

1. Commendations

The program review team identified strengths mostly related to the faculty and their willingness to innovate to improve success rates. They found our faculty to be eager to engage with the campus community to address student success in mathematics. They recognized our faculty as student-focused and willing to implement student-centered pedagogies. The faculty is gratified to see their commitment has been recognized.

2. Recommendations

Recommendation 1: Implement a tenure process for developmental math faculty, which may include a need to reorganize the program into a department that includes other courses.

- Agree. Faculty have felt their voices are stifled. A freer exchange of ideas and proscriptions has great potential for improving the effectiveness of the department. As an example, when the TERM program was proposed, the opinions of the developmental mathematics faculty were not sought. The expertise of the faculty could have improved decision-making related to the adoption and implementation of the program. The developmental mathematics faculty are very willing to work with administration to set up a tenure process and establish stronger job security.
- Action Plan. We cannot move forward on this recommendation without the support of administration. In the interim the faculty will research institutional policy and examples of other developmental mathematics departments and create a proposal for the administration by the end of Fall 2014 semester.
- Assessment of Action Plan. Evidence will be the completed proposal at the end of Fall 2014 semester.

Recommendation 2: Require students to complete or place out of their developmental mathematics courses before they begin their upper division courses.

- Agree. Developmental Math faculty have been discouraged by the removal of the APP restrictions, and previous structures that have required students to complete developmental mathematics early. We are interested in working with administration to identify alternate approaches to encourage students to complete their math courses.
- Action Plan. Again, the administration needs to be involved in a any wide scale policies – particularly restrictions related to enrollment. Developmental mathematics is target marketing to students this summer, and ongoing, to educate students about the importance of completing math early. We will take the lead to bring together key players at the institution to discuss options to get students into math early.
- Assessment. This action plan will have been successfully implemented when the marketing campaign has begun and when a campus wide conversation (possibly a committee) has begun.

Recommendation 3: Students should be dropped from the course at 3 weeks if they have not shown up or logged in.

- Agree. If students are not participating in a course, they should not be retained on the rolls. The large numbers of students who fall into this category have a great effect on course pass rates. It is possible this problem will resolve itself as students

are no longer forced to register for classes in which they have no intention of participating.

- Action Plan. Monitor this problem over the next year and collect data for analysis.
- Assessment. In one year we will have data to analyze and determine if this recommendation should be pursued.

Recommendation 4: Define Quantitative Literacy and backwards map the required developmental content. Develop appropriate conceptual curriculum to prepare students for QL.

- Agree. This recommendation is innovative and timely in the current culture of mathematics education. However, unless department reorganization takes place, as described in Recommendation 1, the developmental mathematics program is limited in the ability to affect change to quantitative literacy courses.
- Action Plan. Continue to develop the Pathway course as a model for possible changes in other QL tracks.
- Assessment. Student success in the Pathway course will be evidence of action completed toward the implementation of this recommendation. Data analysis of student success in QL following completion of the pathway course will be part of this assessment.

Additional Recommendation 1:

- Agree and disagree. A summer bridge or boot camp is needed for incoming students. However, experience has shown that the majority of our incoming students do not fall into the category described by the review team, of needing a quick, intensive review of the content. Those who fit this description do have the option of using Fast Track to move through a quick review of content. Most incoming students are needing more than a review. Also, computer-based summer program is not ideal for our incoming student population. They need to learn with pedagogies that are more likely to motivate them to learn what has always been difficult for them to learn. Currently, students can complete an intensive summer program in a second block flipped summer course.
- Action Plan. The department is collaborating with student affairs and Gear Up to develop a number of boot camps targeting differing needs of incoming students this summer. The populations being targeted are incoming freshman who need to improve placement and incoming freshmen who need to improve basic math skills prior to starting pre-algebra.
- Assessment. The summer bridge program will include an assessment plan based on further design. The action plan will be considered successful when the summer bridge programs are operating.

3. Plans Beyond Program Review Team Recommendations

Developmental Mathematics is working on a number of projects at this time.

- Communications Plan – the most urgent and immediate need is to communicate important messages to students including, but not limited to:
 - Delay math. Delay graduation. We are creating a poster campaign to encourage students to register now for their dev math and not put it off.

- Choose the math class that is right for you. Students need to know about the options they have in courses and delivery methods and know how to choose the class that best meets their needs.
- Scale up Pathway classes
 - Offering 13 sections Fall 14
 - Professional development for instructors wanting to teach Pathway
 - Finalize the curriculum and submit to curriculum committee for official approval.
- Scale up flipped courses
 - Secure classroom space so we can offer more flipped courses.
- Find or develop curriculum for algebra track that allows conceptual and contextual understanding in addition to procedural fluency.