Program Mission:

No changes

Program Changes:

1. Administration decided to accept all applications for CCAP, and approve any instructor that meets minimum qualifications. This has increased our CCAP load. We do not have anyone to oversee this program with the increase, so this program is currently unmonitored by the math department.
2. We have changed Math 123 to the common course numbering system STAT C1000.
3. We have changed our support classes. They will now be linked to a parent class. Both parent and support classes will be taught by the same person and enrollment in both classes will be mandatory. Hopefully this will help enrollment in support and close the communication gap between support and parent class.
4. Several instructors are using the "Building Thinking Classrooms" model and having success.

Two year program map:

In place and no challenges.

Staffing changes

1. Silvia Gutierrez went on maternity leave and Ben Aguayo took over for her in the math center.
2. Dom DalBello went on sabbatical and Laurene Lee took over as Chair.
3. Lori Coulter retired and Dawn Fuller replaced her.

What were your program successes in your area of focus last year?

1. We successfully implemented "Building Thinking Classrooms" into several classes. We had several sessions through the summer with a group of 7 faculty that discussed classroom innovation. We met several times throughout the year and found this implementation to greatly increase student engagement and learning.
2. Several faculty went to the AMATYC conference.
3. We implemented an 8 week Math 100 course. We will make a few changes next year but overall it was successful.
4. Implementation of OER for Math 100 and online sections
5. Calculus support data showed that it was successful. This was our first support class that showed success. We are changing other support courses to model after this one.
6. We adapted to more changes including Math 100's COR.
7. StatCrunch was successfully implemented in a few stats classes.

SLOS:

1. Please summarize key results from this cycle's assessment: We had low instructor participation, data entry was confusing and difficult, and problems were not tailored enough to each specific class.

2. Please summarize your reflections, analysis, and interpretation of the learning outcome assessment and data: We talked about our low instructor participation and linked that partially to the difficulty and confusion in entering data. We also talked through how to make the problems more user friendly to different instructors with differing approaches and teaching styles. We were not able to draw many meaningful conclusions from the data, but spent time discussing how to change this for next year.

3. Please summarize recommendations and/or accolades that were made within the program/department: Our recommendations for change - Karina will create a Google Sheet that we can all edit and is easy to understand and enter data. Dawn has linked the document to our minutes and agenda so it is easily accessible to everyone. After everyone enters their data for their classes, Karina will enter the data into SPOL. We also decided to allow instructors to change problems with consensus among others teaching the same classes as long as it was a similar problem. Hopefully being able to change format and some small presentation details will make the problems more familiar to students and allow them to be more successful. Every instructor's name is on the spreadsheet with the classes they teach and hopefully that will give a bit of peer pressure to enter data numbers. We will assess Spring's numbers this fall.

4. Please review and attach any changes to planning documentation, including PLO rubrics, associations, and cycles planning: No significant changes to the planning and cycles or rubrics. We will continue to assess two PLOs per semester.

DL

1. Which courses were reviewed for regular and substantive interactions (RSI)? We are still setting up our system. This semester we discussed and voted on how this evaluation will be implemented. We randomly drew classes that will be assessed next fall and also randomly assigned instructors that will be evaluating. We will cycle through evaluators and continue to randomly draw classes. If at the end of our five year cycle we have an imbalance of the type of class evaluated, we will compensate for the imbalance in year six.

2. What were some key findings regarding RSI? a. Some strengths b. Some areas of possible improvement? What is the plan for improvement? These questions will be addressed in next year's program review when we start reviewing courses.

Validation:

We will identify a validation team in year six.

