

Mathematics and Computer Science Department

2019-20 PIE Report Narrative

Last edited June 23, 2020

Due to the COVID-19 pandemic, the campus was closed starting March 17, 2020. Math faculty subsequently attended online training (such as FCLT workshops, state-level webinars, YouTube videos, and peer-led workshops), learned new technology (such as Canvas, Zoom, MyLab, ALEKS, WebAssign, ConnectMath, YouTube, and screen-recording software), restructured their classes, revised their syllabi and timelines, and developed their Canvas shells. The initial preparation to go online was accomplished within a short two-week window of time. Once the College closed due to the COVID-19 outbreak, the faculty of the department spent a considerable amount of time in transitioning their classes to Temporary Remote Instruction (TRI). Notably, 100% of math classes were moved to TRI. The MARCS also successfully transitioned to online tutoring.

After the successful transition to online instruction, math and computer science faculty continued their department and campus-wide involvement online via Zoom. Curriculum committees continue to meet during this time. The Corequisite Committee is investigating effective support options for teaching online courses. In addition, the department is still involved in staff development, as evidenced by the weekly Community of Practice sessions which provide a platform for sharing promising practices for teaching online math classes.

With the release of the July 11, 2018 AB 705 guidelines, the Math Department unanimously approved Phase II of the placement and support recommendation system which will grant open access for all students to Math 100, Math 110, Math 120, Math 130, and Math 150. This Phase II model went into effect Summer 2019. A third four-hour AB 705 Open House was held August 22, 2019, which offered a forum for math faculty to discuss the Phase II model.

As AB 705 Math Coordinator and co-chair of the Assessment and Matriculation Committee (formerly known as the SSSP Advisory Committee), David Beydler has been meeting with the Counseling Department, Student Services, IT, Research, and other stakeholders regarding the Phase II placement and support recommendation model.

The Math Corequisite Committee and AB 705 Math Committee continued to oversee the implementation of Phase II. This committee develops and distributes surveys, then summarizes and shares the results of surveys with the department. This committee also keeps corequisite courses and resources updated on the corequisite website. Committee members are the contacts for faculty teaching corequisite courses. The committee is compiling a list of promising practices to share, and is investigating early interventions for students who are struggling in math classes. Late start, 12-week classes are being considered. Members include Debbie

Rivers, Kambiz Khoddam, Melody Summers, Baochi Nguyen, David Beydler, Lisa Morales, Irving Lai, Laura Wohlgezogen, Hoang-Quyen Nguyen, Joe Terreri, Jeff Wakefield, and Dolores Chavez.

Along with open access to entry-level transfer courses in accordance with AB 705, the department piloted four new corequisite courses: Math 11 (support for Math 110), Math 14 (support for Math 140), Math 15 (support for Math 150), and Math 16 (support for Math 160). Instructors teaching all eight corequisite courses participated in ongoing dialogues throughout Fall 2019 and Spring 2020. We expanded our corequisite offerings in both regular semesters and intersessions, beginning Fall 2019. Corequisite student surveys were conducted and tabulated at the beginning and end of each semester for all corequisite courses. Faculty surveys were also conducted for corequisite and traditional courses. All corequisite information and resources can be found at <https://www.mtsac.edu/math/corequisite>

David Beydler has compiled, organized, and presented Phase II data to the department and college. He developed a centralized Research & Data webpage, which houses all of our survey data and other research related to the department: <https://www.mtsac.edu/math/data>

Based on the huge demand for computer science courses, the Math & Computer Science Department was granted one full-time Computer Science hire. Scot Childress, Horia Pop, Karla Rivas, and Tuan Vo were voted by the department to be the hiring committee. Due to the COVID-19 crisis, this position was placed on hold during the Spring. The College is moving forward with hires during the Summer. The committee is looking forward to filling this much needed position in order to help meet student demand.

The Math & Computer Science Department hired two new full-time math faculty: Krysten DeWilde and Hoang-Quyen Nguyen.

