

Closing the Gap in Pre Algebra MAT 0012

Operational Unit: Academic Affairs - WPK

Unit Purpose Statement: The mission of the Winter Park Campus Division of Mathematics is to provide excellent instruction and support for students.

Initiative Contact: Michele McArdle

Strategic Initiative: Learning Assured

Goal Outcome: Establish learning and learning support systems and techniques designed to reduce achievement gaps among groups of learners from diverse backgrounds.

Objective: Close achievement gaps

Objective Description: Close achievement gaps among students from diverse backgrounds in completing six key courses, leading to increased persistence and program completion rates. [Note: The six courses are: College Prep mathematics Pre-Algebra (MAT0012C) and Beginning Algebra (MAT 0024C), Intermediate Algebra (MAT1033), and "gateway" courses, Communications (ENC1101), Political Science (POS2041), and College Algebra (MAC1105).]

Initiative's Relation to the Strategic Plan:

This initiative relates to Building Pathways and Learning Assured. PreAlgebra is the first math class that students will take at Valencia so they need assistance transitioning to college. The plan is also addressing the achievement gap among students from diverse backgrounds.

Expected Results and the Means of Assessment

Expected Results 1: Identified a set of common assessment items that will be used to assess student learning in specific MAT 0012 learning outcomes college wide.

Means of Assessment: The creation and existence of the common items.

Individual Responsible: Math Deans and Faculty

Expected Completion: 8/31/2009

Stakeholders: Academic Affairs - WPK (10671) - Michele McArdle Math and Science OSC (10683) Melissa Pedone Math EAC (10675) - Maryke Lee Math WEC (10694) - Lisa Armour Institutional Assessment (12001) - Kurt Ewen Institutional Research (10630) - Jeffrey Cornett

Results: A new 30-question college wide exam will be created for MAT 0012C, based on the learning outcomes for the course. The exam will be given for the first time during the Fall Term (201010). A faculty task force has created the exam. The five imbedded exit exam questions for which student responses were gathered in this academic year (2008-2009) are among the 30 questions on the new college wide exit exam.

Expected Results 2: In year 1. we will collect baseline data using the common assessment items for the purposes of comparison to years 2 and 3.

Means of Assessment: The existence of baseline data for comparisons.

Individual Responsible: Math Deans and Faculty

Expected Completion: 8/31/2009

Stakeholders: Academic Affairs - WPK (10671) - Michele McArdle Math and Science - OSC (10683) - Melissa Pedone Math EAC - (10675) - Maryke Lee Math WEC - (10694) - Lisa Armour

Results: During the fall and spring terms (200910, 200920), we collected student responses to five selected final exam questions. We will collect student responses to the five selected final exam questions during the summer term, which is in progress. This collections of responses will serve as base line data for purposes of comparisons in years 2 and 3.

Expected Results 3: In year one we will have articulated a plan for programmatic changes to implement in years two and three to improve student learning and close achievement gaps in the identified MAT 0012 learning outcomes.

Means of Assessment: The existence of a plan for programmatic changes.

Individual Responsible: Math Deans and Faculty

Expected Completion: 8/31/2009

Stakeholders: Academic Affairs - WPK (10671) Michele McArdle Math and Science - OSC (10683) - Melissa Pedone Math EAC - (10675) - Maryke Lee Math WEC - (10694) - Lisa Armour

Results: The plan has been designed by a college wide team of math faculty and deans. It is described in an uploaded document entitled: MAT 0012C Plan.

Expected Results 4: At the conclusion of this three-year plan achievement gaps in mastery of identified MAT 0012C learning outcomes among student from different ethnic backgrounds will be smaller than gaps measured in the baseline data.

Means of Assessment: Analysis of achievement gaps in mastery of the identified MAT 0012C learning outcomes among students from different ethnic backgrounds, as indicated by performance on common assessment items.

Individual Responsible: Math Deans and Faculty

Expected Completion: 8/31/2011

Stakeholders: Academic Affairs - WPK (10671) - Michele McArdle Math and Science - OSC (10683) - Melissa Pedone Math - EAC (10675) - Maryke Lee Math - WEC (10694) - Lisa Armour Institutional Research - (10630) - Jeff Cornett Institutional Effectiveness (12001) - Kurt Ewen

Results: An analysis of the data will be completed.

Implementation Plan

Budget Requirements: The majority of MAT 0012 instructors are part-time so approximately \$5000 will be needed to support annual college wide MAT 0012 workshops.

Results to Improve: The college wide team of math faculty and deans focused on programmatic changes to MAT 0012C that could be implemented for the upcoming academic year (2009-2010). Revisions to the instructional design for MAT 0012C will need to be made in an iterative fashion as data is analyzed and as instructors and student provide feedback on the changes.

Changes for Next Year: We will gather student responses to imbedded items on the college wide exit exam and compare them to the baseline data we gathered this year. We will compare results among students from different ethnic backgrounds. We will use next year's data to consider the programmatic changes implemented, and refine the instructional design for MAT 0012C according to the data and the feedback.

Additional Document Attachments

File: <http://net3.valenciac.edu/sip/uploads/Winter Park version of MAT0012C Plan 7-16-09.docx>