Curriculum Design Questions

1. What data were analyzed and what were the main conclusions?
    a. Distance Education - We analyzed preparedness, engagement and discussion participation. In Math 131, we found these to be the most underprepared students. They don't communicate and do not use the "message instructor" option when they need help. In Math 141, there is a higher level of engagement, but these students are typically more prepared for STEM math classes. Math 123 has very limited discussion participation.
    b. Math 100 - our "data"/goal was that we needed to get Math 100 to articulate with the new changes.
    c. Thinking classrooms - we measured student feedback on engagement, understanding, attendance and retention. All of this feedback came back overwhelmingly positive. Students enjoy working on the whiteboards, they learn from hearing their peers explain material. This process engages embedded tutors more effectively and more students receive help than in a traditional style. Engagement was hugely increased. In one class when given a problem to work on their own, there were about 10/35 students engaged. When given a problem to work on the whiteboard about 25/35 were engaged. Retention seems to increase and understanding of difficult topics is increased with the increase of discussion, debate and problem solving.
    d. StatCrunch - we analyzed the effectiveness of data use in stats through StatCrunch compared to other programs. It is much more effective and efficient than other forms of tech and is able to handle preset data to move class along in a more efficient way. Group work seemed to be more challenging and test monitoring increased, but overall more pros than cons.
    e. Math 181 Support - We annalized student surveys, student grades based on who took support and who did not. The data showed pass rates significantly higher for students who took Math 181 with support than those who took Math 181 without support. This was the first time we have had successful data in a support class. Student surveys showed that the review topics presented were helpful and they appreciated the extra time.
2. Based on the data analysis and looking through a lens of equity, what do you perceive as *challenges* with student success or access in your area of focus?
    a. Distance Education - Students often enter DL math not understanding that they will need to work. They are underprepared and they do not consistently do the work assigned.
    b. Math 100 - We are working through challenges with Math 100 moving from a 16 week course to an 8 week course. We plan to adjust some days and time and see if we can get better communication regarding the expectations and opportunities. The format of the new class search and course details is very challenging. Students have a hard time finding the relevant information especially when they are operating without support. The messaging to students about the term 2 opportunities did not permeate the needed demographics.
    c. Thinking classrooms - There is social anxiety for some students that makes group work challenging. People are averse to change. Classrooms are not equipped for this teaching style. Our classrooms are too small and there are not enough whiteboards.
    d. StatCrunch - We have tech needs in this area. It would be nice in computer labs to have control over students browsing etc. It would help if we could allow them to only have the tab for StatCrunch open during exams. Also, as we expand our use of technology we have great need for another computer lab. We currently have one classroom that we share with all our

instructors that use computers as well as all the computer science classes. We need more space.
   e.   Math 181 Support - Normal classroom challenges. Nothing unique from any other class.
3. What are your plans for change or *innovation*?

   We are planning on doing the topic of Academic Service and Support next year. We plan to center this time around the change in our support classes. We have three Math 123 support classes, one for Math 131, one for Math 135 and one for Math 141. These classes will be chained to parent classes that are all taught by the same instructor. Enrollment in the support classes will be required for the chained parent class. In the fall we will discuss any other ideas for innovation for this topic. We will ask support classes to require hours for students to serve in the math center. We plan to offer a hybrid 105 class in the spring. Anna and Chris are working with the MESA STEM center to offer a boot camp for students that are not prepared for the math class that they are required to enroll in. We will continue to offer the athlete section of Stats.

4. How will you *measure* the results of your plans to determine if they are successful?
   a.   We will gather data as to the success of these students and compare it to the classes that did not have support. We will discuss the possibility of student surveys in these classes.
   b.   We will track enrollment in the math center to see if support classes up enrollment.
   c.   Amanda will report the success of 105 hybrid class. We will survey students.
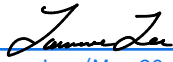
5. What practices are used in your program's DE courses that support or demonstrate regular and substantive interaction?
   a.   Email, contact instructor, instructor videos, discussion boards, quizzes with written feedback, exams with feedback, homework.

