Classroom:	Tues & Thur 4:00-5:20 pm in PKH 103
Contact Info:	PKH 462, 817-272-3932, vancliff@uta.edu
Web:	http://www.uta.edu/math/vancliff/T/S11
Office Hours:	Tues & Thur 3:20-3:50 pm in PKH 462 & 5:20-5:50 pm in PKH 103 or 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
Tests:	• 4 comprehensive tests on Thur Feb 3 (15 minutes), Thur Mar 3 (20 minutes), Thur Mar 31 (60 minutes), Thur Ap 28 (60 minutes); • one comprehensive **Final** on Thur May 12, 2:00-4:30 pm. Bring photo ID to all tests. Make a note of these dates.
Weighting:	Test 1 = 6%, Test 2 = 8%, Test 3 = 20%, Test 4 = 20%, Final = 32%, graded assignments/quizzes = 10%, attendance 4%. Each test will be curved separately and its grade (not score) will contribute to your course grade.
Note:	any student not obtaining at least 25% on the Final for this class will not pass this class.
Important Dates:	Wed Feb 2 = Census Date Mar 14-18 = Spring Break, Fri April 1 = last day to drop course with W (see page 2), Thur May 5 = last class, test dates given above.

CALCULATORS

On tests, you will be allowed to use nonprogrammable calculators with basic computational features, such as arithmetic and transcendental functions. Calculators with the following features are NOT allowed: graphing, equation solving, differentiation & integration; any device that has internet or e-mail capabilities – this includes cell phones – and any devices with a QWERTY keyboard are also not permitted (use of such a calculator on a test will disqualify that test). Recommended calculators are TI-30XA or TI-30XIIS.

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.

HELP OUTSIDE CLASS TIME

Feel free to ask me relevant questions during class and outside class. My office hours are times I am planning to be in my office or in a predecided classroom where you can drop by without an appointment. You can also e-mail me your questions, or e-mail me to schedule an appointment.

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.

There will be a lot of homework assigned, some of which will be graded. 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. At least half of each test will be based on homework problems. Some reading will also be assigned, due to the amount of material that we need to cover.

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.

CONFLICT WITH EXAMINATION DATES

Students who miss tests due to UNauthorized reasons will NOT be accommodated.

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. Any student not obtaining at least 25% on the Final for this class will not pass this class.

DROP POLICY

The last day this semester to drop a course is Friday April 1 at 5 pm. Any student who drops the course on or before April 1 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 April 1 to allow time to obtain necessary signatures.

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.

GRADE–REPLACEMENT & GRADE EXCLUSION POLICIES

These policies and deadline dates are described in detail in the University catalog and can also be found online at http://www3.uta.edu/registrar/gradeExclusion.asp and at http://www3.uta.edu/registrar/grade_replacement.asp .

DISTRACTION IN THE 21ST CENTURY!!

Cellular phones should be SWITCHED OFF during all classes & all tests. Cellular-phone use is not permitted in class. 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 class & I prefer that you do not return, & I will subtract your name from the attendance sheet. During tests, your cellular phone should be out of sight. 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 action includes leaving and/or entering the room during class.

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:

- 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.

Submitting homework that has been copied verbatim (or almost verbatim) from any kind of solution manual (with or without reference to said manual) is a form of plagiarism. I will seek academic sanctions against any student who participates in any form of plagiarism in this class.

First week's homework:

1/18: Read lecture notes & do Sec 18 pgs 174/5: 1, 3, 5, 7, 9, 11. Submit Jan 27.

1/20: Read lecture notes & do Sec 18 pgs 175/6: 14, 16, 19, 20, 31, 38, 46 (hint: think binomial theorem from Math 1302), 22, 27, 23, 40. Submit Jan 27.

See http://www.uta.edu/math/vancliff/T/S11 for more homework.