

Algebra I

Course: MTH 619

Semester: Fall 2014

Instructor: Yorck Sommerhäuser

Office: Math 208

Telephone: 645-8774

E-Mail: yorcksom@buffalo.edu

Class meetings: Monday, Wednesday, Friday 12:00 pm–12:50 pm, Math 122

Office hours: Monday, Wednesday, Friday 3:00 pm–4:00 pm and by appointment.

Textbook: H. Kurzweil/B. Stellmacher: The theory of finite groups—an introduction, Universitext, Springer, Berlin, 2004, ISBN-10: 0-387-40510-0.

Course description: The course begins with an in-depth introduction to group theory. Toward the end, we also study ring and module theory, which will be continued in the second semester.

Objectives: The objective of the course is to provide an introduction to abstract algebra based on rigorous proofs and deductive reasoning. Together with its sequel Algebra II, it prepares the student for second qualifying exam in algebra.

Coverage: Approximately the first three quarters of the course will be concerned with group theory. We will cover the majority of topics in Chapters 1, 2, 3, and 5. We will also cover selected parts of Chapters 4 and 6. Approximately the last quarter of the course will be concerned with ring and module theory. This material is not covered in the textbook and will be taught using photocopies from other textbooks provided by the instructor.

Exams: There will be two midterm exams and a comprehensive final exam. The midterm exams take place on Friday, September 26 as well as Friday, October 31. The final exam takes place Wednesday, December 10, 11:45 am - 2:45 pm, in Capen 260.

Homework: Beginning Monday of the second week, a weekly exercise sheet will be handed out, containing three to four problems. This has to be completed until the next Monday. While it is allowed to collaborate on the problems, every student is required to write up his solution in his own words. There will be no exercise sheets during exam weeks.

Attendance: Attendance is required.

Grading weights:

Homework:	30 %
Midterm exams:	20 % each
Final exam:	30 %

Grading scale:

A: 90% A-: 88%
B+: 86% B: 80% B-: 78%
C+: 76% C: 70% C-: 68%
D+: 66% D: 60%

Disabled students: If you have a diagnosed physical, learning, or psychological disability which will make it difficult for you to carry out the course work as outlined, or requires accommodations such as recruiting note takers, readers or extended time on exams or assignments, please advise me during the first two weeks of the course so that we may review arrangements for accommodations.