

Course Syllabus
MAT 334-Introduction to Abstract Algebra
Fall 2017
Dr. John Peter
Utica College

Course Description: This is intended to be the student's first course in abstract algebra. We will cover the basic theory of groups, rings, and fields. The course will rely heavily on writing proofs, but there will be plenty of examples that are computational in nature. It is likely that this is one of the student's first upper level mathematics courses, so emphasis will be put on correctly constructing proofs.

Course Learning Goals:

- In accordance with the Program Learning Goals of the Mathematics Department, the student will demonstrate an ability to read and analyze mathematical proofs (PG1), write mathematical proofs (PG2), formulate and solve mathematical problems (PG3), and communicate mathematics in written form (PG4).
- Group Theory: The student will become familiar with the basic theory of groups including subgroups, cyclic groups, alternating groups, finitely-generated abelian groups, factor groups, cosets, Lagrange's Theorem, simple groups, and group homomorphisms.
- Ring Theory: The student will become familiar with the basic theory of rings including rings of polynomials, factorization, integral domains, ideals, and factor rings.
- Field Theory: The student will become familiar with the basic theory of fields including extension fields, finite fields, and the field of fractions of an integral domain.

Class Meetings: Tuesday & Thursday from 10:00am to 11:15am in 103 ECJS

Required Text: *First Course in Abstract Algebra* Edition: 7th by John Fraleigh. ISBN: 9780201763904

Course Webpage: https://www.utica.edu/faculty_staff/jpeter/mat334f17.cfm

Contacting me: EMAIL: jwpeter@utica.edu (The best way to contact me)
OFFICE PHONE: 315-792-3730

Office/Hours: Room 257 White Hall
Monday, Tuesday, Thursday, and Friday from 11:30AM to 12:30PM
or By Appointment (made either in person or by email)

Coursework/Weights:

Assessment	% of Final Grade
Participation	5%
Weekly Homework (Assigned/Collected every Thursday)	20%
Midterm Exam 1	25%
Midterm Exam 2	25%
Final Exam	25%

Final Exam Date & Time: Tuesday, December 12, 8:00am

NO MAKE-UP WORK WILL BE GIVEN.

Grading: The grading scale will be *no worse* than:

90 – 100% = A/A- 70 – 79% = C+/C/C- Below 60% = F
80 – 89% = B+/B/B- 60 – 69% = D+/D

Secrets to success in this course:

- Do lots of problems ... homework and more!
- Come to class
- Read the book
- ASK QUESTIONS!

Attendance: It is mandatory that I keep track of your attendance. An attendance sheet will be available for you to sign at the beginning of each class. Your attendance will count toward your participation grade. **YOU ARE EXPECTED TO ATTEND EVERY CLASS PERIOD.** In the event that you miss class (or are mentally absent from class!) it is your responsibility to keep up with all announcements, syllabus adjustments, and/or policy changes made during scheduled class time and/or sent to

you via your Utica College email. Please make sure that your Utica College email is functioning properly, and make every effort to contact me using your Utica College email address (as opposed to hotmail, yahoo, etc.) to avoid confusion. If class must be cancelled for some reason, you will be notified as early as possible via your Utica College email.

Classroom Etiquette: Always keep in mind that you are in a college classroom. You and all of the people around you have paid to be here. By simply showing up for class, you are demonstrating that you take very seriously the opportunity to pursue the best learning experience possible. You are expected to treat all people in the classroom with respect, and to come to class prepared to learn. Disruptive behavior, including (but not limited to) talking, whispering, texting, eating loudly, etc. will negatively impact EVERYONE'S experience and will not be tolerated.

Intellectual Honesty: Academic honesty is necessary for the free exchange of ideas. Utica College expects academic honesty from all students and Utica College faculty are authorized to assign a wide range of academic penalties for incidents of academic dishonesty. Academic dishonesty includes both cheating and plagiarism. Plagiarism is the intentional or unintentional use of other people's ideas, words, and/or factual information as your own and without crediting the source. It doesn't matter if the words come from a book, journal article, web site, or personal letter; if somebody else originally wrote them you may not use them without attributing them to that individual by appropriately citing the source. Plagiarism also refers to self-plagiarism, or re-purposing material that you've already completed for another course or assignment. Cheating refers to giving and/or receiving unauthorized assistance in taking examinations or creating assigned and/or graded class work. Students who assist other students in, or contribute to, acts of academic dishonesty are subject to the appropriate penalties. As mentioned above, Utica College faculty are authorized to assign a wide range of academic penalties for incidents of academic dishonesty. Depending on the nature of the offense, the penalty may include a reduced grade or grade of zero for the particular assignment, a grade of F for the course, or the grade of "F" for cheating in the course. Incidents of academic dishonesty are reported to the Vice President for Academic Affairs who will refer any repeat offense, or any particularly egregious first offense, to the Academic Standards Committee which may recommend a more severe penalty than that imposed by the faculty member.

Disability Disclosure: Any student who has need of special accommodations in this class due to a documented disability should speak with me as soon as possible, preferably within the first two weeks of class. You should also contact Kateri Henkel, Director of Learning Services in the Academic Support Services Center (315-792-3032 or khenkel@utica.edu) in order to determine eligibility for services and to receive an

accommodation letter. We will work with you to help you in your efforts to master the course content in an effective and appropriate way.

Writing Proficiency: Students are expected to possess and use adequate writing skills. All written assignments should be well-written and free of grammar, punctuation, and spelling errors. Help is available in the Writing Center located in the library.

Math and Science Center: Peer tutors are available in the Math and Science Center located on the first floor of the library. These services are typically available beginning in the second week of a Fall/Spring semester.

Tentative Course Schedule

8/29: Syllabus	10/19: Section 13
8/31: Section 0 (9/1 - Last day to drop)	10/24: Section 14
9/5: Section 1	10/26: Section 15
9/7: Section 2	10/31: Section 18
9/12: Section 3	11/2: Section 19 (11/3-Last Day to Withdraw)
9/14: Section 4	11/7: Section 20
9/19: Section 5	11/9: MIDTERM EXAM 2
9/21: Section 6	11/14: Section 21
9/26: Section 7	11/16: Section 22
9/28: Section 8	11/21: Section 23
10/3: Section 9	11/23: NO CLASS - Thanksgiving
10/5: MIDTERM EXAM 1	11/28: Section 26
10/10: NO CLASS - October Break	11/30: Section 27
10/12: Section 10	12/5: Section 29
10/17: Section 11	12/7: Section 30

The author of this syllabus reserves the right to change it at any time during the semester.