Martha Hall has completed her Master's degree work and will be joining the Department from the Learning Assistance Department beginning Fall 2020. There is currently no plan for Jannie Ma to transfer from LERN to Math & Computer Science. Eric Kaljumagi continues to have 100% reassigned time as President of CCA. We currently have no office space for Martha or Eric.

The revised AS-T in Mathematics Degree was finally approved. The new degree will be listed in the 2020-2021 catalog. It will now have Math 260 and Math 290 as an option for completion in lieu of Math 285. This will allow many students who have been anxiously waiting to have a variance for Math 285 to finally be able to receive their AS-T degree.

Karla Rivas supported the International Student Orientation Summer 2019 and Winter 2020 by presenting information about the math classes offered at Mt. SAC, helping the students complete the AQ, and answering questions for students seeking eligibility for Math 140, Math 160, and Math 180.

There will be insufficient office space for faculty hires starting Summer 2020. We currently have no offices for Eric Kaljumagi, Martha Hall, and the new Computer Science hire. Further

office space is needed. Several ideas include renovation of the adjunct office or conversion of the conference room into a faculty office. The Math & CS Department's vision was to have all full-time and adjunct faculty in close proximity to classrooms, tutoring centers, and offices in building 61. This centralized model makes it easy for students to take advantage of faculty office hours. The model also allows improved faculty interaction and generally promotes a cohesive program. There are more opportunities for full-time faculty mentoring adjunct and new-hires, discussions about best practices, and impromptu brainstorming sessions.

The Adjunct Hiring Committee hired four new adjunct faculty in August 2019. This brings the current number of adjunct faculty to 57. There are still plans to increase the adjunct pool for computer science and statistics courses.

Janet McMullin is the Adjunct Faculty Coordinator. This is a re-assigned time position that she has been involved with for three years. She helps the department chair with the evaluations of 57 adjunct faculty. As part of her duties she also holds office hours for the adjunct faculty, presents at the Natural Sciences Division Adjunct Faculty Seminar twice a year, and helps adjunct faculty with concerns and issues that arise during the semester.

Paula Young and Lisa Morales led another successful Community of Practice on August 20-21, 2019. This Community of Practice was open to other departments after Math & Computer Science faculty were given an opportunity to register. Several faculty from other departments registered for it. The response was overwhelmingly positive.

Paula and Lisa have held three smaller CoP events throughout the Fall 2019 semester. One was on how to make videos for your students to use outside of class. This was attended by members from multiple departments in our Division. The main push for this was to free up class time so that more collaborative learning could occur. They also held two sessions for Math faculty to discuss how the implementation of AB 705 was going and to share different teaching and classroom strategies that may be beneficial for our current and future students. Lisa Morales and Paula Young also set up a OneDrive folder to share materials among faculty members, including Community of Practice documents, PowerPoint presentations, and instructional materials.

Debbie Rivers continued to organize the department's Math Information Table (MIT), which was staffed by math faculty, counselors, and Math Club members during the first weeks of Fall 2019 and Spring 2020. The goal of MIT is to assist students in finding open courses and classrooms, and provide a positive and welcoming first experience in building 61.

Hoang-Quyen Nguyen, Baochi Nguyen, Debbie Rivers, Kambiz Khoddam, and David Beydler participated in the September 21, 2019 California Acceleration Project's "AB 705 and High Challenge, High Support Classrooms in Math" conference at Cerritos College. Also, Jimmy Tamayo and David Beydler participated in the February 28-29, 2020 CAP conference in Sacramento.

Jennifer Turner continued to maintain and update the Math & CS Department's website, as well as the shared Canvas repository. This included uploading all faculty resources for corequisite courses, keeping corequisite folders current, and updating course outlines, SLOs, and CMOs. Jennifer was a great resource for faculty as they made the transition to temporary remote instruction.

