

**PET FORM**  
**Planning and Evaluation Tracking**  
**(2012-2013 Assessment Period)**

Division of: [Arts & Sciences](#)

Person Responsible for this Division: [Jerry Moller](#)

Department of: [Mathematics and Engineering](#)

Primary Person Responsible for this Form: [Kathryn Wetzel](#)

Purpose Statement (With Last Updated Date):

The Mathematics and Engineering Department supports the goals of the Science and Engineering Division by providing educational opportunities for improvement in foundational mathematics skills and for success in transfer-level math and engineering courses required in a broad spectrum of technical fields and advanced degrees. 2006

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**Goal Statement #1:**

Prepare developmental students for their next level mathematics course (No Excuses: Goal 1 and Goal III).

**Outcome/Objective Statement #1A**

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

Upon successful completion of MATH 0302 (Beginning Algebra) with a grade of A-C, at least 60% of developmental students will score a minimum of 63 on the Accuplacer Test which is the required score for students who place directly into the next course MATH 0303 (Intermediate Algebra).

• Results (If Applicable, Provide Numbers and Percentages for Quantitative Data)

- **2010-2011 Data:** Numbers = 400 out of 690 and Percentage =s 57.8 %
- **2011-2012 Data:** Numbers = 337 out of 654 and Percentage =s 51.5 %

• Analysis

- Provide Previous Data/Result Analysis

(Include if benchmark was met and how results relate to outcome statement):

- It had been felt that students were not giving a diligent effort to “passing” the Accuplacer as it was not seen as a “test”. Teachers were individually informed as to their class results. A general discussion was initiated with the teachers discussing the importance of this benchmark, not as an end to itself but as an indication of the preparedness of the students. Teachers whose students did not did not perform at a rate greater than 60% were given helpful hints and strategies from the teachers with a high percentage of students passing the Accuplacer with a 63 or higher, as they requested. A plan was developed for them to implement this past year.

• Improvements

Clearly, as can be seen from this years’ data, the strategy of working with individual teachers with regards to their student outcomes was not successful. We will be using the course redesign process to address the materials in the course, the students’ comfort with computer-based testing, and the importance of the Accuplacer to the verification of our overall process.

- Recommendations/Actions for 2012-2013
    - Person Responsible (Who will complete the action?): Edie Carter
    - Action Plan: Edie Carter will follow through with the course redesign and visit with the instructors regarding their results of his past year.
    - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date):  
The visits with the teachers will occur during this coming year. The course redesign will begin with research in the fall of 2013 and implementation will be in fall 2014.
    - Budget Information Needed for Future Action (Cost/Details): None
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## Goal Statement #2:

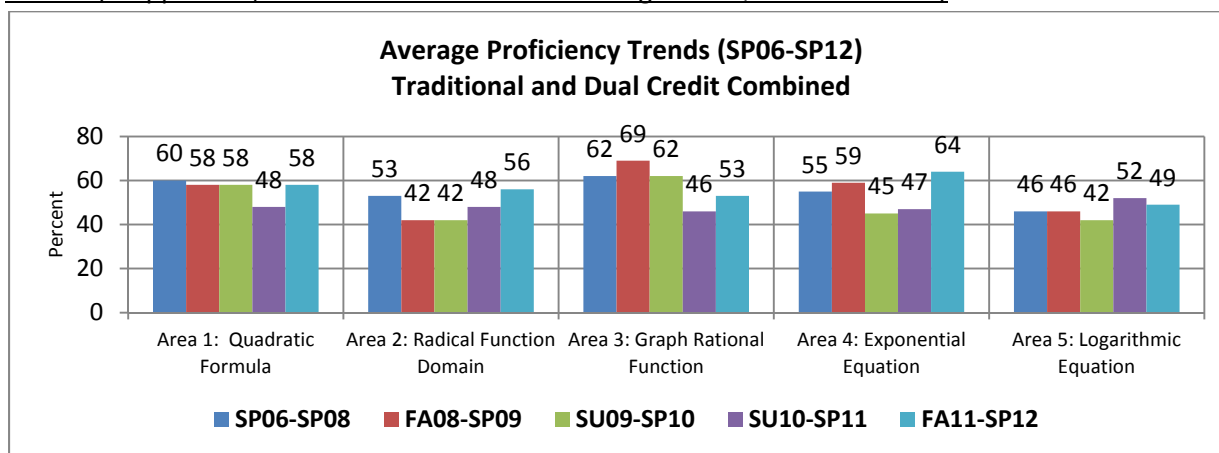
Provide courses encompassing required math skills/knowledge to enable students to transfer and/or complete a degree or certificate program (AC Strategic Plan through 2015: Strategy 1.4).

## Outcome/Objective Statement #2A

**(Be sure to include audience, behavior, conditions, degree/benchmark, and evaluation method):**

Upon completing Math 1314, students will demonstrate an overall 50% proficiency rating in five pre-identified areas. Students will be assessed through the use of embedded test questions and will be evaluated by instructors via rubric.

- Results (If Applicable, Provide Numbers and Percentages for Quantitative Data)



- Analysis

- The same five areas have been assessed for another academic year\*. These five areas include: 1.) Quadratic Formula, 2.) Radical Function Domain, 3.) Graph a Rational Function, 4.) Solve an Exponential Equation, and 5.) Solve a Logarithmic Equation.
- Instructors choose one of three similarly structured problems from each of the five areas to plant on written classroom exams. (Online and dual credit instructors include these embedded questions on written midterm and final exams, and traditional instructors usually include them on periodic major exams and occasionally on the final exam.) Before grading the exams, instructors or student workers xerox the problems, maintaining anonymity of students, and drop the problems in a designated area. All collected questions are then scored using a 5 point rubric. A score of 4 or 5 is deemed proficient.
- Totals from previous academic years included 4026, 5490, and 6234 problems respectively. We see a bit of a drop in problems collected this year for two reasons. First, no problems from Summer 2011 were collected. Second, enrollment suffered in Spring 2012 due to a meningitis vaccine required by the state which many students did not receive and were therefore not allowed to enroll in classes. However, we still have a good cross section of participation from full-time, part-time, online, dual credit, and satellite campus instructors to have a balanced sample.

- Improvements

Goals achieved for improving assessment procedures include:

- Include off-campus dual credit instructors in assessment procedures by supplying information in the meeting prior to the Fall 2011 semester.
- Rotate volunteer graders.
- Goals for making major assessment changes over the next academic year:
- For the College Algebra Redesign courses, set to pilot in Fall 2012, approach assessment electronically.
- Collect data and create reports efficiently using MyMathLab.
- Keep assessment data separate for redesign sections to measure effectiveness of course.
- Use a pre-test/post-test format.
- Maintain current assessment procedure for non-redesign sections.

- Recommendations/Actions for 2012-2013

- Person Responsible (Who will complete the action?): Shannon Cornell and Kathryn Wetzel
  - Action Plan: This year, we will try to emphasize all five areas using teaching and learning strategies to be selected by the various teachers and also train the graders more thoroughly.
  - Expected Time Frame Needed to Implement Action Plan (Please provide specific deadline date): Two semesters in 2012-2013.
  - What Budget Implications Are Involved with this Action? (Please Provide Cost Estimate/Details): None.
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