

# Closing the Gap in PreAlgebra MAT0012

**Operational Unit:** Mathematics WEC

**Unit Purpose Statement:** The mission of the West Campus Division of Mathematics is to focus on learning to provide excellent instruction and support for students.

**Initiative Contact:** Lisa Armour

**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 course many underprepared students take at Valencia. They are frequently in need of assistance in transitioning to college studies. This initiative contributes to the college's goal to close achievement gaps among students from diverse backgrounds.

## Expected Results and the Means of Assessment

### Expected Results

1: In year 1, we will collect baseline data for the purposes of comparisons to years 2 and 3.

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

**Individual Responsible:** Math Deans and Developmental Math Faculty

**Expected Completion:** 8/31/2009

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

**Results:** During Fall and Spring terms (200910, 200920), we collected student responses to five selected final exam questions. We will be collecting student responses to the five selected final exam questions during Summer Term also, which is in progress.

This will serve as baseline data for purposes of comparisons to years 2 and 3.

### Expected Results

2: At the conclusion of this three-year plan, achievement gaps in mastery of identified MAT0012 learning outcomes among students from different ethnic backgrounds will be smaller than gaps measured in the baseline data.

**Means of Assessment:** Analysis of achievement gaps in mastery of identified MAT0012 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 Mathematics and Science OSC (10683) - Melissa Pedone Mathematics EAC (10675) - Maryke Lee Mathematics WEC (10694) - Lisa Armour Institutional Research (10630) - Jeffrey Cornett Institutional Assessment (12001) - Kurt Ewen

**Results:** Baseline data has been gathered. Analysis of achievement gaps is in progress.

**Expected Results** 3: Identify a set of common assessment items that will be used to assess student learning in specific MAT0012 learning outcomes college wide.

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

**Individual Responsible:** Math Deans and Faculty

**Expected Completion:** 8/31/2009

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

**Results:** There will be a new 30-question college wide exit exam for MAT0012, based on the learning outcomes for the course. The exam will be given for the first time during the upcoming Fall Term (201010).

A faculty task force has written 27 out of 30 of the questions for the exit exam, and is in the process of writing the 3 final questions.

The five selected final exam questions for which student responses were gathered this academic year (2008-2009) are among the 30 questions on the new college wide exit exam.

**Expected Results** Devise a plan for programmatic changes to MAT0012 instruction to improve student learning and close achievement gaps in mastery of identified MAT0012 learning outcomes.

**Means of Assessment:** The existence of the plan for programmatic changes.

**Individual Responsible:** Math Deans and Faculty

**Expected Completion:** 8/31/2009

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

**Results:** The plan has been devised by a college wide task force. It is described in an uploaded document called "MAT0012C Plan."

## Implementation Plan

**Budget Requirements:** The large majority of MAT0012 instructors are part-time, so approximately \$5000 will be needed to support annual collegewide MAT0012 workshops.

**Results to Improve:** The college wide task force focused on programmatic changes to MAT0012 that could be implemented for the upcoming academic year (2009-2010). Revisions to the instructional design for MAT0012 will need to be made in an iterative fashion as data is analyzed and as instructors provide feedback on the changes.

**Changes for Next Year:** We will gather student responses to selected 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 MAT0012 according to the data and instructors' feedback.

## Additional Document Attachments

**File:** <http://net3.valenciac.edu/sip/uploads/MAT0012C Plan.doc.docx>