

Cedar Crest College

COLLEGE MATHEMATICS- MATH 102

3 Credits

Fall 2008

Instructor: Melissa Ulicny

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Ext. 6467

610-504-5979, cell phone (between 9 am and 7 pm)

Instructor Assistance: I would gladly help to clarify any areas of uncertainty during the semester. Please drop in at my office hours listed below in the adjunct office located at Curtis Hall Room 204.

Thursday 6-6:50pm

OR BY APPOINTMENT.

Text: Mathematics in Our World, Allan G Bluman

Calculator: A scientific calculator is required. The use of cell phones as a calculator is NOT permitted!

Course Description: A nontechnical presentation of mathematical topics essential to the student of the arts, humanities or social sciences. The following are studied: elementary sets theory, logic, number systems, probability and statistics and measurement and applications of mathematics to various disciplines. A scientific calculator is required. This course is appropriate for secondary education students (not math majors); some content is based on the Pre-Professional Skills Test in Mathematics (PRAXIS).

Course Objectives: Upon completion of the course the student will be able to demonstrate proficiency in:

- The basics of set theory including Venn Diagrams and basic set operations
- The basics of logic including symbolic logic, computation of truth tables, and analysis of arguments.
- Basic computation of Hindu-Arabic number system (based 10 and other bases) and other historical systems
- The understanding of the rules of Algebra as they apply to the real number system.
- The computation and use of descriptive statistics.
- The fundamentals of Network Theory.

Attendance: Attendance will be taken at all classes. If you will be absent from class, I ask that you please write me an email or leave me a message as to your absence. It is your responsibility to get all missed information from a classmate. **If you are absent from a test or quiz, a valid doctor's excuse is necessary to retake the test. If no valid excuse is produced, you will receive a grade of zero for that test.**

Instructional Method: Class time will be used for instructor demonstration and student practice. Homework assignments will be given for student practice. Practice is essential to success in this course. Homework assignments will be collected and graded only when indicated. Answers to homework problems can be found in the back of the textbook and/or solutions manual. You should check your work prior to entering the following class meeting or attending office hours in order to have questions prepared regarding the content.

Grading Procedures: Your grade will be determined by three exams, graded assignments, and a project. Graded assignments are to be completed individually. **All assignments are due in class on the due date and will not be accepted otherwise without prior notification and documentation of a legitimate excuse.** Collaboration on these assignments is not allowed and will be violating the Honor Philosophy in the Cedar Crest College Student Guide. All student work will be returned within approximately one week of its due date.

Grades will be calculated on a total point system. At the end of the semester these will be converted to a percent.

A	93-100	A-	90-92	B+	87-89
B	83-86	B-	80-82	C+	77-79
C	73-76	C-	72-70	D+	67-69
D	60-66	F	0-59		

Class Cancellations: College wide class cancellations are announced on the regular media and on the college inclement weather hotline. In a rare event that I need to cancel an individual class, every effort will be made to notify students via email of the class cancellation. When a class is cancelled, the following will occur:

- If a class is cancelled on the day of a test, the test will be given at the next class.
- If a class is cancelled on the day an assignment is due, the assignment will be collected at the next class.

Students with Disabilities: Students with documented disabilities who may be in need of academic accommodations should discuss these needs with me during the first week of class.

This syllabus is subject to change. Notice will be given to any changes during the semester.

<i>Date</i>	<i>Section/Topic</i>	<i>Assignment</i>
R Aug 28	2-1 The Nature of Sets 2-2 Subsets & Set Operations	2-1 Pg 41 #1-67 odd 2-2 Pg 50 #1-49 odd
R Sept 4	2-3 Venn Diagrams 2-4 Using Sets to Solve Problems 2-5 Infinite Sets	2-3 pg 58 #1-19 odd 2-4 pg 63 #1,5,7 2-5 pg 68 #1-9 odd Select Chapter 2 Review problems
R Sept 11	3-1 Statements 3-2 Truth Tables 3-3 Types of Statements	3-1 pg 80 #27-63 odd 3-2 pg 91 #3,5,9 3-3 pg 98 #1,5,9,11,15,23 <i>Graded Assignment</i>
R Sept 18	3-4 Arguments Chapter 2 and 3 Review 4-1 Early & Modern Numeration Systems	3-4 pg 104 #3,7,15,17 4-1 pg 129 #1,7,13,17,21,25,29,33,37,43,47,53,57,63,67,71
R Sept 25	<i>Graded Assignment Due Exam 1- Chapters 2 and 3 (70 minutes)</i> 4-2 Base Number System 4-3 Operations in Base Numbers	4-2 pg 140 #9,16,31,35 4-3 pg 152 #1,9,20
R Oct 2	5-1 The Natural Numbers 5-2 Integers 5-3 The Rational Numbers	5-1 pg 168 #5-15 odd, 21, 35-41 odd, 53,63 5-2 pg 179 odds ending w/ 1 or 5 5-3 pg 192 #21-35 odd, 41,47, 53,55
R Oct 9	5-4 The Irrational Numbers 5-5 The Real Numbers Chapter 5 Review	5-4 pg 201 #7-39 odd Finish Chapter 5 Review
R Oct 16	7-1 Fundamental Concepts of Algebra 7-2 Solving Linear Equations 7-3 Applications of Linear Equations	7-1 pg 275 #5,13,19,23,29,35,37,41,53,55 7-2 pg 287 #1-43 odd 7-3 pg 293 #1-37 odd
R Oct 23	7-4 Solving Linear Inequalities 7-5 Ratio, Proportion, and Variation 7-6 Solving Quadratic Equations	7-4 pg 300 #11-37 odd 7-5 pg 311 #11-19 odd, 23,25,29,33 7-6 pg 324 #1,7,13,19,25,31,35,39 <i>Graded Assignment</i>

R Oct 30	Exam 2 – Chapters 4,5,7 (70 minutes) Graded Assignment Due 11-1 Basic Concepts of Probability 11-2 Tree Diagram, Tables, Sample Spaces Project Description	11-1 pg 532 #1,3,5,15 11-2 pg 541 #1,5,9,11
R Nov 6	11-3 Odds and Expectations 11-4 The Addition Rules for Probability 11-5 The Multiplication Rules & Conditional Probability	11-3 pg 549 #1,3,5,7 11-4 pg 556 #3,9,13 11-5 pg 567 #5,11,15,19,25
R Nov 13	Project Due 11-6 The Fundamental Counting Rule & Permutations 11-7 Combinations	11-6 pg 576 #17,21,25,29 11-7 pg 581 #13,17,25
R Nov 20	12-1 The Nature of Statistics Organizing Data 12-2 Picturing Data 12-3 Measures of Average	12-1 pg 604 #7,13 12-2 pg 617 #3,7,9,13 12-3 pg 630 #3,7,11,13
R Nov 27	No Class – Thanksgiving Holiday	
R Dec 4	12-4 Measure of Variation 12-5 Measures of Position	12-4 pg 637 #3,7 12-5 pg 641 #1,3 Graded Assignment
TBA	Exam 3 – Chapters 11, 12 Graded Assignment Due	