

## Course Outcomes Guide (COG)

**Directions:** Please complete this form to document your progress toward improving student learning. For each item, indicate your progress and your anticipated next steps. Thank you!

**Course Title:** MAT 099 Elementary Algebra

**Date:** June 2012

**Course Team:** Math Faculty

### Expected Learning Outcomes

#### STUDENT LEARNING OUTCOMES:

**Upon successful completion of this course students will be able to:**

1. Use computational techniques and algebraic skills essential for success in an academic, personal, or workplace setting. (Computational and Algebraic Skills)
2. Use visualization, spatial reasoning, as well as geometric properties and strategies to model and solve problems. (Geometric Skills)
3. Use technology, where appropriate, to enhance and facilitate mathematical understanding, as well as to aid in solving problems and presenting solutions. (Technological Skills)
4. Communicate and understand mathematical statements, ideas and results, both verbally and in writing, with the correct use of mathematical definitions, terminology and symbolism. (Communication Skills)
5. Work collaboratively with peers and instructors to acquire mathematical understanding and to formulate and solve problems and present solutions. (Collaborative Skills)

**Assessment** (How do or will students demonstrate achievement of each outcome? Please attach a copy of your assessment electronically.)

All MAT 099 Elementary Algebra students complete the same homework, quizzes, and tests. We use MyMathLab to run the course and all instructors are using the same assignments. Additionally, all students take a five question pre-test and take the same five questions again as a post-test that is incorporated into the final exam.

**Validation** (What methods have you used or will you use to validate your assessment?)

We are using a 2-point rubric to grade the five question pre/post-test and all other tests in the course. Spring 2012 is the first semester for this assessment, but as we collect data over a few semesters, we will then compare results from semester to semester.

**Results** (What do your assessment data show? If you have not yet assessed student achievement of your learning outcomes, when is assessment planned?)

We are in the process of analyzing the SLOA data from our first semester (Spring 2012). The assessment will continue unchanged for the summer semester in all classes. Once the analysis is complete, changes might be implemented for Fall 2012.

**Follow-up** (How have you used or how will you use the data to improve student learning?)

Because the 12/SP semester was the first semester of MAT 099 redesign, minimal changes will be made for the upcoming academic year. Time is needed to collect data and analyze the results of the new curriculum and assessment tools.

**Budget Justification** (What resources are necessary to improve student learning?)

**Attachments:**

1. Pre/post-test (common assessment),
2. Grading rubric

**Pre/Post-Assessment for MAT 099 Elementary Algebra**

**Please answer the following questions. Do your work in the space provided and place your final answer in the answer column.**

1. Length: \_\_\_\_\_ ft

Width: \_\_\_\_\_ ft

The National Junior College Athletic Association requires that a volleyball court have a perimeter of 177 feet. The length of the court is twice the width.

**Find the dimensions of the court.**

2. \_\_\_\_\_

Divide using synthetic OR long division:  
 $(6x^4 + 15x^3 + 28x + 6) \div (x + 3)$

3. \_\_\_\_\_

Divide and simplify the expression:  $\frac{x^2 - x - 2}{x^2 - 1} \div \frac{x - 2}{x^2 - 6x + 5}$

4. \_\_\_\_\_ in

The new Museum of Contemporary Art in New York City consists of eight floors and reaches a height of 59 yards.  
**What is the height of the museum in inches?**

5. \_\_\_\_\_

Solve the equation:  $\frac{x}{15} - \frac{4}{5} = \frac{x}{3}$

## Grading Rubric for Developmental Mathematics

This general scale is to be used for all Tests and Final Exams  
in MAT 098, MAT 099, and MAT 100.

All questions are worth 2 points.

2 points	Answer is completely correct, including any necessary units.
1.5 points	Work is approximately 75% correct. Examples include: <ul style="list-style-type: none"><li>• missing a negative</li><li>• missing units</li><li>• simple arithmetic errors (unless arithmetic is what is being tested!)</li></ul>
1 point	Work is approximately 50%-75% correct.
0.5 point	Work is approximately 25%-50% correct AND some basic understanding of the concept is demonstrated.
0 points	Work is roughly less than 25% correct OR no basic understanding is demonstrated.