Math 1011Q: Introductory College Algebra and Mathematical Modeling -- Spring 2013

Course Information and Syllabus

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Class Meeting Times/Place: MWF 12 – 12:50 MSB 311 Wed 4 – 5:30 MSB 311 (+ a 3 hour Review Class before Final Exam) **Class Web Page:** http://www.math.uconn.edu/~glaz/math1011f08	**Textbook:** Intermediate Algebra, by K. Elayn Martin-Gay, 5th ed. (At UConn Coop packaged with Solution Manual) **Other Requirements:** A simple Scientific Calculator, for example TI-30Xa

Homework: Individual homework will be assigned after every section, collected every Monday, and returned the following class. Homework assignments will consist of the individual assignments from your textbook listed in the Syllabus Table below, and weekly Group Projects provided as handouts in class. Group Project assignments will be graded, individual assignments will carry exam points – each section's homework assignment is worth one point (this will be explained in more details in class). The majority of homework assignments will be done outside of class, but we will devote 30 to 50 minutes each week (usually on Wednesday) to questions related to difficulties in the homework. You are encouraged to work with other students in this class on all your homework assignments.

Exams Schedule: There will be three in-semester, in-class exams and a Final Exam. None is strictly cumulative, but there will be overlap of material between the exams. NO MAKE-UP EXAMS unless there is a very serious emergency for which you provide proof.

Exam 1: Wednesday February 13in class
Exam 2: Wednesday March 6 in class
Exam 3: Wednesday April 10 in class
Final Exam: TBA

Grading Policy: Homework, Quizzes, and Group projects about 12%. Each Exam (including the Final Exam) is of equal weight, that is, about 22%.

****Please turn off cell phones during class time—no texting or calls.****

Special Days:

First Day of Classes: Wednesday January 23 **Last Day of Classes: Friday May 3**

Syllabus Outline and Individual Homework Assignments

Each week: 2 to 4 sections from the text-book, and 1 or 2 group projects selected from the table below:

Section	Topic	Individual Homework Assignments
Introduction		Math-Autobiography
Chapter 1		
1.2	Algebraic Expressions and Sets of Numbers	page 14-16: 1,5,7,31-36,59,61,67,77,82-84 ,87
1.3	Operations With Real Numbers	page 26-29: 1,9,11,17,21,27,31,35,37,45, 47,53,67,73,79
1.4	Properties of Real Numbers	page 37-39: 3,9,15-20,45,51,53,61,83,87, 99
Conversion Rectangle		**1** .Calculate 15% of 723. **2**. If 9.8 is 12% of your grade, find your grade. **3**. Find the height in metes of a person 5'6" tall.
Group Project	Are Rationals Irrational?	
Group Project	Calculate Your BMI	
Group Project	Analyze Newspaper Circulation	If time permits
Chapter 2		
2.1	Linear Equations in One Variable	page 54-55: 1,11,13,17,23,26,35,43
2.2	Introduction to Problem Solving	page 62-67: 1,5,11,13
2.3	Formulas and Problem Solving	page 72-75: 1,5,49
2.4	Linear Inequalities and Problem Solving	page 84-87: 1,3,7,11,43,45,55,63
2.6	Absolute Value Equations	page 99: 5,9,15,21,53,61
Group Project	Algebraic Poetry - Lilavati's Swarm	
Group Project	Algebraic Poetry - The Rose-Red City	If time permits
Group Project	Calculate Your Income	
Chapter 3		
3.1	Graphing Equations	page 126-129: 1,3,5,7,9,17,19,27,33,37
3.2	Introduction to Functions	page 141-145: 1,3,11,23,25,29,35,37,55,57, 59,61
3.4	The Slope of a Line	page 163-166: 5,19,25,27,37,39,61,63,67, 70, 91
3.5	Equations of Lines	page 173-177: 1,13,25,41,42,44,47
Group Project	Hurricane Season (and Tracking Chart)	If time permits
Group Project	Three Swimmers	
Group Project	Cigarette Ads	

Group Project	Life Expectancy	
Chapter 4		
4.1	Linear Equations in Two Variables	page 212-215: 1,3,7,13,17,21
Group Project	Which Honda Should You Buy?	If time permits
Group Project	Photos of All Sizes	
Chapter 5		
5.1	Exponents	page 263-265: 1,7,13,19,27,43,63
5.2	More Exponents	page 269-271: 1,7,9,19,39,55
5.3	Polynomials and Polynomial Functions	page 280-283: 17,23,37,39,43
5.4	Multiplying Polynomials	page 289-291: 1,5,19,23,27
5.5	The Greatest Common Factor	page 295-297: 3,9,11,13
5.6	Factoring Trinomials (Use Quadratic Formula for Roots from 8.2 and/or Handout)	page 304-305: 15,25,27,47
5.7	Factoring Special Products	page 310-312: 1,9,39,53
5.8 (partial)	Solving Quadratic Equations (Via Quadratic Formula and Roots)	page 324-328: 5,9,13
Group Project	The Largest Box	
Group Project	Free Falling From Bridges	If time permits
Group Project	Factoring Trinomials Completely	
Chapter 6		
6.1	Multiplying and Dividing Rational Expressions	page 348-350: 1,17,37,41,47,63
6.2	Adding and Subtracting Rational Expressions	page 357-359: 3,17,26,27,29
Group Project	Calculate Your Lottery Winning	
Chapter 7		
7.1	Radicals and Radical Functions	page 419-420: 3,9,19,25,39,43,45,53,75,100,109,110
7.2	Rational Exponents	page 426-428: 1,11,19,29,39,41,47,51,61, 65
7.6 (partial)	Radical Equations	page 456-459: 1,9,11,13 (with 7.2),53,59 (with 7.1)
Group Project	Skid Marks	
Chapter 9		
9.3	Exponential Functions	page 563-565: 1,5,18,20,21,27,35,37
9.4	Logarithmic Functions	page 571-572: 29,31,41,45,51,69
9.5	Properties of Logarithms	page 577-578: 1,9,17,21,35,43,53,55,57

9.7 (partial)	Exponential and Logarithmic Equations	page 589-590: 13,14,15,27 (with 9.4), 31,32,33 (with 9.5)
Group Project	The Black Bear Population	
Group Project	Puzzled by Logs?	
Topics	**(Optional)**	
5.1	Scientific Notation	page 263-265: 104,109,111,121
5.2	More Scientific Notation	page 269-271: 69,73
Group Project	Very Large and Very Small Numbers	
4.2	Linear Equations With Three Variables	page 221-222: 5,7,9,13
Group Project	Tacos Anyone?	
9.6	Logarithms and Change of Base	page 583-584: 17-27
Group Project	How Long it Takes to Double Your Money?	If time permits