Syllabus - Math 090

Department of Mathematics
9--8--2016

This is the Math 090 syllabus based on Beginning Algebra (8th edition) by Richard N. Aufmann and Joanne S. Lockwood.   If the text changes before this syllabus is revised, instructors should cover the topics listed below.

Required topics should be covered by every instructor teaching the course. Optional topics may be covered or not, at the instructor's discretion. The time given for each topic is a rough measure, to be adjusted by the instructor.

1. Pre-Algebra Review -chapter 1
    - Introduction to Integers (1.1)(Required)(1 period)
    - Operations with Integers(1.2) (Required)(1 period)
    - Rational Numbers(1.3) (Required)(1 period)
    - Exponents and Order of Operations Agreement(1.4) (Required)(1 period)
    - Concepts from Geometry (1.5) (Optional)
2. Variable Expression- Chapter 2
    - Evaluating Variable Expressions (2.1) (Required)(1 period)
    - Simplifying Variable Expressions(2.2) (Required)(1 period)
    - Translating Verbal Expressions into Variable Expressions(2.3) (Required)(1 period)
3. Solving Equation and Inequalities- Chapter 3
    - Introduction to Equations(3.1)(Required)(0.5 period)
    - Applications of Equations of the Form ax=b(3.2)(Required)(0.5 period)
    - General Equations(3.3)(Required)(1.5 period)
    - Inequalities(3.4)(Required)(1.5 period)
4. Solving Equations : Applications- Chapter 4
    - Translating Sentences into Equations(4.1)(Required) (1 period)
    - Geometry problems(4.2)(Optional)
    - Markup and Discount Problems(4.3) (Optional)
    - Investment Problems(4.4) (Optional)
    - Uniform Motion Problems(4.6) (Optional)
5. Linear Equations- Chapter 5
    - Rectangular Coordinate System(5.1)(Required) (0.5 period)
    - Graphs of Straight Lines(5.2)(Required) (1.5 period)
    - Slopes of Straight Lines(5.3)(Required) (2 period)
    - Equations of Straight Lines(5.4)(Required) (1 period)
6. Polynomials- Chapter 7
    - Addition and Subtraction of Polynomials(7.1)(Required) (1 period)
    - Multiplication of Monomials(7.2)(Required) (1 period)
    - Multiplication of Polynomials(7.3)(Required) (1 period)
    - Integer Exponents and Scientific Notation(7.4)(Required) (1.5 period)
    - Division of Polynomials(7.5)(Required) (1 period)
7. Factoring- Chapter 8
    - Common factors(8.1)(Required) (1 period)

- Factor Polynomials of the Form $x^2 +bx +c$(8.2)(Required) (2 period)
- Factor Polynomials of the Form $ax^2 +bx +c$(8.3)(Required) (1 period)
- Special factoring(8.4)(Required) (1 period)
- Factoring Polynomials Completely(8.5)(Required) (1 period)
- Solving Equations(8.6)(Required) (1.5 period)

8. Rational Expressions- Chapter 9
- Multiplication and Division of Rational Expressions(9.1)(Required) (2 period)
- Expressing Fractions in Terms of the LCD(9.2)(optional)
- Adding and Subtracting Rational Expressions(9.3A Like Denominators)(Required) (1 period)
- Adding and Subtracting Rational Expressions(9.3A Different Denominators)(Optional) (1 period)
- Equations Containing Fractions(9.5)(Optional)