Rene Pyle and James Abbott have implemented changes to the MARC and T-MARC as of Fall 2019. In addition to tutoring pre-transfer-level math classes, the MARC now also tutors Math 130 and Math 150, which opens up the T-MARC for a potential influx of statistics students. They also merged the names MARC and T-MARC into MARCS on the department website. With the number of developmental courses decreasing and the number of transfer-level courses (especially statistics) increasing, they are monitoring student usage to determine if any additional changes need to be made.

Dual enrollment courses were held at IPoly High School, Bonita High School, Village Academy, Ganesha High School, and South Hills High School. Erik Pachas taught Math 110 and Math 130 at IPoly. Tim Wes taught Math 180 and Math 181 at Bonita. William Saravia taught Math 110 at Village Academy. Billy Lam taught Math 110 at Ganesha. Jose Menjivar taught Math 110 at South Hills. Erik Pachas will be teaching Math 110 at the Early College Academy this Summer. We would like to continue the partnership that we have developed with these high schools and look forward to determining if we can extend our dual enrollment offerings to other interested high schools in the area.

Members of the math department (Joe Terreri, David Beydler, Marissa Case, Irving Lai) worked with ABE faculty (Donna Necke and Lesley Johnson) to develop a plan for how Continuing Education and the Math & CS Department could better cooperate with each other to help our students. A main outcome was that the Math Department approved a committee-created webpage for our department website showing various support options for our students, with how Continuing Education courses can help as a featured option. The link to this webpage is now being included in the syllabus of many faculty members:
<https://www.mtsac.edu/math/support>

As the Math & CS Department continues its ongoing relationship with Bridge and Pathways to Transfer, these two programs have quickly adjusted to students' needs as a result of AB 705. Jeff Wakefield is now the new Bridge liaison and receives reassigned time for this position. He continues to organize and encourage the teaching of Pathways and Bridge classes (including the new First-Year Experience Program which involves Pathways cohorts 1 – 4). Both programs are offering more transfer-level courses, particularly Math 110, Math 130, Math 150, and Math 160, with many being linked to support courses. Also, Pathways to Transfer now has cohorts that typically start with Math 71 (as opposed to Math 50 or Math 51 in previous years) and run through Spring, usually ending with Math 110 or Math 160.

Discussion for the need for an additional computer lab facility and/or an additional CSCI lab in building 61 continued. 61-1420 continued to be discussed as a possible new computer

classroom. Another idea is to use 61-3311 for computer science classes since that computer lab appears underutilized. 61-3311 was also discussed as a possible computer lab to use for hybrid courses and/or ALEKS usage. This would free up classrooms for traditional classes. This is an idea that can be of benefit since the classrooms in building 61 are being more highly utilized due to corequisite courses.

Mariano Arellano served as advisor to the Math Club, and was assisted by Hoang-Quyen Nguyen and Baochi Nguyen. The club held Integration and Factoring Rallies in the Fall, and held a final exam tutoring event. Club members also helped staff the Math Information Table during the first week of each semester. The Math Club has also been looking into opportunities for Mt. SAC Math Club students to volunteer as tutors at the local elementary and middle schools. They are currently in the planning phase of this tutoring project and hope to have something established by Fall 2020.

Our Computer Science Club, under the guidance of Tuan Vo, is very active this year. They meet twice a month and provide weekly workshops and tutoring in Computer Science. A few members participated in some local hackathons in Riverside and San Diego. The club also organized and ran the local Hack Day 14-hour event at Mt. SAC on November 16, 2019. Professor Dan Chen helped out with the event. About 20 Mt. SAC students attended the event and shared that they really enjoyed the experience.

Tuan Vo applied and received a grant to attend a conference in Washington DC on February 3-5, 2020. It is a conference by American Society for Engineering Education's (ASEE) on Increasing Participation of Minority Serving Institutions in the National Science Foundation's Computer and Information Science and Engineering programs (NSF CISE).

