

MATH 01340 MODERN ALGEBRA I

Syllabus

Dr. Abdul Hassen

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Office Hours: MW 3:00- 3:25 pm and by appointment

Prerequisite: Math 03.150 Discrete Mathematics, Math 01.210 Linear Algebra, and Phil 09.130 Introduction to Symbolic Logic with a C- or better in all three courses

Text Gilbert and Gilbert, Elements of Modern Algebra, 7th Edition, Brooks Cole

Course Description: This course includes: the introductory theory of groups, rings, integral domains, and fields. Also included are homomorphisms and isomorphisms, subgroups, kernels, rings and ideals, and polynomial rings. At the option of the instructor, computer use can be required.

OBJECTIVES: This course is designed to begin the student's development in the area of abstract algebra and mathematical reasoning.

CONTENT: We will cover chapters one through six of the textbook.

- 1 Fundamentals
- 2 The Integers
- 3 Groups
- 4 More on Groups
- 5 Rings, Integral Domains, and Fields
- 6 More on Rings

Grading Policy: Your final grades will be determined by your results on three tests and homework assignments, and class participation. **Thus attendance will be very important.** The dates for each test will be announced in class two weeks before the test date. The materials covered in the four tests will be as follows:

Test 1 (30% of the total grade) covers all sections of Chapters 1 and 2

Test 2 (30% of the total grade) covers Chapter 3 and 4

Test 3 (30% of the total grade) covers Chapters 5 and 6

10% of your grade will be from homework assignments. A letter grade assignment will be as follows:

$A(A-) = 90 \text{ to } 100$ $B(-,+) = 80 \text{ to } 89$ $C(-,+) = 70 \text{ to } 79$ $D(-,+) = 55 \text{ to } 69$ $F = 0$
to 54

Homework: The homework problems will be posted on the Blackboard page of the course.

Attendance Policy: Attendance is mandatory. An attendance sheet will be passed around at the beginning of each class period. Please write your signature next to your printed name on the list. If you are absent/tardy from a class, you must submit a note requesting that the absence/tardiness be excused by the next class meeting. Each student is allowed a total of three unexcused absences/tardies (combined). If you miss a class, it is your responsibility to study the section(s) covered and do the homework.

If you are absent the day of a regularly scheduled test, a grade of zero is automatically recorded as your test score. You will be permitted to make up this zero only when you can confirm that you were absent for reasons beyond your control. In such cases, you must telephone 256-4500 extension 3888 (or send me an e-mail) and leave a message including your name and telephone number, the reason for your absence and the date you anticipate returning. *Students who fail to leave the above information will be assigned the grade of zero for that test.*

Academic Honesty: Cheating on a test or assignment seriously undermines the integrity of the academic system and will not be tolerated. If I determine that a student has cheated, I will assign the grade of F for this course and send a letter to this effect to his advisor. Although a student is not cheating, he or she is expected to refrain from actions that could be suspicious. Using common sense on your part should avoid unnecessary embarrassment.

You may visit the website <http://www.rowan.edu/provost/policies/AcademicIntegrity.htm> for more information on Academic Integrity policy at Rowan University.

Classroom rules:

- Students will abide by Rowan's student code of conduct and policy on academic honesty (p. 19 and p. 28 of Rowan 1999-2000 undergraduate catalog, respectively). Improper behavior will not be tolerated.
 - Students are not permitted to leave the classroom during class period except for emergencies or unless prior arrangements have been made with the instructor. Please use the restrooms before class begins.
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Students with Disabilities and Special Needs: Please speak with me as early in the semester as possible so that we can make appropriate accommodations for you. If necessary, you can also contact the Office of Special Services.

Questions in Class: The best time to ask questions is during class. Many times students fear that their questions will seem foolish, while in fact, many others also have the same question. I urge you to ask your questions during class. If you have questions that were not answered in class, you may stop by my office during my office hours.
