**MATH 3110 - ABSTRACT ALGEBRA**  
Fall, 2006

Instructor: Dr. Mark Budden  
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Office Hours: Mondays and Fridays 11:00-1:00,  
Tuesdays 11:30-12:30, or by appointment.

**Textbook:** *Contemporary Abstract Algebra, 5th ed.*, by Joseph Gallian.

**Other Materials:** Every student will be expected to have a calculator. You will not be allowed to share calculators with other students during exams.

**Prerequisites:** Math 2083 and Math 3000

**Description/Purpose of Course:** The purpose of this course is to introduce students to the subject of modern algebra. The main focus of the course will be to investigate the basic theory of the algebraic structures known as groups and rings. More specifically, we will study their important substructures, the structure-preserving maps, quotients, and many examples. The course will rely heavily on each student’s ability to write thorough proofs.

**Exams:** There will be 3 in-class exams (100 points each) and one comprehensive final exam (200 points). No make-up exams will be given for any reason. If a student misses an exam for an excused reason, then their final exam will count for 300 points to make up the missing points. A missed exam will be considered excused only if all of the following conditions are met:

1. I am notified of the absence prior to the exam,
2. The excuse is legitimate: illness, death of a family member, etc. . . ,
3. I am provided with the proper documentation.

**Homework:** A homework assignment will be given each class over the material covered that day. Before each of the 3 exams, I will collect the homework assigned since the previous homework was collected. On each assignment, 4 problems will be picked and graded out of a total of 20 points. Two points will be deducted for each day that an assignment is turned in late. An assignment will not be accepted once the grading has been completed. While the homework grade is not as significant as that of the exams and final, I collect homework primarily to give you feedback on the completeness of
your proofs and understanding of the material. Therefore, homework is a fundamental component of your success in the class.

**Attendance:** Students are expected to attend all classes. If a class is missed, it is the student’s responsibility to find out about missed material. Attendance will be taken for the first two weeks of class so that I can determine who is enrolled. There is usually a high correlation between students that attend all classes and students that perform well on exams.

**Withdrawal:** If a student wishes to withdraw from the course, s/he must come and speak with me. If a student withdraws after late registration and by midterm, they will receive a W. Any student withdrawing after midterm will receive a WF.

**ADA Accommodations:** Any student who may require special accommodations due to a disability should contact the Office of Disability Services in the Division of Student Affairs and should come and speak with me privately as soon as possible. I will work with the Office of Disability Services to provide accommodations according to their documented needs.

**AASU Honor Code:** The University’s policies in regards to the Honor Code and Code of Conduct will be upheld in this class (see catalog p.308).

**Other:** This class is an introduction to modern algebra, and like other courses in pure mathematics, you will be expected to provide rigorous arguments justifying your work. All proofs should be clearly written in complete sentences. If you are questioning whether or not a step should be included, then include it. Do not be afraid to waste paper (see me in my office if you want a stack of scratch paper) or spend too much time on homework problems. Some problems may only require a few minutes, while others may take an hour or more. The more effort you put into the homework, the better understanding you will have of the subject.

* If you bring a cell phone to class, then it must be turned OFF! Note that vibration mode is not the same as off.

**Grade Distribution:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>60</td>
</tr>
<tr>
<td>Exams</td>
<td>300</td>
</tr>
<tr>
<td>Final</td>
<td>200</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>560</strong></td>
</tr>
</tbody>
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Letter Grades will be assigned on a standard 10-point scale (100% – 90% A, 89% – 80% B, 79% – 70% C, 69% – 60% D, 59% – 0% F).