

Course Content For Math 060 Elementary Algebra: Blitzer 1st edition (Custom)

Effective Spring 2009

(We added section 9.5, removed section 3.3, and recommended breaking up the remainder of chapter 3.)

Some faculty may wish to condense Sections 2.1 – 2.3. This is a review from Math 058; however, this textbook emphasizes fractions within the equations.

- 2.1 The Addition Property of Equality - 35 min
- 2.2 The Multiplication Property of Equality – 35 min
- 2.3 Solving Linear Equations – 70 min
- 2.4 An Introduction to Problem Solving – 70 min
- 2.5 Solving Linear Inequalities – 70 min
- 2.6 Mathematical Models – 70 min

Chapter 3 may be broken up and covered along with other sections in the book. If faculty test on chapters 2 and 3 combined, the students may be overwhelmed with the number of word problems on their first test in the course.

- 3.1 Critical Thinking – 70 min (try with Ch 2 or Ch 4)
- 3.2 Ratio and Proportion -70 min (try with Ch 4 [4.4])
- 3.4 Classic Algebraic Word Problems – 70 min (try with Ch 5 [5.4])

- 4.1 Linear Equations in Two Variables – 35 min
- 4.2 Graphing Linear Equations in Two Variables – 70 min
- 4.3 Graphs of Equations and Functions – 70 min
- 4.4 The Slope of a Line – 70 min
- 4.5 Equations of Lines – 70 min
- 4.6 *Linear Inequalities in Two Variables (optional)*

Faculty might introduce some of the word problems from 5.4 as applications for the material within 5.1 through 5.3. Seventy minutes per section for 5.1 through 5.3 may be generous.

- 5.1 Systems by Graphing – 70 min
- 5.2 Systems by Addition (Elimination) Method - 70 min
- 5.3 Systems by the Substitution Method – 70 min
- 5.4 Problem Solving using Systems – 70 min

- 6.1 Adding and Subtracting Polynomials – 70 min
- 6.2 Multiplying Polynomials – 70 min
- 6.3 Multiplying Binomials; Special Products – 70 min
- 6.4 Problem Solving – 70 min
- 6.5 Exponents and Dividing Polynomials – 70 min
- 6.6 Dividing Polynomials by Binomials – 70 min
- 6.7 Exponents and Scientific Notation – 70 min

- 7.1 Factoring Polynomials (GCF) – 70 min
- 7.2 Factoring Trinomials – 70 min
- 7.3 Factoring Trinomials – 70 min or more
- 7.4 Factoring Special Forms – 70 min
- 7.5 A General Factoring Strategy – 70 min or less
- 7.6 Solving Quadratic Equations – 70 min
- 7.7 Problem Solving – 70 min

- 8.1 Rational Expressions: simplifying – 70 min or less
- 8.2 Multiplying and Dividing Rational Expressions – 70 min
- 8.3 Adding and Subtracting; Same Denominator – 70 min
- 8.4 Adding and Subtracting; Different Denominators – 70 min
- 8.5 Complex Fractions – 70 min
- 8.6 Equations Containing Rational Expressions – 70 min
- 8.7 Problem Solving using rational equations – 70 min

A handout for sections 9.1 through 9.3 with both explanations and problems to try in class helps to cover the material more quickly. Thirty-five minutes per section for 9.1 through 9.3 may not be enough time. Chapter 9 may be combined with chapter 10 into one unit test.

- 9.1 Finding Roots – 35 min
- 9.2 Multiplying and Dividing Radicals – 35 min
- 9.3 Adding and Subtracting Radicals – 35 min
- 9.5 Rationalizing Denominators (brief coverage) – 35 min

If faculty are pressured for time at the end of the course, they may cover section 10.1 lightly and skip section 10.2. Completing the Square is covered in Intermediate Algebra.

- 10.1 Quadratic Equations by Square Root Property – 70 min
- 10.2 Quadratic Equations by Completing the square – 70 min
- 10.3 The Quadratic Formula – 70 min
- 10.4 *Applications of Quadratic Equations (Optional)*

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