**Syllabus of M014 for Fall 2008**

(Text: Basic Algebra Math M014 custom edition for IUSouthBend, by Tussy & Gustafson)

| Time | Sections | Suggested Odd Problems (Please include application problems in homework) |
|---|---|---|
| Part I<br>3.5<br>weeks | 1.1 Review: The language of Algebra<br>1.2 Review: The real numbers<br>1.3 Review: Operations with Real Numbers<br>1.4 Review: Simplifying Algebraic Expressions using properties of real numbers<br>1.5 Solving Linear equations using properties of equality<br>**1.6 Solving Formulas**<br>1.7 Using equations to solve problems<br>1.8 More about problem solving (**percent problem only**)<br>2.1 The Rectangular coordinate system<br>2.2 Graphing linear equations in two variables<br>2.3 Rate of change & the slope of a line<br>2.4 Writing equations of lines | Sec. 1.1: odd 1-19, 25, 31<br>Sec. 1.2: odd 1- 73<br>Sec. 1.3: every other odd 1-81, 89, 93<br>Sec. 1.4: odd 1-17, odd 35-89<br>Sec. 1.5: odd 1-85<br>**Sec. 1.6: 7, 9, odd 31-45**<br>Sec 1.7: odd 7-29, 39, 41<br>Sec 1.8: 7, 9, 15, 17-21 all, 25, 27 and **supplement**<br>Sec. 2.1: odd 1-37<br>Sec. 2.2: odd 1- 35, 41, 43, 45, 71, 73, 75<br>Sec. 2.3: odd 1- 51, 57, 59<br>Sec. 2.4: odd 1- 67, 87, 95, 96 |
| Part II<br>3.5<br>weeks | 3.1 Solving systems of equations by Graphing<br>3.2 Solving systems of equations algebraically<br>**3.3 Problem solving using systems of two equations**<br>4.1 Solving Linear Inequalities in one variable<br>4.2 Solving Compound Inequalities<br>4.3 Solving Absolute Value Equations and Inequalities<br>5.1 Exponents<br>5.2 Scientific Notation | Sec. 3.1: odd 1-33, 49, 57, 71, 72<br>Sec. 3.2: odd 1- 37, 57<br>**Sec 3.3; 11, 23, 25, 27**<br>Sec. 4.1: odd 1-73<br>Sec. 4.2: odd 1-73,77<br>Sec. 4.3: every other odd 1-97, 101, 105<br>Sec. 5.1: odd 1-107, 121<br>Sec. 5.2: odd 1-55, 65, 69, 81, 82 |
| Part III<br>3.5<br>weeks | 5.3 Polynomials & Polynomial Functions (skip the function parts)<br>5.4 Multiplying Polynomials<br>5.5 The Greatest Common Factor & Factoring by Grouping<br>5.6 Factoring Trinomials<br>5.7 The Difference of Two Squares **(skip sum & difference of cubes)**<br>5.8 Summary of Factoring Techniques<br>5.9 Solving Equations by Factoring | Sec. 5.3: odd 1-71, 83<br>Sec. 5.4:odd 1-57, 79-89<br>Sec. 5.5: odd 1-77, 87-103<br>Sec. 5.6: odd 1-97<br>Sec. 5.7: 1, 3a, 4, 5a, odd 9-45<br>Sec. 5.8: odd 1- 15, 19-29, 35-41, 55. 61<br>Sec. 5.9: odd 1-41, 53, 59-71, 87, 91 |
| Part IV<br>4 weeks | 6.1 Rational Functions & Simplifying rational expressions (ignore functions)<br>6.2 Multiplying and Dividing Rational Expressions<br>6.3 Adding and Subtracting Rational Expressions<br>7.1 Radical Expressions & Radical Functions (again ignore functions)<br>**7.2 Rational Exponents, (only introduce the connection between** $\sqrt{4}$ & $(4)^{\frac{1}{2}}$ *and* $\sqrt[3]{-8}, (-8)^{\frac{1}{3}}$ **)**<br>7.3 Simplifying and combining radical expresssions<br>7.4 Multiplying & Dividing Radical Expressions<br>7.5 Solving Radical Equations<br>8.2 The Quadratic Formula **(optional)**<br>8.3 Quadratic functions and graphs **(optional)** | Sec. 6.1: 1- 5, 9, 13, odd 19-49, 55-61,67-77<br>Sec. 6.2: odd 1-37, 47-59, 63- 67, 71, 73, 77, 81<br>Sec. 6.3: odd 1-43, 49, 51, 61, 69-73<br>Sec. 7.1: odd 1-11, 21-45, 57-95, 105, 109<br>Sec. 7.2: 5, 9, 11, 15-25, 43, 45, 67, 69, 83-93<br>Sec. 7.3: every other odd 1-77, 91<br>Sec. 7.4: odd 1-37, 55-63<br>Sec. 7.5: odd 1-21, 29-33, 45, 47, 73, 79, 83 |

**Suggestion for Evaluation:**

Besides giving 4 exams, please try to give quizzes, or collect & grade homework or anything else you want to do. Try to keep the ratio of course work & final exam around 60-40. Some people prefer 50-50 distribution of points. Another idea is to have some attendance points embedded in your score system to encourage them to come. Please try to follow department's guidelines for course syllabus. Also, look through the policies about alternate grade, attendance, note cards and bonus points.