MTH 065: Elementary Algebra

Catalog Description: Arithmetic of signed numbers, order of operations, simplifying algebraic expressions, solution of linear equations, and inequalities. Rules of exponents, addition, subtraction, and multiplication of polynomials, factoring, solutions of quadratic equations by factoring, reducing rational expressions. Word problems involving linear equations, graphing of linear equations, inequalities.

Course Credits: 3

Terms offered: F, W, S, Su

Enforced Prerequisites: ALEKS math placement test: 15%, or math placement test: 5, or instructor permission.

Meetings: Three 50-minute lectures weekly

Course Content:
1. Arithmetic of signed numbers
2. Order of operations
3. Simplifying algebraic expressions
4. Solution of linear equations, and inequalities
5. Rules of exponents
6. Addition, subtraction, and multiplication of polynomials
7. Factoring
8. Solutions of quadratic equations by factoring
9. Reducing rational expressions
10. Word problems involving linear equations

MTH 065 Measurable Student Learning Outcomes: A successful student in MTH 065 will be able to:

- Perform addition, subtraction, multiplication and division with whole numbers, integers, and fractions.
- Simplify algebraic expressions using the correct order of operations.
- Translate English statements and sentences into mathematical expressions and equations.
- Solve linear equations and linear inequalities.
- Simplify monomials expressions using the properties of exponents.
- Add, subtract and multiply polynomials expressions and give the resulting expression in the simplest form.
- Factor binomial and trinomial expressions, and solve binomial and trinomial equations by factoring.
- Solve linear application problems by defining a variable, creating and solving a linear equation, and interpreting the results.
- Given a linear function, graph the line and identify the slope and y-intercept.
- Find the equation of a linear function given then slope and a point or two points on the line.

Evaluation of Student Performance: Your grade and measurement of your progress on the course outcomes will be based on weekly online homework, along with 2 written midterms and a final exam. (Approximate percentages given.)

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<tr>
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<th>Percentage</th>
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<tbody>
<tr>
<td>Online Homework</td>
<td>25%</td>
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<tr>
<td>2 Midterms</td>
<td>50%</td>
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<tr>
<td>Final Exam</td>
<td>25%</td>
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**Learning Resources:** The required text is *Elementary Algebra, Concepts and Applications* by Marvin L. Bittinger and David J. Ellenbogen (2013, Ninth Edition) with MyMathLab access code or other similar text selected by department. Scientific calculator.

Selected portions of the text will be covered as follows.

Chapter 1: 1.1, 1.2, 1.3, 1.4, 1.5, 1.6, 1.7, 1.8  
Chapter 2: 2.1, 2.2, 2.3, 2.4, 2.5, 2.6  
Chapter 3: 3.1, 3.2, 3.3, 3.5, 3.6, 3.7  
Chapter 4: 4.1, 4.2, 4.3, 4.4, 4.5, 4.8  
Chapter 5: 5.1, 5.2, 5.3, 5.4, 5.5, 5.6, 5.7

**Students With Disabilities:** Accommodations are collaborative efforts between students, faculty and Disability Access Services (DAS). Students with accommodations approved through DAS are responsible for contacting the faculty member in charge of the course prior to or during the first week of the term to discuss accommodations. Students who believe they are eligible for accommodations but who have not yet obtained approval through DAS should contact DAS immediately at 737-4098.

**Academic Honesty and Student Conduct:** Students are expected to be familiar with the Homework and Exam policies stated in this syllabus, as well as Oregon State University's Student Conduct Code.  