Classroom:	Tues & Thur 5:00-6:20 pm in PKH 103
Contact Data:	PKH 462, 817-272-3932, vancliff@uta.edu
Web:	http://www.uta.edu/math/vancliff/T/S12
Office Hours:	Tues & Thur 4:00-4:50 pm in PKH 462, or by appointment
Textbook:	A First Course in Abstract Algebra, 7th Ed., by J. B. Fraleigh, Addison-Wesley.
Prerequisite:	A, B or C in Math 3321.
Test dates:	Test 1: Thurs Feb 2 (10 minutes) = 8% Test 2: Thurs Feb 23 (20 minutes) = 16% Test 3: Thurs Mar 22 (40 minutes) = 24% Test 4: Thurs April 26 (20 minutes) = 16% Final Test: 5:30-8:00 pm on Tues May 8 = 32%. All tests are comprehensive. Make a note of these dates NOW. Bring photo ID to all tests.
Weighting:	Each test will be curved separately and its grade (not score) will contribute to your course grade. Attendance will count 4% of your course grade.
Note:	any student not obtaining a positive score on the Final examination will not pass this class.
Important Dates:	Wed Feb 1 = Census date Tests (see above): Feb 2, Feb 23, Mar 22, Ap 19, May 8 Mar 12-16 = Spring Break (holiday) Fri Mar 30 = official last day to drop (with W) Thurs May 3 = last day of class.

COURSE CONTENT & LEARNING OUTCOMES

The topics to be covered are: rings, ideals, factor rings, fields, extension fields and Galois theory. We will cover most of chapters 4-6, 10, and possibly some of chapter 9.

Expected Learning Outcomes: upon completion of this course, for any of the topics listed above, you should be able to: 1. write the definition of many of the terms; 2. solve problems; 3. construct correct and detailed mathematical arguments to justify your claimed statements.

Rings & groups are useful in classical & quantum mechanics, coding theory & other areas; in particular, they play a crucial role in robotics, & in describing the movement of electrons in an atom.

HOMEWORK

The homework will not be collected; it is assigned to help you learn the material and prepare for the tests. The tests will be designed to determine whether you have mastered the ideas in the homework and in the lectures. Indeed, at least half of each test will be based on homework problems. Some reading might also be assigned, due to the amount of material that we need to cover.

CALCULATORS

No calculator is allowed on any test, so it is best not to use one on the homework.

ATTENDANCE

Attendance is required and counts 4% of your course grade. You are responsible for any and all announcements made in class and on my website (given above). You are responsible for any and all material missed during lecture.

HELP OUTSIDE CLASS TIME

Feel free to ask me relevant questions during class, after class and in office hours. You can also e-mail me your questions, or ask me to look over your solution to a homework problem. My office hours are times I am planning to be in my office where you can drop by without an appointment to ask me questions.

Tutoring (at cost) is available at the SOAR Office in Hammond 132 and at the Science Learning Center in Life Science 106. A list of tutors is available from the Math Department Office but note that this list is not endorsed by the Math Department.

My web page (given above) will list the homework as the semester progresses as well as other miscellaneous information pertinant to this course; you are advised to check it every couple of days.

HOW TO DO WELL IN THIS COURSE

You are expected to spend *at least* 6 hours/week on this course outside class time. The best way to guarantee a good grade in this course is to take good lecture notes and to read them over after class, and to do ALL the assignments on a regular basis (this is your *brain exercise*!) and to discuss the material with each other. After completing any one assignment, put together a list of the ideas you have learned in doing that assignment; keep your list as help when you study for the tests.
See page 4 for techniques on how to study.

It is very important that you know how to work out the homework problems correctly. If you use a solutions manual, be sure to use it in a way that helps you understand & remember the concepts and arguments.

CONFLICT WITH EXAMINATION DATES

Students who miss tests due to UNauthorized reasons will NOT be accommodated. In particular, your personal commitments (e.g., job) must accommodate the test dates/times.

If you have a conflict with a test, or if you miss a test, you should contact me as soon as possible (in person, by e-mail, or by phone (leave a message on my answering machine (NOT with the math office) if I am not there)). If you miss any test for an authorized reason which can be verified with official documentation (e.g., hospitalization), then accommodations will be offered (no make-up tests). Any student not earning a positive score on the Final examination for this class will not pass this class.

