective(s) (if last program review was an annual or old six-year).

Since submitting the last program review, the Mathematics Department has made meaningful progress on several of the objectives identified in our previous action plan, particularly in the areas of curriculum development, AB 1705 implementation, and expanded student support in transfer-level mathematics.

One major area of progress has been the development of new courses in response to AB 1705 and the changing mathematics placement landscape. The department developed Math 6 with Math 6C as a new precalculus pathway with concurrent support. This work reflected the department's effort to preserve a meaningful preparatory option for students pursuing STEM and calculus-based pathways while aligning our curriculum with state requirements. The creation of Math 6+6C represents a significant step in adapting our course offerings to the post-AB 705 and AB 1705 environment.

The department also developed Math 7C, a concurrent support course for Calculus I. This directly addresses one of the major objectives from the last action plan: to develop and launch a support course for Calculus I. Since Calculus I is a critical gateway course for STEM students, the creation of Math 7C marks important progress toward providing students with additional support while they complete transfer-level coursework. This course is intended to reinforce foundational skills, support students as they adjust to the rigor of calculus, and improve student success in one of the most important courses in the mathematics sequence.

In addition, the department developed Math 55 with Math 55C, a Quantitative Reasoning course and its concurrent support course. This also fulfills a previous action-plan goal, which called for the development of a quantitative reasoning course designed to strengthen students' mathematical reasoning, critical thinking, and ability to apply mathematics in real-world contexts. The creation of Math 55+55C expands the department's offerings beyond the traditional algebra-calculus pathway and provides another option for students whose academic and career goals require strong quantitative literacy.

Overall, the department has moved several important objectives from the planning stage into the curriculum and implementation stage. The development of Math 6+6C, Math 7C, and Math 55+55C demonstrates the department's continued commitment to adapting to legislative changes, supporting students in transfer-level mathematics, and broadening course pathways to better serve the diverse needs of SMC students. These accomplishments represent concrete progress on the department's prior action plan and provide a foundation for continued evaluation and refinement in the next review period.

End of Progress Update Past Action Plans

2. Considering your program's past plans and the developments over the past two years, what challenges and concerns need to be addressed in the next two-year review period?

Considering the department's past plans and the developments over the past two years, several challenges and concerns need to be addressed in the next two-year review period.

A major challenge continues to be the implementation of new mathematics pathways created in response to AB 1705. The department developed Math 6+6C as a new precalculus pathway with concurrent support and Math 7C as a support course for Calculus I. Math 7+7C has seen strong enrollment, likely because more students are now being placed directly into calculus and are willing to enroll in either the standalone Calculus I course or the supported version. This confirms the need identified in our previous program review: as students move more quickly into transfer-level and STEM-level mathematics, the department must provide meaningful support structures to help them succeed.

However, enrollment in Math 6+6C has been lower than expected. When the course was created, the department understood that AB 1705 would restrict or eliminate the traditional Math 2/3/4 precalculus pathway, making a new precalculus course necessary. Since then, the state has allowed colleges to continue offering Math 2, Math 3, and Math 4 in addition to Math 6. As a result, students now have several possible pathways, and many appear to be choosing the more familiar sequence. This creates a new challenge: students and counselors may not yet fully understand the purpose of Math 6, how it differs from Math 2/3/4, and which students would benefit most from this pathway. In the next two-year period, the department will need to work more closely with counseling, STEM programs, and outreach efforts to clarify these options and help students make informed choices.

A related concern is the enrollment pattern in Math 55+55C, the new Quantitative Reasoning course and support course. This course was developed as part of the department's action plan to provide students with a broader mathematical reasoning pathway connected to real-world applications. However, it has also experienced enrollment challenges. The department will need to evaluate whether the issue is course visibility, counseling/advising, transfer applicability, scheduling, student demand, or lack of awareness among programs that could benefit from this course.

Another major challenge is ensuring that students who enter calculus or other transfer-level mathematics courses under AB 1705 are adequately supported. While access has expanded, access alone does not guarantee success. Many students will enter higher-level mathematics courses without the same level of algebraic, trigonometric, or precalculus preparation that students had in previous pathways. The department must continue to monitor success, retention, throughput, and equity data in these courses, especially for students enrolled in supported sections. Continued investment in tutoring, embedded support, Math Lab resources, STEM workshops, bootcamps, and faculty collaboration will be essential.

The department must also continue addressing equity gaps. The previous review identified persistent disparities in success and completion for historically underrepresented students, particularly Black and Latinx students. As the department shifts more support into transfer-level and calculus-level courses, equity work must also shift into these courses. This includes culturally responsive teaching practices, targeted academic support, continued Professional Learning Community work, and regular review of disaggregated data to determine whether new course structures are helping close gaps or unintentionally creating new ones.

