

Math Prep Express: MAT0055 and MAT0056



Broward College

- ▶ Third largest college in the Florida College System.
- ▶ Over 67,000 students enrolled annually.
- ▶ Diverse student body.
- ▶ Certificates, associate degrees and select bachelor's degrees.
- ▶ #3 in the nation in associate degrees awarded to minority students.
- ▶ About 65% begin in developmental education (more than half in math).

Math Prep Express Purpose

- ▶ Reach out to those students who missed the cutoff score for MAT1033.
- ▶ Enter into MAT1033 without having to go over the entire course (MAT 0028).
- ▶ 1 credit & 2 credit classes.
- ▶ Alternative course individually tailored to their specific needs based on the PERT and PERT Diagnostic Test results.
- ▶ Test out of their strong areas and work on their weaknesses.

Original Course Entrance Criteria

- ▶ PERT score between 109 – 112.
- ▶ PERT Diagnostic to be taken for course placement and course load (individual course competency plan).
- ▶ Students who scored 0-24 on the PERT Diagnostic were eligible for MAT0056, the two-credit course.
- ▶ Students who scored 25-50 on the PERT Diagnostic were eligible for MAT0055, the one-credit course.

Course Development

- ▶ Mini grant requirement: create a self-paced modular course and place students into competencies according to their PERT Diagnostic results.
- ▶ Included all of the Florida State Competencies not tested on the PERT Diagnostic.
- ▶ Due to classroom space constraints, courses were delivered in Session 4 (second 8-week session) as blended/online with only three face-to-face meetings. Communication was mainly by email.
- ▶ My Math Lab was set up as a six-module course.
- ▶ Each student was given a personalized course competencies checklist that included all of the Florida State Competencies.

▶ Sample Course Competencies Checklist for Module 5.

Module 5		
	Course Competencies	Navigation Bar Title
	Simplifying Radical Expressions (MDEUCC16)	Radicals CC16
	Monomial Operations (MDEUCC17)	Monomials CC17
✓	Rationalize the Denominator (MDEUCU17)	Rationalize CU17
✓	Pythagorean Theorem (MDEUCU18)	Pythagorean Theorem CU18

First Semester Results

- ▶ Passing Rate: 78%
- ▶ MAT0055 (one credit): 5 students
 - 2 A's
 - 1 B
 - 2 C's
- ▶ MAT0056 (two credit): 4 students
 - 1 B
 - 1 C
 - 2 F's

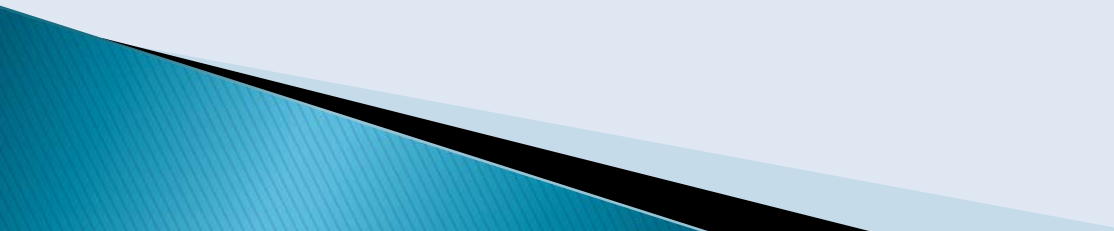
Second Semester Changes

- ▶ In order to increase enrollment:
 - Expanded the required PERT scores from 109-112 to 106-112.
 - Students who did not pass the MAT0028 Final Exam (still use as Exit Exam) but had a passing average were now eligible to take the PERT Diagnostic and enroll in MAT0055 or MAT0056.
 - Students who exhausted their three attempts in MAT0028 were eligible to take the PERT Diagnostic and enroll in MAT0055 or MAT0056.
- ▶ My Math Lab was reorganized. Module pre-tests place the students into an individualized learning plan.
- ▶ Offered course in Session 3 (12-week session) and increased teacher/student contact hours, eight face-to-face meetings instead of only three.

Second Semester Observations

- ▶ One great success story: One student completed the course in its entirety in 6 weeks by mastering all modules with an 100%. That student scored a 97% on the Final Exam.
- ▶ The majority of students have fallen behind a pace that would promote success.
- ▶ Attendance is poor. An average of 45% students have attended every class.
- ▶ This semester's passing rate is expected to be poor.
- ▶ We feel the decline in attendance and online participation is due to our lax entrance criteria.
- ▶ The course was designed for those students at the higher end of developmental math not for those who had multiple unsuccessful attempts at MAT0028.
- ▶ We are still optimistic. Our observations have given us new and better ideas for these courses.

