Algebraic Structures
Mathematics 222 Section 02
Fall Semester 1998
MWF 1:55 – 2:45, CCMB 326

Professor: Peter Cholak
Office: 223 Computer Center and Mathematics Building (CCMB)
Office Phone: 1-6507 *E-mail:* Peter.Cholak.1@nd.edu
Office Hours: MWF 2:45 – 3:30 or by appointment.

Text: Introductory Modern Algebra – a Historical Approach by Saul Stahl.

Our Goals: Along with learning some very nice mathematics, the main goal of this class is continue the process of how to solve complex mathematical problems, how to think abstractly, how to write a "good" solution to a mathematical problem and how to communicate mathematically. These skills have proven to be very valuable in many realms. To this end, it is excepted that you *read* the textbook and do the homework. Ideally it would be nice if you read the textbook *before* we discussed the material in class. One resource you should definitely take advantage of are my office hours.

Take-Home Quizzes: Approximately every week a take-home quiz will given. Normally, but not always, quizzes will be given on Wednesdays. About 12 such quizzes will be given. Each quiz is worth 10 points. Your best 10 quizzes will count toward your grade. Hence the quizzes are worth 100 points in total. These quizzes will be graded by me.

In-Class Presentations: We will break the class into groups of 3 or 4. Throughout the semester each group will be given at least 2 problems to solve and present to the class. You may solve these problems as a group and present them as a group but everyone must speak in front of the class at least once. All presentations *must* be approved by me; i.e. you must present a *correct* written solution to me in my office *before* giving a presentation to the class. There will be about 2-3 presentations a week. The presentations are worth 25 points but if you do not complete them you will fail the course.

Exams and the Final: The dates of the exams and final are below. The first exam will be given in class and will take the whole class period. We are toying with the idea that the second exam will be a take-home exam in which case it will be given on the dates listed below but otherwise it will

have the same format as the first exam.
EXAM 1: Wednesday, February 24.
EXAM 2: Wednesday, April 14.
FINAL: Thursday, May 6, 1:45 – 3:45 (location will be announced later).
The exams are worth 100 points and the final 150 points. The grades for the exams will be curved into the letter grades A, B, C, D and F. The exams and final will be graded by the Professor.

Homework: Homework will be assigned daily and due *two* class periods later (i.e. if assigned on Wednesday it is due on Monday.) This is done to allow you the time to ask questions about the homework. If you miss a class when the homework is assigned it is still your *responsibility* to find out the homework assignment and complete it in time. In total the homework is worth 25 points. The homework will not be graded by me but by a corrector. As a general rule unless you do exceptionally well or poorly on the homework, your homework grade will have little effect on your course grade. However, in order to do well in any mathematics class it is very important to keep up with the homework!

Grading: The course grade will be determined by curving the total number of earned points out of the possible 500 points. The previous curves will help determine the final curve. The possible letter grades are: A, A-, B+, B, B-, C+, C, C-, D, F.

Makeups: You can make up the exams only if you have a university approved excuse (i.e. ill at the infirmary, a participant at an away game, etc) and have an official note or letter to this effect. You may *not* make up any of the quizzes (after all they are take-home and you can drop several), homework (after all in most cases this will have little effect on your final grade) or the final (you better be there!).

The Honor Code and working together: As always you are bound by the *Honor Code*[1]! The in-class exam(s) and final are "closed book" and no books, notes or *calculators* are allowed. However you may work together on the homework, quizzes and your in-class presentation but *not* on the one take-home exam (if given). While you can talk with others about the homework and quizzes problems you *must* each individually write up the solutions.

[1] If you are unclear how this code will effect you in this class, please see me.