Math 103B Winter 2016
Modern Algebra II
Course Syllabus

Course: Math 103B
Title: Modern Algebra II
Credit Hours: 4
Instructor: Efim Zelmanov

Time/location: The lectures will take place Monday, Wednesday, Friday 1:00 pm - 1:50 pm in Peterson Building 102. Discussion section will take place Thursday, 9:00am - 10:50 am in AP&SM B412.

Prerequisite: Math 103A or Math 100A or consent of instructor.

Textbook: The textbook for this course is Contemporary Abstract Algebra, 8th edition, by Joseph A. Gallian.

Course Material:

1. Survey of 103A
2. Rings: examples and elementary properties (Chapter 12)
3. Integral Domains, Fields (Chapter 13)
4. Ideals, Factor Rings, Prime Ideals and Maximal Ideals (Chapter 14)
5. Ring Homomorphisms, Isomorphisms (Chapter 15)
6. Division algorithm for polynomials, F[x] as a principle ideal domain (Chapter 16)
7. Irreducible polynomials and maximal ideals; irreducible polynomials of degrees 2, 3 (Chapter 17)
8. Finite fields, examples, multiplicative groups (Chapter 22)
9. Applications to Coding Theory and Cryptography (Chapter 31, sections 1-2)

Grading: Homework will be assigned on the course [ADD HYPERLINK]. You are strongly encouraged to seek help and discuss homework problems with your classmates and your TA. While homework scores will not be used in computing
your final grade, completing the homework assignments is a valuable way to receive feedback on your understanding of the course material.

There will be two midterm exams and one final exam. Midterm I will be given during class on Wednesday, January 27. Midterm II will be given during class on Friday, February 26. The midterm questions will be very similar to the homework problems.

The final examination will be held:

- 11:30am - 2:30pm, Friday, March 18, 2016

Your final course grade will be determined by your cumulative average at the end of the term, based on the following percentages:

- Midterm exam I (Wednesday, January 27): 25%
- Midterm exam II (Friday, February 26): 25%
- Final exam (Friday, March 18): 50%

Graded exams will be available from your TA in discussion section. If you wish to dispute anything about the grading of your assignment, you must do so within one week of it being available in section, and you must do so in writing before you leave the room with your assignment.

Accommodation: Students requesting accommodations and services due to a disability need to provide a current Authorization for Accommodation (AFA) letter issued by the Office for Students with Disabilities (OSD) as soon as possible and prior to eligibility for requests. Receipt of AFAs in advance is necessary for appropriate planning for the provision of reasonable accommodations. For additional information, contact the Office for Students with Disabilities: 858-534-4382 (V); 959-534-9709 (TTY)- reserved for people who are deaf or hard of hearing; or email osd@ucsd.edu. The OSD website is http://disabilities.ucsd.edu

Academic Integrity: Academic dishonesty will be taken very seriously, and students caught cheating will face penalties which range from failing the assignment or course to suspension or expulsion from the university. It is your responsibility to know what constitutes cheating. To review the Policy on Integrity of Scholarship at UCSD, please see http://students.ucsd.edu/academics/academic-integrity.