A new and significant concern is compliance with updated ADA accessibility expectations for online instructional materials. Mathematics courses rely heavily on videos, PDFs, tables, graphs, formula sheets, handwritten notes, symbolic notation, and online homework resources. Many of these materials are not currently fully ADA compliant. Making them accessible is especially difficult in mathematics because formulas, graphs, tables, and visual explanations often do not translate easily into standard screen-reader formats. In some cases, the technology needed to make mathematical content fully accessible is limited, difficult to use, or not yet adequate for the complexity of the material. This creates a serious workload and resource concern for faculty and the department.

To address this, the department will need institutional support, training, accessible technology, and possibly centralized assistance for converting mathematical materials into compliant formats. Without this support, individual faculty may not have the time, software, or technical expertise required to make large collections of videos, PDFs, formula cards, tables, and online resources fully accessible.

In summary, the next two-year review period should focus on improving implementation of the new AB 1705-related pathways, increasing student and counselor understanding of Math 6+6C and Math 55+55C, sustaining support for students entering Calculus I and other transfer-level courses, continuing equity-focused work, and addressing the major challenge of ADA compliance for mathematics instructional materials. These challenges are not simply course-level issues; they affect advising, scheduling, technology, professional development, tutoring, equity, and the department's ability to provide rigorous but accessible mathematics education for all students.

3. Broadly discuss the most critical resources you anticipate needing to effectively implement the goals in your program's action plan in the next review period. If applicable, your answers here should inform the specific line item requests in your future Annual Resource Requests (ARR).

The most critical resources we anticipate needing in the next review period are related to ADA/accessibility compliance for online instructional materials and Canvas-based course materials. This need affects nearly all mathematics courses because most courses use Canvas to distribute handouts, lecture notes, worksheets, videos, formula sheets, tables, graphs, online assignments, and other digital resources.

Mathematics presents unique accessibility challenges because much of our instructional material is visual and symbolic. Many of our courses rely heavily on PDF handouts, handwritten or typed notes, graphs, tables, formula cards, statistical output, diagrams, and mathematical notation. These materials are not always easily converted into formats that are fully accessible to screen readers or other assistive technologies. Courses such as Statistics, Precalculus, Calculus, and Quantitative Reasoning make daily use of formulas, tables, graphs, and visual representations, so ADA compliance is more complex than simply converting text-based documents.

To address this effectively, the department will need institutional support in several areas. First, we will need access to appropriate technology and software that can help faculty create and convert mathematical content into accessible formats. This may include tools for accessible equation editing, captioning, tagging PDFs, creating accessible tables, writing alternative text for graphs and diagrams, and ensuring compatibility with Canvas and screen readers.

Second, the department will need expert training and technical support. Having an accessibility expert work directly with mathematics faculty would be extremely valuable. Faculty need guidance not only on how to repair existing materials, but also on how to create new materials correctly moving forward. This training should be specific to mathematics, since mathematical notation, statistical tables, graphs, and formula-based documents require specialized knowledge.

Third, the department will likely need dedicated time, staffing, or funding support to complete this work. Many faculty have years of accumulated PDFs, worksheets, videos, exams, review sheets, and instructional handouts. Updating these materials will be a major workload issue. Without release time, stipends, instructional design support, or centralized assistance, it will be difficult for individual faculty members to bring large collections of course materials into compliance while also maintaining normal teaching responsibilities.

Fourth, continued investment in accessible instructional technology and OER development will be important. As the department continues developing and refining support courses, quantitative reasoning materials, and resources for transfer-level mathematics, accessibility should be built into the development process from the beginning. This will help avoid repeatedly converting inaccessible materials after they have already been created.

In future Annual Resource Requests, the department may need to request funding for accessibility software, professional development, expert consultation, instructional design support, faculty stipends or reassigned time, captioning/transcription services, and tools that support accessible mathematical notation, graphs, tables, and online course materials. These resources are essential for ensuring that our courses remain rigorous, student-centered, legally compliant, and accessible to all students.

Instructions for Area Vice President

This section is to be completed by the Area VP Please provide feedback, comments, and observations regarding the department or program's progress update. Your input will help guide next steps and support continuous improvement

N/A

Submission Instructions

CONGRATULATIONS! You have completed the Progress Update! Please save your document in PDF and email it to your Area Vice President for review.

This form is completed and ready for acceptance.

Completed Date: 6/1/2026

Completed By: SOLEYMANI_SAM-SOLEYMANI_SAM