The Future-Fall Semester 2013

- ▶ Try the course with ALEKS 360 using their Intermediate Objectives feature as modules.
 - ▶ Set due dates for each module.
 - ▶ Meet every week for a total of twelve meetings for a Session 3 (12-week session) schedule.
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Connections Conference 2013

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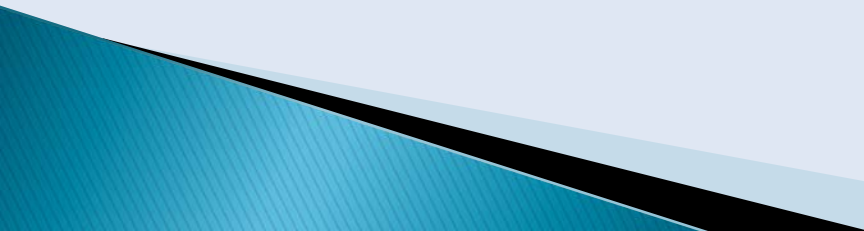
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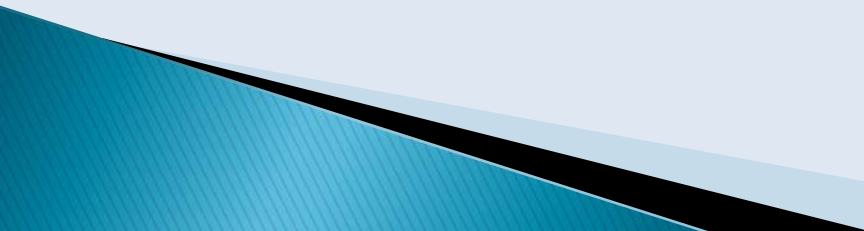
Target Population

- ▶ Students placing into the MAT0028 mathematics course as determined by the (PERT)
 - ▶ Students with scores of 104 to 112 for mathematics.
 - ▶ A student who scores within that range will be informed of the opportunity to take the PERT diagnostic
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How the PERT Diagnostic Was Used

- ▶ Students requiring remediation in zero to three areas were eligible to enroll in MAT 0055 the 1 credit hour course
- ▶ Students requiring remediation in four to six competency areas were eligible to enroll in MAT 0056 the 2 credit hour course.
- ▶ **NOTE:** A score of less than 60% on a skill was considered a deficiency.

Technology Utilized for the Project

- ▶ Gulf Coast had developed an online textbook, DVDs, and study guides for all competencies.
 - ▶ Students were able to print out sections of the text book and study guides, if necessary.
 - ▶ Online quizzes for the competencies were used to assess learning, and online practice tests helped students prepare for the final exam.
 - ▶ The courses were scheduled in a computer lab where students had access to computers and a printer as well as the course facilitator
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Evaluation Plan

- ▶ The effectiveness of the project will be assessed based on how well it addresses the goals of the program.
- ▶ Gulf Coast estimates that 72 students will participate in the pilot: 36 each semester. For fall 2011, the pass rate for MAT 0028 was 45.8% and the pass rate for MAT 1033 was 49.7%.
- ▶ With the new format, we projected that 70% of students will pass each of the classes

Evaluation Plan

- ▶ Students completed the areas of the deficiencies
- ▶ MAT0055 student meet 2 day per week, MAT0056 students meet 3 days per week
- ▶ There were some topics covered in MAT0028 not covered on the PERT diagnostic, all students had to cover these objectives
- ▶ The student took the MAT0028 final exam and that was the grade for the class.

THE RESULTS



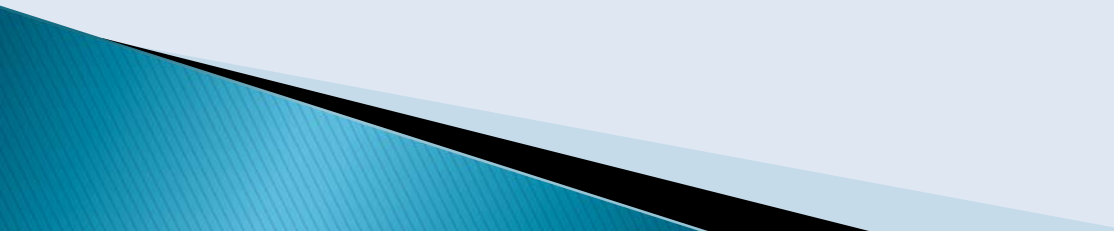
Fall 2012

- ▶ 1 student enrolled in MAT0055
- ▶ 4 students enrolled in MAT0056
- ▶ 4 of the students were successful in the mod courses
- ▶ 1 student withdrew from all classes in the fall and did not register for Spring classes

Fall 2012 Mod classes

- ▶ 2 of the 4 students enrolled in the mini-mester MAT1033 class and passed with a “C”.
- ▶ Both students is currently enrolled in MAC1105.
- ▶ 1 of the students are currently enrolled in MAT1033 this semester.

Spring 2013 mod classes

- ▶ We decided to offer a morning and evening mod classes
 - ▶ Students who attempted MAT0028 and were not successful were allowed to place into the mod classes
 - ▶ 4 student enrolled in the morning classes
 - ▶ 4 students enrolled in the evening classes
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Spring 2013 mod classes

- ▶ In both the morning and evening classes:
- ▶ 1 student enrolled in MAT0055 (2 total)
- ▶ 3 students enrolled in the MAT0056 (6 total)

Spring 2013 Mod classes Morning class

- ▶ 3 of the 4 students were successful in the mod
- ▶ All 3 students enrolled in the mini-mester MAT1033 class.
- ▶ The two students who placed into the mod class are strong students.

Spring 2013 Mod classes Evening class

- ▶ 4 of the 4 students were successful in the mod
- ▶ 3 students enrolled in the mini-mester MAT1033 class
- ▶ 2 of the students are doing really well in the class, the other is doing average

Conclusion

- ▶ The class sizes were small, but I think this was a good way to allow student to make up the math deficiencies and take a math course that they will receive college credit for in one semester.