Horia Pop accompanied 8 students to Riverside Community College to compete in the regional International Collegiate Programming Contest (ICPC). Two teams solved one problem each. The students who participated were very happy with their results and that they had an opportunity to compete. Horia also organized the 2019 Putnam Exam. Nine students took the exam over the morning and afternoon sessions. This national exam was held on December 7, 2019. The morning session was proctored by Horia and the afternoon session was proctored by Krysten DeWilde.

Janet McMullin served on the Kepler Distinguished Lecture and Scholarship Committee. This was her fourth year of involvement with this event. She is involved in the collection and organization of the silent auction and raffle. Each year Janet organizes the Math & CS gift basket donation for the silent auction. The money raised goes directly to help the Mt. SAC Kepler Astronomy Scholarship program for deserving students.

Under the coordination of the Math and Computer Science Scholarship committee, the Math & Computer Science Scholarship awarded 6 scholarships at \$600 each. Numerous math faculty contribute financially to Math and Computer Science student scholarships and serve on the selection committee.

Numerous math faculty members serve as student club advisors, Faculty Association and Academic Senate representatives, Academic Senate Executive board representatives, and other campus-wide committees.

The Department joined discussions with the Division and other departments in the Division regarding the new science building slated to begin construction in 2024. The new building would potentially house the STEM Center, the NSD Computer Lab in 61-3311, the Anthropology classroom in 61-2312, the Biology lecture classroom in 61-2320, and the Astronomy classroom in 61-1420. It may also house the Division office. This would free up space for six to seven classrooms, two computer science classrooms, and potentially new faculty offices. Due to the COVID-19 situation, planning for the building has been placed on hold.

Debbie Rivers won the Academic Senate Outstanding Faculty Member of the Year award.

Scott Guth was named "Carnegie National Faculty" for 2019.

Tuan Vo was selected to be honored at the Educator Recognition Event at UC Irvine on May 14, 2019. He was nominated by a former student, Kevin Ngo, as the teacher who had the most significant impact on their academic performance and successful entrance into the University of California, Irvine.

Daniel Bortis was the recipient of the Faculty Association's 5th Annual Adjunct Faculty Award this year.

Baochi Nguyen has been named the STEM Center Faculty Coordinator effective Spring 2020.

The Torchbearer Award was given to the AQ (Assessment Questionnaire) Team, which included David Beydler and Debbie Rivers.

Discussions about lower textbook costs to students have been considered. Textbook committees are including LibreTexts, MyOpenMath, as well as OpenStax in their adoption considerations.

The AB 705 Math Committee has completed a draft of a Mountie Math Students Poster to promote growth mindset attitude towards math. These posters will be displayed around building 61.

Lisa Morales and David Beydler attended and helped organize the CMC^3-South Conference on October 12, 2019 (Coastline College).

The department continues to pursue increasing Math 110 from 3 units to 4 units (VPI—Richard Mahon has gone on the record in support of this request.)

The Calculus Committee (chaired by Tetsuro Kojima) proposed a corequisite course for Math 181. This corequisite will be numbered Math 18B. It has been approved by the department and will be going through the WebCMS process Spring 2020. Math 181 + Math 18B may be offered as early as Fall 2020.

Math 100 has been revised. Kambiz Khoddam and Debbie Rivers worked with Jamaika Fowler and submitted Math 100 for IGETC approval in December 2019. This course has now been granted IGETC approval (Area 2A) effective Fall 2020, and will give non-STEM majors another option to satisfy their transfer-level math class.

The Movin' Math Members kept busy walking in the Fall Festivals of America Challenge, the New Year's Celebration Challenge, and the Epic Walks Around the Globe Challenge. Each of these challenges lasted 6 weeks. The M³ team participants logged in over 12 million steps. The M³ team consisted of Paula Young, Laura Wohlgezogen, Michelle Johnson, Baochi Nguyen, Lisa Morales, Melody Summers, Jimmy Tamayo, Hoang-Quyen Nguyen, Janet McMullin, Karla Rivas, Dolores Chavez, Debbie Rivers, and Bren Estrada.