

**Text** We will be using *Contemporary Abstract Algebra* (Fifth Edition) by Joseph A. Gallian. We will cover material from Chapters 0 through 11, and 24 — see the attached **tentative** schedule for the exact sections covered.

**Home Page** Start at <http://buzzard.ups.edu/courses.html> to locate the WWW page for this course.

**Office Hours** My office is Thompson 321G; the telephone number is 879-3564. Making appointments or simple, non-mathematical questions can be handled via electronic mail — my address is [beezer@ups.edu](mailto:beezer@ups.edu). Office hours will be 11:00–11:50 on Monday, Wednesday and Friday, and 10:30–12:20 on Tuesday. I will always be available during these times on a first-come, first-served basis. If these times are not convenient, please do not hesitate to make an appointment with me for another time. You are also welcome to drop by my office without an appointment at any time that I am in (2 P.M. to 4 P.M. is a good time to try). Office hours are your opportunity to receive extra help or clarification on material from class, or to discuss any other aspect of the course.

**Homework** Homework will be assigned for each chapter, but will not be collected. Of course, you are not limited to working *just* these assigned problems. Once a week, generally on Friday, we will have a problem session where we can discuss these problems. It is your responsibility to be certain that you are learning from the homework exercises. The best ways to do this are to work the problems diligently when assigned and to participate in the classroom discussion. If at this point you are still unsure about a problem, then a visit to my office is in order. Making a consistent effort outside of the classroom is the easiest way to do well in this course.

Mathematics not only demands straight thinking, it grants the student the satisfaction of knowing when he or she is thinking straight. — D. Jackson

Mathematics is not a spectator sport. — Anonymous

I hear, I forget.

I see, I remember.

I do, I understand.

— Chinese Proverb

**Reading Questions** Reading questions will be posted on the course WWW page for each chapter. Your answers are due back to me by 10 P.M. the night before we begin discussing a new chapter (usually this will be Monday night). These should be submitted to the email address announced in class, not my `beezer@ups.edu` address.

**Quizzes** There will be thirteen one-hour quizzes — see the attached sheet for tentative dates — though mostly they will be on Monday, at the conclusion of each chapter. The lowest two of your quiz scores will be dropped. The comprehensive final exam will be given at 8 AM on Tuesday, December 14. The final exam cannot be given at any other time, so be certain that you do not make any travel plans that conflict, and also be aware that I will allow you to work longer on the final exam than just the two-hour scheduled block of time.

**Grades** Grades will be based on the following breakdown: Quizzes — 75%; Reading Questions — 5%; Final — 20%. Homework, attendance and improvement will be considered for borderline grades. Scores will be posted on the World Wide Web at <http://buzzard.ups.edu/courses.html>. A reminder about withdrawals — a Withdrawal Passing grade (W) can only be given during the third or fourth weeks of the semester, after that time (barring unusual circumstances), the appropriate grade is a Withdrawal Failing (WF), *even if your work has been of passing quality*. See the attached schedule for the last day to drop with an automatic ‘W’ and please read *The Logger* about these often misunderstood grades.

**Attendance** Daily attendance is required and expected, and is a pretty good idea.

**Purpose** At this point in your college career, you should be well on your way to being an independent scholar, who appreciates the beauty of mathematics and understands the effort needed to master new and difficult ideas. Consistent with that, I will be giving you a fair degree of freedom to learn this material in a manner that suits you.

Read the book before the lectures, work the exercises diligently, tidy up your class notes each evening, and ask questions. Arriving late to class, or having conversations with others during class, not only disrupts your peers, but tells me you are not serious about your education. I will not routinely check attendance, but our class is small enough that I will notice when you are not here, and again this will be another way that you signal me about your commitment to the endeavor.

Many consider group theory (the branch of Abstract Algebra that we will concentrate on this semester) one of the most fascinating areas of mathematics. The investment of your time and energy applied to studying it will be amply repaid by a full understanding of its deeper ideas.

## Homework Exercises

Chap	Page	Computational	Theoretical
0	23	4, 16, 29, 38, 41, 46	8, 12, 14, 15, 21, 24
1	37	4, 13, 19, 22	6, 7, 8, 9
2	53	3, 5, 8, 13, 22, 24, 37	12, 14, 16, 17, 19, 29, 33
3	67	9, 24, 27, 28, 31, 33, 34, 41, 42	10, 13, 14, 16, 19, 21, 22
4	82	19, 22, 33, 40, 45, 46, 55, 65	24, 31, 41, 54, 56, 62, 64
5	111	4, 6, 24, 25, 32, 33, 36, 43	13, 16, 22, 31, 40, 45, 46
6	129	3, 4, 5, 7, 12, 16, 22, 23	2, 10, 30, 32, 33, 34, 35
7	145	1, 2, 3, 6, 8, 12, 13, 26, 33	10, 15, 19, 21, 23, 24, 36
8	162	5, 8, 12, 18, 20, 22, 26, 30, 40, 49, 51, 53	3, 14, 16, 55
9	186	3, 4, 5, 9, 12, 14, 21, 24	6, 10, 30, 37, 41, 43, 46, 48, 49, 58
10	205	2, 6, 10, 11, 14, 17, 19, 20	22, 37, 38, 42, 45, 46, 53 (see #7 p. 169)
11	219	3, 4, 6, 7, 8, 12, 15, 19, 25, 28	20, 30, 32, 34
24	407	5, 7, 11, 12, 18, 21, 44	1, 4, 10, 33, 36, 39, 42

## Tentative Daily Schedule

Monday	Tuesday	Wednesday	Friday
Aug 30 Chapter 0	Aug 31 Chapter 0	Sep 1 Chapter 1	Sep 3 Problem Session
Sep 6 Labor Day	Sep 7 Quiz #0	Sep 8 Chapter 1	Sep 10 Problem Session
Sep 13 Quiz #1	Sep 14 Chapter 2	Sep 15 Chapter 2	Sep 17 Problem Session
Sep 20 Quiz #2	Sep 21 Chapter 3	Sep 22 Chapter 3	Sep 24 Problem Session
Sep 27 Quiz #3 Last day to drop	Sep 28 Chapter 4	Sep 29 Chapter 4	Oct 1 Problem Session
Oct 4 Quiz #4	Oct 5 Chapter 5	Oct 6 Chapter 5	Oct 8 Problem Session
Oct 11 Quiz #5	Oct 12 Chapter 6	Oct 13 Chapter 6	Oct 15 Problem Session

Mid-Term

Monday	Tuesday	Wednesday	Friday
Oct 18 Fall Break	Oct 19 Quiz #6	Oct 20 Bonus Day RSA Encryption	Oct 22 Bonus Day RSA Encryption
Oct 25 Bonus Day Rubik's Cube	Oct 26 Chapter 7	Oct 27 Chapter 7	Oct 29 Problem Session
Nov 1 Quiz #7	Nov 2 Chapter 8	Nov 3 Chapter 8	Nov 5 Problem Session
Nov 8 Quiz #8	Nov 9 Chapter 9	Nov 10 Chapter 9	Nov 12 Problem Session
Nov 15 Quiz #9	Nov 16 Chapter 10	Nov 17 Chapter 10	Nov 19 Problem Session
Nov 22 Quiz #10	Nov 23 Chapter 11	Nov 24 Chapter 11	Nov 26 Thanksgiving
Nov 29 Problem Session	Nov 30 Quiz #11	Dec 1 Chapter 24	Dec 3 Chapter 24
Dec 6 Problem Session	Dec 7 Quiz #24	Dec 8 Housekeeping	

Final Examination  
8 AM, Tuesday, December 14