

# Course Outline - Math 99

## Fall 2011

### Class 1 - Monday, August 22

**Lecture:** Course Information ([Syllabus](#), [Textbook Info](#), [Calculator Info](#))  
[The Real Number System](#)

**Homework:** [Questions](#), [Problem Set 1](#)

### Class 2 - Wednesday, August 24

**Lecture:** Natural numbers and integers, factors of a number  
FOIL and multiplying polynomials, expanding  $(x+y)^n$

**Homework:** [Problem Set 2](#)

#### Extra Credit Assignment:

- 1) List all possible outcomes for problem 5 on Problem Set 1. Show what combination of parentheses will result in each of the results.
- 2) State what  $(x+y)^6$  is and use it to expand  $(x+y)^7$ .
- 3) Is the following statement true or false? Explain why. "All natural numbers have an even number of factors".

### Class 3 - Friday, August 26

**Lecture:** [Simplifying algebraic expressions](#)

**Homework:** [Problem Set 3](#)

### Class 4 - Monday, August 29

**Lecture:** [Evaluating algebraic expressions](#), division by zero, absolute value of a number

**Homework:** [Problem Set 4](#)

### Class 5 - Wednesday, August 31

**Lecture:** [Solutions of equations](#), identities, contradictions and conditional equations

**Homework:** [Problem Set 5](#) and [Problem Set 6](#)

**Also posted:** [Integers](#)

### Class 6 - Wednesday, September 7

**Lecture:** Radical expressions - part 1, rules of divisibility by 2,3, and 6

**Homework:** [Problem Set 7](#)

**Also posted:** [Review of fractions](#) (practice)

### Class 7 - Friday, September 9

**Lecture:** [Solving linear equations](#)

**Also posted:** [Exam 1 Information](#), [Review for Exam 1](#), [Answers to Problem Sets 1-7](#)

### Class 8 - Monday, September 12

**Lecture:** Perimeter and area, the Fundamental theorem of Arithmetics,  
[Linear equations](#)

**Homework:** [Sample Exam 1](#)

### Class 9 - Wednesday, September 14

**Lecture:** Review for Exam 1

### Class 10 - Friday, September 16

Exam 1

**Class 11 - Monday, September 19**

**Lecture:** Exponents (rule 1), Graphing straight Lines, Factoring out the GCF or -1

**Homework:** [Problem Set 8](#)

**Also posted:** [Review for Quiz 5](#)

**Class 12 - Wednesday, September 21**

**Lecture:** The zero product rule, Factoring and divisibility

**Homework:** [Problem Set 9](#)

**Class 13 - Friday, September 23**

**Lecture:** [The difference of squares theorem](#)

**Also posted:** [Review for Quiz 6](#)

**Homework:** [Problem Set 10](#)

**Class 14 - Monday, September 26**

**Lecture:** Exponents (rules 1-5), [Linear Word Problems](#)

**Homework:** [Problem Set 11](#)

**Class 15 - Wednesday, September 28**

**Lecture:** Rationalizing radical expressions,  
Simplifying, multiplying, and adding rational expressions

**Homework:** [Problem Set 12](#)

**Also posted:** [Review for Quiz 7](#)

**Class 16 - Friday, September 30**

**Lecture:** Inequalities and their notations, compound inequalities

**Homework:** [Problem Set 13](#) and [Problem Set 14](#)

**Class 17 - Monday, October 3**

**Lecture:** Factoring by Completing the Square - [Part 1](#) and [Part 2](#)

**Also posted:** [Review for Quiz 8](#)

**Class 18 - Wednesday, October 5**

**Lecture:** Review

**Homework:** [Problem Set 15](#)

**Class 19 - Friday, October 7**

**Lecture:** Rational numbers, Equations with Absolute Value

**Also posted:** [Exam 2 Information](#), [Review for Exam 2](#), [Answers to Problem Sets 8-15](#)

**Class 20 - Monday, October 10**

**Lecture:** [Factoring by Completing the Square - Part 3](#)

**Class 21 - Wednesday, October 12**

**Lecture:** [Fractions and decimals](#)

**Extra Credit Assignment:** [Sample Exam 2](#)

**Class 22 - Friday, October 14**

**Lecture:** [Review for Exam 2](#)

**Class 23 - Monday, October 17**

**Exam 2**

**Homework:** [Problem Set 16](#)

**Class 24 - Wednesday, October 19**

Lecture: Integer exponents

Homework: [Problem Set 17](#)

**Class 25 - Friday, October 21**

Lecture: [Factoring by Completing the Square - Part 4](#)

Also posted: [Review for Quiz 11](#)

**Class 26 - Monday, October 24**

Lecture: [Solving systems of equations by substitution](#)

**Class 27 - Wednesday, October 26**

Lecture: [Solving systems of equations by elimination](#)

Also posted: [Review for Quiz 12](#)

**Class 28 - Friday, October 28**

Lecture: [Graphing straight lines](#)

Homework: [Problem Set 18](#)

Also posted: [Integer exponents](#) (practice)

**Class 29 - Monday, October 31**

Lecture: Review of negative exponents, the parabola  $y=x^2$

Homework: [Problem Set 19](#)

**Class 30 - Wednesday, November 2**

Lecture: [Graphing a parabola](#)

Also posted: [Practice](#)

**Class 31 - Friday, November 4**

Lecture: [Investment Problems](#)

Also posted: [Review for Exam 3](#), [Answers to Problem Sets 16-19](#)

**Class 32 - Monday, November 7**

Lecture: Factoring by grouping ([practice](#)), [Factoring by the AC-method](#) ([practice](#))

**Class 33 - Wednesday, November 9**

Lecture: Review for Exam 3

Also posted: [Review for Exam 3 - Version B](#)

**Class 34 - Friday, November 11**

Exam 3

**Class 35 - Monday, November 14**

Lecture: linear Inequalities ([practice](#)), Factoring the difference of cubes ([practice](#))

Also posted: [Review for Quiz 15](#)

**Class 36 - Wednesday, November 16**

Lecture: Rational exponents ([Practice](#))

**Class 37 - Friday, November 18**

Lecture: [Mixture Problems](#), [Writing equations of lines](#)

Homework: [Review for Quiz 16](#)

**Class 38 - Monday, November 21**

**Lecture:** Functions and their domains

**Class 39 - Wednesday, November 23**

**Lecture:** [The Pythagorean Theorem](#)

**Homework:** [Problem Set 20](#)

**Also posted:** [Review for Quiz 17](#)

**Class 40 - Monday, November 28**

**Lecture:** [Motion Problems](#), Factoring the sum of cubes ([practice](#))

**Also posted:** [Final Review - Version A](#)

**Class 41 - Wednesday, November 30**

**Lecture:** Compound inequalities, rational equations, radical equations

**Homework:** [Final Review - Version B](#)

**Class 42 - Friday, December 2**

**Lecture:** [The quadratic formula](#)

**Class 43 - Monday, December 5**

**Final Exam - Part 2**

**Class 44 - Wednesday, December 7**

**Final Exam - Part 1**