

: _____ Math (See list below) _____
: _____ AY2015-2016 _____
: _____ Susan Moosai _____

MAC1105: College Algebra
MAC1114: Trigonometry
MAC1140:

Examinations in each of the selected courses will include embedded questions from the questions pool, and the students' performance on these items will be used to determine whether the program has reached its criterion for success. Students will not be informed as to which are the embedded questions. If the course does not have a comprehensive examination, embedded questions will be used throughout the term on examinations.

The question pool and student learning outcomes will be evaluated annually by the faculty

59% correct in fall 2015 and 55% correct in spring 2016; and outcome #3 had 64% correct in fall 2015 and 71% correct in spring 2016. All sections were on a 2 + 2 model, in which students had 2 hours of lecture per week and were required to spend 2 hours per week in the computer lab, where they could receive immediate help and feedback. All outcomes were close to meeting the criterion for success, and there was little variation between semesters. The committee decided that no action is needed at this time.

In MAC 1147, outcome #1 had 78% correct in fall 2015 and 59% correct in spring 2016; outcome #2 had 56% correct in fall 2015 and 59% correct in spring 2016; and outcome #3 had 55% correct in fall 2015 and 48% correct in spring 2016. All sections were on a 3.5 + 2 model, in which students had 3.5 hours of lecture per week and were required to spend 2 hours per week in the computer lab, where they could receive immediate help and feedback. All outcomes were close to meeting the criterion for success except outcome #3 in the spring semester, for which no explanation was available. The committee decided that no action is needed at this time.

In MAC 2233, outcome #1 had 55% correct in fall 2015 and 60% correct in spring 2016; outcome #2 had 58% correct in fall 2015 and 58% correct in spring 2016; and outcome #3 had 52% correct in fall 2015 and 51% correct in spring 2016. The criterion for success was clearly not met for all outcomes except outcome #1 in the spring semester, for which no explanation was available. The committee decided that these results needed to be looked into further for the upcoming year.

In MAC 2311, outcome #1 had 48% correct in fall 2015 and 54% correct in spring 2016; outcome #2 had 75% correct in fall 2015 and 35% correct in spring 2016; and outcome #3 had 85% correct in fall 2015 and 8% correct in spring 2016. The criterion for success was clearly not met for all outcomes except outcome #3 in the fall semester, for which no explanation was available. The committee decided that these results needed to be looked into further for the upcoming year.

In MAC 2312, outcome #1 had 71% correct in spring 2016; outcome #2 had 72% correct in spring 2016; and outcome #3 had 55% correct in spring 2016. No results were ever collected for Fall semester. The criterion for success was met in the spring except for outcome #3, in which it was nearly met. The committee noted that this is not a coordinated course and does not have common exams; the committee recommends to the department chair that some level of coordination (including a common final exam) be initiated in the near future.

In MGF 1106 and MGF 1107, no data was available for fall 2015 or spring 2016. In the fall semester, this was due in large part to the fact that instructors were not coordinated and as such no embedded questions were ever included in their finals.

The committee has decided that these two courses should be coordinated (as most other mathematics courses in the IFP) and recommends to the department chair that a coordinator be appointed.

immediate help and feedback. STA 2023 underwent change in textbook and mathematics software during the 2014-2015 academic year, so some variation over the previous year's results was expected. The criterion for success was clearly met (and exceeded) for all outcomes except outcome #3 in the fall semester, which was close to meeting the criterion. The committee decided that no action is needed at this time.

(What do the results mean to you?)

Recommendations for Improving Assessment Processes.

The committee discussed the continued use of practice tests to ensure students get an early feel of time and implied pressure that they might experience on an exam or the final. Assigning practice tests for credit and ensuring that help is available is currently being considered. These tests should be designed to be slightly longer and harder than the actual exam. Requiring that students achieve a certain score on the practice tests might help improve performance and was discussed by the committee. Getting students started early on doing homework is crucial, and stratagems for accomplishing this were discussed.

Review sessions for exams are still scheduled on a course-by-course basis. The committee discussed working with the Math Learning Center to implement general reviews outside of the classroom for midterm exams in all IFP mathematics courses.

Recommendations for Improving Student Learning.

The shift to the 2 + 2 format in many courses seems to have been successful, but more work is needed in order to meet the criterion for success consistently, and thereby attain the desired program improvements. This is the second year the department has begun offering MAC 2233 in the 2 + 2 format, although sufficient computer lab space has been difficult to find, and an unintended co

classes. Follow-up data is needed.

MAC 1140, MAC 1114, and MAC 1147 were reworked (change of software, textbooks, and format of course), and results appear to be very promising. The committee does not advocate further changes at this time but would like to see another year of data to make sure that the improvements continue. STA 2023 was also extensively reworked (change of software, textbooks, and format of course as well), and results appear to be very good (especially in spring). The committee is pleased with the current structure of the course.

The committee noted that online sections of IFP courses frequently have lower success rates than on-campus classes. Course coordinators are already overworked with the on-campus classes and have little time to devote to online sections which have different needs. The committee recommends that the department chair appoint a separate eLearning coordinator who can work with instructors in online classes and facilitate help from FAU's eLearning office.

To better support the learning outcomes of the general education curriculum, the committee recommends adding material on ethics: best statistical application for analysis and interpretation of statistical results. This topic could be discussed in MGF 1106 during an introduction to statistical analysis and more fully handled in STA 2023. Students could be reminded of the need to interpret and present results in an intellectually honest manner; perhaps a unit on the "use and misuse of statistics" could be added to these courses. The chair of the Assessment Committee for IFP will meet with the course coordinators to initiate discussions.

(e.g., rubric, sample items)

Sample items and data files are available on the Core Curriculum Committee V: drive and are available upon request.