Course Syllabus

MTH 310: Abstract Algebra I and Number Theory
Summer Session I, 2018

Contact Information

Instructor: Matthew Cha
Email: chamatth@msu.edu
Office: C237 Wells Hall
Office Hours: WR 2:40p–4:40p

Course Information

Course description and prerequisites: This is a first course in abstract algebra and number theory. The topics we will cover include the structure of the integers, congruences, rings, ring homomorphisms, ideals, and quotient rings. This course will emphasize writing mathematical proofs. The prerequisite for this course is MTH 299 or MTH 317H, and it is expected that the student has obtained certain comfort level with writing proofs.

Lecture: There will be three weekly lectures starting from May 14, 2018 until June 28, 2018, Mon-Wed-Thur 12:40p - 2:30p in A132 Wells Hall. Attendance is not mandatory but highly recommended.

Textbook: The official textbook is T. W. Hungerford, *Abstract Algebra: An Introduction*, 3rd ed., (Brooks Cole, 2012), however, any edition is fine. We will cover chapters 1-6.

Webpage: The course webpage can be found here: http://users.math.msu.edu/users/chamatth/mth310.html. It is imperative that the student stay up-to-date with the webpage as it will be used regularly to post announcements, homeworks, and lecture topics.

Homework: There will be six weekly homework sets. Homeworks will typically be assigned a week before they are due. Solutions will be posted the day after homework is collected. Late homework will not be accepted. Students are allowed to discuss the homework assignments among themselves, but are expected to turn in their own work copying someone else's is not acceptable. Homework scores will contribute 30% to the final grade. The lowest homework score will be dropped.

Exams: There will be one midterm exam, tentatively set for Monday, June 8th. The final is scheduled for Thursday, June 28; this is the last scheduled day of the course at the regular lecture time. There will be no makeup tests.

Grading: The grade for the course will be calculated based on the following percentages: homework 30%, midterm 30%, final 40%. Grades will be posted on D2L.

Tenative Schedule:

- Week 1: Sec. 1.1, 1.2, 1.3

- Week 2: Sec. 2.1, 2.2, 2.3, 3.1

- Week 3: Sec. 3.2, 3.3

- Week 4: Sec. 4.1, 4.2, Midterm

- Week 5: Sec. 4.3, 4.4-5, 5.1,

- Week 6: Sec. 5.2, 5.3, 6.1

- Week 7: Sec. 6.2, Final

Other Policies

Academic Integrity: Working on homework assignments together is encouraged, but each student must write up their own solutions. If you copy an assignment from another student or from another source, then you will be disciplined according to Michigan State Universitys student regu- lations. You must work

individually on mid-term exams and the final exam. Cheating on mid-term exams and the final exam will not be tolerated and it will be disciplined according to Michigan State Universitys student regulations.

Accommodations for Students with Disabilities: (from the Resource Center for Persons with Disabilities (RCPD)) Michigan State University is committed to providing equal opportunity for participation in all programs, services and activities. Requests for accommodations by persons with disabilities may be made by contacting the Resource Center for Persons with Disabilities at 517-884-RCPD or on the web at rcpd.msu.edu. Once your eligibility for an accommodation has been determined, you will be issued a Verified Individual Services Accommodation (VISA) form. Please present this form to me at the start of the term and/or two weeks prior to the accommodation date (test, project, etc.). Requests received after this date may not be honored.