TUITION NONPAYMENT

If you are dropped from this class for non-payment of tuition, you may secure an Enrollment Loan through the Bursar's Office.

DROP POLICY

The last day this semester to drop a course is Friday Mar 30 at 5 pm. Any student who drops the course on or before Mar 30 will receive a W. **Students must contact an advisor in their major in order to drop a course,** and I recommend those interested in this should see their advisor at least a few days before Mar 30 to allow time to obtain necessary signatures.

DISABILITY ACCOMMODATIONS

The University of Texas at Arlington is on record as being committed to both the spirit and letter of federal equal opportunity legislation; reference Public Law 93112 — The Rehabilitation Act of 1973 as amended. With the passage of the Americans with Disabilities Act (ADA), pursuant to Section 504 of the Rehabilitation Act, there is renewed focus on providing this portion of the population with the same opportunities enjoyed by all US citizens. In particular, students in this situation who desire accommodation should **notify me informally this week**, and notify the Disabilities Office as soon as possible with official authorized documentation; the Disabilities Office will give you documentation that will authorize me to provide accommodation and inform me of the nature of the accommodation.

GRADE–REPLACEMENT & GRADE EXCLUSION POLICIES

These policies and deadline dates are described in detail online at http://wweb.uta.edu/ses/recordsandregistration/content/student_services/grade_exclusion.aspx & at http://wweb.uta.edu/ses/recordsandregistration/content/student_services/grade_replacement.aspx .

SCHOLARLY INTEGRITY

It is the philosophy of The University of Texas at Arlington that academic dishonesty is a completely unacceptable mode of conduct and will not be tolerated in any form. All persons involved in academic dishonesty will be disciplined in accordance with University regulations and procedures. Discipline includes suspension or expulsion from the University and a grade of FAIL in the class given to involved student(s). Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22 of the Regents' Rules and Regulations states the following. "Scholastic dishonesty includes, but is not limited to, cheating, plagiarism, collusion, the submission for credit of any work or material that are attributable in whole or in part to another person, taking an examination for another person, any act designed to give unfair advantage to a student or the attempt to commit such acts".

Photo-ID is REQUIRED at all tests. The University has informed all its faculty that steps should be taken to discourage cheating on tests. As such I will uphold the following during the tests:

- all items not needed for the test should be placed on the floor by the wall;
- if you wish to leave the room during a test, you should ask permission first and turn in your test to me — only in exceptional circumstances will I let you continue the test should you return (so it is better to be 3 minutes late to the test, rather than ask to go to the restroom during the test);
- if you finish a test early but prefer to stay in the room, then you should NOT get out any work, book nor item, no matter what the subject matter is.

Remember, in any test, keep your eyes on your own work only.

DISTRACTION IN THE 21ST CENTURY!!

Cellular phones should be SWITCHED OFF during all classes & all tests. Cellular-phone use, texting, e-mailing, and web surfing are not permitted in class unless permission explicitly given by me. If you NEED to use your cellular phone for an URGENT reason during class, you may leave the room to talk & return to class when you are done. If you leave class for a nonurgent reason, the students & I prefer that you do not return, & I will subtract your name from the attendance sheet. During tests, your cellular phone should be switched off and with your belongings by the wall. If you need to use your cellular phone for any reason during a test, then you may leave the room to talk, but **you will not be able to continue the test**.

The University reserves the right to impose disciplinary action for any kind of infraction of University policies. Engagement in conduct which disrupts, obstructs or interferes with activities authorized by the University will result in disciplinary action against the perpetrator(s). Such conduct includes leaving and/or entering the room during class.

STUDY TECHNIQUES

See the website http://www.uta.edu/math/vancliff/T/S09/1426study.pdf for a list of study techniques for calculus students; many of those study techniques apply to studying the material in this course.

Homework from Sections 18 and 19

- Read lecture notes and pages 167-174 and do §18: 1, 3, 5, 7, 9, 11, 14, 16, 19, 20, 31, 38, 46 (hint: think binomial theorem from Math 1302), 22, 27, 23, 40.
- Read lecture notes and §19 and do §19: 14, 23, 24, 28, 5-12, 27, 29.

See http://www.uta.edu/math/vancliff/T/S12 for homework as semester progresses.