6. What resources are needed for your program this year? E.g. Facilities, Equipment, Staffing, Technology, other?
   a.   We desperately need more classroom space. We need updated and bigger rooms. We have instructors moving groups out into the hallway because our classrooms can not accommodate the innovations in teaching that we are pursuing.
   b.   We need more classrooms. Our classroom space is maxed out in the morning hours and we are not able to add any more classes.
   c.   Better ventilation in our classrooms and climate control.
   d.   Ceilings that are falling down need to be repaired and updated.
   e.   Technology in our classes needs to be updated and math faculty consulted for installation.
   f.   Leaking roofs need to be repaired.
   g.   We need an additional computer lab. We currently share one lab with several math instructors as well as the computer science instructors.
   h.   We need corner to corner whiteboards in all our math classrooms.
   i.   Math Center needs to be enlarged.
   j.   More study rooms in Math Center for students.
   k.   Math CCAP Coordinator with release time.

l.   Inspection of carpeting in all classrooms for safety (carpet ripping and buckling, tripping hazard) and replace/repair where necessary.

_____
Laurene Lee (May 29, 2025 13:04 PDT)


_____
Sean Abel (May 29, 2025 13:12 PDT)

| Dept | Program | Source | Fund | Initiative (Objective) | Resource Need | Requested Item(s) Please Include per item cost | Funding Request | Program Faculty Lead Priority | Estimated Equipment Cost |
|---|---|---|---|---|---|---|---|---|---|
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| Dept | Program | Source | Year | Initiative (Objective) | Resource Need | Requested item(s) please include per item cost | Funding Request | Program Priority | Lead Priority | Estimated Equipment Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| English | English/Reading | Yearly Planning work | 2022/2023 | EN ObJ-4 | Instructional Supplies | Please contact to this office | One-time | | 1 – High | $ 2500 |

| Dept | Program | Source | Year | Initiative (Objective) | Resource Need | Requested Item(s) | Funding Request | Program Priority | Lead Priority | Estimated Equipment Cost |
|---|---|---|---|---|---|---|---|---|---|---|
| English | English (Student) | Yearly Planning cycle | 2023/2024 | ITS SMs: n 1 | Staffing | New FT faculty | Ongoing | | 3 = High | $ |

| Dept | Program | Source | Year | Initiative (Objective) | Resource Need | Requested Item(s) please include per item cost | Funding Request | Program Priority Level/Priority | Estimated Equipment Cost |
|---|---|---|---|---|---|---|---|---|---|
| English | English/Reading | Yearly Planning and | 2024-2025 | PR OBJ – 3 | Technology | New software program | One-time | 1 = High | 0 | $45000 |
| Mathematical Sciences | Math | Yearly Planning Only | 2024-2025 | | Technology | Math needs a dedicated computer lab so we do not | One-time | 1 = High | $200/my first |
| Mathematical Sciences | Math | Yearly Planning Only | 2024-2025 | | Technology | We would like updated technology in all math classrooms and for faculty to be contacted before has | One-time | 3 = Low | $1000/classroom |

Building maintenance, furniture requests, repairs      **FACILITIES**

| Dept | Program | Source |
|---|---|---|
| English | English Rhetoric | Yearly Planning and Core Topic |
| Mathematical Sciences | Math | Yearly Planning Only |
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| Year | Initiative (Objective) Reference | Resource Need |
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| 2022-2023 | ER OBJ.- 3 | Facilities |
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| Requested Item(s) please include per item cost | Funding Request | Program Faculty Lead Priority |
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| Need air conditioning | One-time | 1 = High |
| We would like more classrooms. $200/square foot | One-time | 3 = Low |
| We need more space in our current classrooms for student group work and an updated work space. $200/sq foot | One-time | 1 = High |
| More student reservable group work areas with white boards - can be associated with math center. $200/square foot | One-time | 1 = High |
| Air Conditioning in M-400 building $14,000 | One-time | 2 = Medium |
| Leaking roof in M-400 repair $5000 | One-time | 1 = High |
| Dedicated computer lab for math that is not shared with computer science $200/square foot | One-time | 2 = Medium |
| Corner to corner whiteboards in all math classrooms for student group work $300 per board | One-time | 1 = High |
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| Dept | Program | Service | Year | Initiative (Objective) | Resource Need | Requested item(s) please include per item cost | Funding Request | Program/Faculty Lead Priority | Estimated Equipment Cost |
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# Math PReview 2024-2025 and resource

Final Audit Report        2025-07-17

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