

**Time and Place:** 8:35 – 9:50 TR, Evans 106

**Office:** Evans B18 (basement) Phone: 866-6295 E-mail: rogero “at” saintjoe.edu

**Office Hours:** Talk with me before or after class, or make an appointment

### TEXT

C.C. Pinter, *A Book of Abstract Algebra*, 2<sup>nd</sup> Ed., Dover, 2010, ISBN: 978-0486474175

### COURSE CATALOG DESCRIPTION

This course is that portion of Abstract Algebra that studies elementary group theory. It considers the properties of groups, subgroups, and functions; this leads to groups of permutations and groups isomorphic to them. Homomorphisms of groups along with the induced factor groups culminate in the *Fundamental Homomorphism Theorem*; this rounds out the course. Either Math 432 or this course fulfills the requirement for Modern Algebra by the Indiana State Department of Education for Secondary Teacher Education students of mathematics.

### REQUIREMENTS AND GRADING

The course will cover chapters one through eleven of the text. Understanding rigorous mathematical proofs via the deductive method is an essential part of this course. Many of the homework and presentation problems will involve mathematical proof, but there will be many “computational” problems as well. I realize that some students have a hard time with mathematical proofs, and it is my hope that you will learn proof technique, but be assured that you can still pass this course if you can articulate the definitions and master computational problems.

Your course grade will be based on four criteria: Examinations (two in addition to the final), written homework assignments, class presentations, and attendance. Attendance will be taken at every class period and will affect your grade by a maximum of two percentage points in either direction. The weighted criteria and final grade percent scale follow:

Exams: 60%	HW: 10%	Presentations: 30%	Participation/Attendance: +/-3%
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A	93-100
A-	90-92
B+	87-89
B	83-86
B-	80-82
C+	77-79
C	73-76
C-	70-72
D+	67-69
D	60-66

## NOTES ON GRADING CRITERIA

- 1) There will be an assignment from each chapter covered in the text. I will always announce when an assignment is due, however, in case for any reason you don't hear me give the due date, the game plan will always be as follows: Assignments should be attempted by the next class period (so that questions may be asked in class) and are due at the end of the second class period after the appropriate chapter is finished. E.g., if we complete Chapter 3 on Thursday September 16, the assignment for Chapter 3 is due at the end of the Thursday September 23 class. **Late assignments will not be accepted except under extreme circumstances.**
- 2) I cannot stress enough the importance that doing your homework has to your success in an advanced math course such as this. Math is not a “spectator sport”. Even though class attendance and participation will help you a great deal in keeping up with the material, you cannot adequately learn math without practicing it on your own – mainly via homework and preparation for presentations.
- 3) Your assignments must be NEATLY DONE, and all work must be shown. Multiple pages must be STAPLED, and each page must have a smooth edge - pages torn out of spiral binders are NOT ACCEPTABLE.
- 4) The first two exams will be given during part of the regular class period (approximately September 21 and November 9), and the third will be given in finals week - Monday December 13 at 10am. They will consist mostly of short proofs and definitions, with an occasional computational problem. If you keep up with class notes, diligently prepare your class presentations, and do all homework assignments in a timely manner you will be adequately prepared for the exams
- 5) Your class presentations will be given by your team and consist of explanation of proofs and problems from the text. Each team member should put forth equal effort over the course of the semester. I'll assign problem numbers at the end of the class period before your team's presentation.