Math 1030 - Spring 2011

Common Page

This page contains information that is common to all sections of Math 1030 begin taught. For more specific/detailed information please see your instructors website and/or syllabus. A list of the sections and the instructors is given below.

Text: Mathematics Beyond the Numbers, Custom Ed, by Gilbert and Hatcher

This course will stress problem solving skills and the development of reasoning skills in an interactive setting. The mathematics involved is not difficult, but most of it is not routine either. We will see how some of this mathematics allows us to better understand the world surrounding us. As much of the class time will be devoted to active participation in discovering solutions to problems, regular attendance and class participation can enter into the final grade, especially in pass/fail situations.

Exams: There will be three one hour in-class exams. A cumlative final will take place during the Math block. This is tentatively scheduled for Friday May 6.

Grading: The grading scheme is set by you instructor, see the syllabus for your section.

Extra Help: Please make use of offce hours and/or the Q Center (www.qcenter.uconn.edu) if you experience difficulty with course material after it is covered in class. Students who actively read the material, try the book examples, do the homework exercises, and seek help when they encounter difficulties tend to learn more, and this is reflected in the final grade.

Section	Instructor	Room	Time
001	Lucas David-Roesler	MSB 303	TuTh 8:00 -- 9:15
004	Gerald Leibowitz	MSB 411	MoWeFr 1:00 -- 1:50
005	Gerald Leibowitz	MSB 311	MoWeFr 10:00 -- 10:50
002	Nina Pham	MSB 407	MoWeFr 12:00 -- 12:50
003	Nina Pham	MSB 415	MoWeFr 3:00 -- 3:50

* The table is ordered by the instructors last name.

Instructor: Lucas David-Roesler **Office:** MSB 231
E-mail: lucas.roesler@uconn.edu **Office Hours:** M: 11-12PM,Th: 10-12 and by appointment
Website: www.math.uconn.edu/~roesler/math1030s11/
Text: *Mathematics Beyond the Numbers*, Custom Ed, by Gilbert and Hatcher

Course Objectives: This course will stress problem solving skills and the development of reasoning skills in an interactive setting. The mathematics involved is not difficult, but most of it is not routine either. We will see how some of this mathematics allows us to better understand the world surrounding us. As much of the class time will be devoted to active participation in discovering solutions to problems, regular attendance and class participation is expected.

The course outline gives weekly reading and homework assignments. The pace of the course will be adjusted somewhat, depending on the pace of classroom discussions, so the student must always be up to date on what the assignments are. Material in the text should be read before the classroom discussions of that material, and homework for the section attempted before the next class following the discussion. Homework will be discussed at the beginning of each lecture. There will be quizzes and/or projects weekly.

Grading: Three one hour exams will be given on:

Thur Feb 10 **Thur March 3** **Thur Apr 7**

The **final exam** will be given during the MATH block tentatively scheduled for **Friday May 6**. Final grades will be computed as follows:

Best two (2) exams (each):	20 %
Worst exam:	10 %
Quizzes:	15 %
Notes:	5 %
Final Exam:	30 %
	100 %

Makeups: There will be no makeup examinations given during the semester for students who miss the regularly scheduled hour exams. If a student misses an hour exam, his/her grade on the portion of the final exam covering the material on which the hour exam was based will be fairly weighted and used to replace the missing grade. Students are permitted to miss two exams only under dire and documented circumstances. Students who miss the final exam must receive permission from the office of the Dean of Students to make up the final, and receive the grade "Absent" in the interim. "Incomplete" or "Absent" grades must be made up by the third week of the next semester. Students MUST see their instructor during the first week of classes in order to schedule the makeup exam.

Extra Help: Please make use of office hours and/or the Q Center (www.qcenter.uconn.edu) if you experience difficulty with course material after it is covered in class. Students who actively read the material, try the book examples, do the homework exercises, and seek help when they encounter difficulties tend to learn more, and this is reflected in the final grade.

Course Policy on Academic Integrity: Academic integrity is a fundamental expectation of all students in this course. Cheating (for example copying answers from another students exam sheet, allowing another student to take an examination in your place, making use of notes during a closed book/closed notebook examination, etc.), plagiarism (representing the work of another individual as your own), and other forms of academic misconduct will not be tolerated. Instances of cheating on an examination will result in an automatic grade of 0 for the examination with no opportunity to retake the examination. Other forms of academic misconduct will receive equivalent sanctions. Please remember that assisting another student to cheat on an examination or assignment also constitutes academic misconduct and you will be accountable

for knowingly providing such assistance. It is your responsibility to be familiar with the Student Code of conduct, and conduct yourself according to the standards that are described in the code.

Course Outline and Suggested Problems:

Week	Sections	Topics	Homework
1	1.1	Plurality, Runoff methods	pg. 15 # 1,3,6,7,11,15
	1.2	Borda's Method	pg. 28 # 1,3,5,9,12
	1.3	Head-to-Head Comparisons	pg. 39 # 1,3,7,9,11,15
2	1.4	Approval Voting	pg. 51 # 2,5,7,9,11,15
	1.5	An Ideal System	pg. 61 # 1-5
3	2.1	Quota Methods	pg. 80 # 1,3,5,8,9
	2.2	Early Divisor Methods	pg. 99 # 1,3,5,7,11,13
	2.4	An Ideal Method	pg. 120 # 1,5,7
4	3.1	Review	
		Exam 1 and Algebra Review	pg. 133 # 1-29 odd
5	3.2	Simple interest	pg. 138 # 1,7,11,15,17,21,23,27,30
	3.3	Compound interest	pg. 150 # 1,5,9,13,17,21,31,35,39,52
6	3.4	Systematic Savings	pg. 161 # 1,5,9,13,15,19,21
	3.5	Amortized Loans	pg. 174 # 1,5,9,13,17,23
7	4.1	Elementary Probability	pg. 192 # 1,3,5,19,7,11,13,17,19,23,29
8	4.3	The Addition Rule	pg. 205 # 1,3,5,7,11,13,15
		Review and *Exam 2*	
9	4.4	Conditional Probability	pg. 215 # 1,3,7,11,13,19,23,27,34
		Bayes Theorem	
	4.5	Counting Techniques	pg. 232 # 1,5,9,13,17,21,25,29,35
10	4.6	More Probability	pg. 242 # 1,5,9,1,17,21,25,28,31,33
	4.7	Expected Value	pg. 248 # 1,5,9,12,13,17,23
11	4.8	Genetics	pg. 260 # 1,3,4.5,7,11,12,13,17,21,25
		Review	
12		*Exam 3*	
	6.1	Euler Paths and Circuits	pg. 375 # 1,5.7,11,13,15,17,23,28,31
13	6.2	Traveling Salesman	pg. 396 # 1,5,7,9,15,19,21,23
	6.3	Spanning Trees	pg. 411 # 1,3,5.7,11,15,21
14		Review	