

Syllabus for Math 306 Topics in Algebra

Spring 2013

Instructor Info

<u>Instructor:</u>	Ismar Volić
<u>Meeting days:</u>	Mondays and Thursdays, and the following Wednesdays: January 30, February 13, March 6, March 13, April 10, April 17 <i>Please leave the remaining Wednesdays free as I might schedule more meetings</i> - we will also meet Tuesday, February 19 since that's a Tuesday with Monday's schedule - there will be no class on Monday, February 25
<u>Meeting time and place:</u>	9:50—11:00, in SCI 364 on Mondays and Thursdays 9:50—11:00, in SCI 380 on Wednesdays
<u>Office hours:</u>	Mondays 2:45—3:45, Thursdays 8:45—9:45 and 3—5, and by appointment; in SCI 370
<u>Phone:</u>	781-283-3103
<u>Email:</u>	ivolice@wellesley.edu

Textbook and Google Group

<u>Text:</u>	<i>Abstract Algebra</i> , by D. Dummit and R. Foote, 3 th edition, Wiley, 2003. This is the required textbook.
<u>Google group:</u>	The Google group for this class is <i>MATH-306-01-SP13</i> . If you have not already been automatically added to this group, please add yourself. The group will contain posts with various important announcements, materials, and information about the course. You can also ask questions, have discussions, or arrange study groups through the group. I will be checking the messages posted to it regularly.

Prerequisites and Policies

<u>Prerequisites:</u>	MATH 305 Algebra I is required.
<u>Attendance:</u>	It is not required that you come to class, although it is doubtful that you will do well in the course if you miss too many lectures. If you do decide to attend, <i>please be on time</i> . If you miss a class, please copy the notes from a classmate. I will not relecture the material in my office hours, but will be happy to clear up any confusion you might still have after you have studied the notes and the textbook.
<u>Special Arrangements:</u>	If you need special arrangements for the exams or any other aspect for the course due to religious observances or disabilities, please contact me as soon as possible. If you think you might need special arrangements, you should contact Jim Wice, the Director of Disability Services.

Course Outline and Objectives

This course is a continuation of Math 305 and will consist of various topics that are essential in advanced study of groups, rings, and fields. Topics will include

- Sylow Theory
- Representation Theory
- Module Theory
- Homological algebra

The more general objective of this course is to continue providing you with a deeper understanding and working knowledge of abstract algebra, while in the process strengthening your analytical skills, increasing your ability to read mathematics on your own as well as communicate it mathematically symbolically and orally.

Assignments, Exams, and Grading

- Workload: You should expect to spend 2—3 hours of studying on your own for each hour of lecture.
- Homework: Homework sets will be posted on our Google group by the end of every week. You will turn in the solutions the following Friday by 5 pm and you can leave them in an envelope in the box on my door (or you can give them to me in class any time). You will be graded on the content, but also in large part on clarity and presentation, and will be expected to follow the guidelines from the document ***Homework guidelines.pdf*** that I sent to you. It is very important that you keep up with the assigned work since homework counts for a large portion of your final grade. In addition, exams will be based on the homework problems. Feel free to work on the homework assignments together, but write them up individually. You are allowed to turn in any two homework assignments *except the last one* up to one week later than the due date. Subsequent late homeworks will not be accepted.
- Exams: There will be one take-home midterm and a take-home final exam. The midterm will be handed out on Monday, March 25 and will be due on Monday, April 1. The final will be handed out around the end of classes and will be due a week later.
- Solutions: I will do my best to provide you with the solutions to the problem sets and exams. However, please keep in mind that I am under no obligation to do this and may in fact not be able to do it for all the assignments. It is your responsibility to solve all the problems and are of course more than welcome to talk to me in office hours about them.
- Makeup Exams: Please do not ask me for a postponement of an examination or an extension of a take-home exam deadline (unless you need special arrangements that you talked to me about already). I will not determine if you deserve a postponement or an extension, but I will accept your personal judgment based on the policy outlined here.
- There are only two contingencies which are acceptable for the postponement of an exam or an extension of an exam deadline: personal illness or family crisis. If either of these prevents you from taking an exam or turning in a take-home exam, you are entitled to take the exam at a later date. However, any illness or crisis which allows you to study for / take another exam or to prepare a paper for another course, but not this class, does not entitle you to a postponement or extension.
- If a postponement or extension is taken, the following steps must be followed:
1. Prior to the beginning of an in-class exam or the deadline for a take-home exam, notify me (x3103 or ivolic@wellesley.edu) that you will not be able to take the exam or turn it in by the deadline. This notification must be made before the actual exam is handed out for in-class exams or before the deadline for take-home exams.
 2. If you are eligible for a postponement, please submit to me a written statement indicating that you are acting in accord with Wellesley's Honor Code and state that the reason for your not being present at the exam or not being able to turn it in on time is consistent with the criteria I have established. Note that you do not have to specify the reason, just that you fit the criteria. I will assume that anyone who does not notify me before a test or a deadline that she will be unable to be present or to turn in the exam is opting to take a zero for that exam. Unless the circumstances are very unusual, I will ask that you make up the exam within 3 days of the original exam date. The makeup will take place in my office, *will be an oral exam, and will not be curved.*
- Extra credit lectures: For every student seminar or a colloquium you attend, you will receive 1/3 extra point on the final exam after the curve. Further, if you give a student seminar, you will receive 3 extra points on your final exam. Schedules for the seminars and colloquia can be found at the math department website.
- Grading: 50% homework
25% midterm exam
25% final exam

Resources

Office hours: Please take advantage of my office hours whenever you can. You do not need an appointment to come in. If you need help with the homework or material from class, if you feel that you are falling behind or that the material is consistently too difficult, or if you simply want to chat about anything, please see me. It is imperative that you talk me as soon as a problem arises so that we can fix it quickly. If you cannot make the office hours, feel free to contact me and we will arrange a time to meet. The best way to reach me is through email, although I cannot guarantee that I will reply to a message sent after 9 pm until the next morning or a message sent during the weekend until the following Monday. When communicating via email with me or with each other, please follow the suggestions from the *Netiquette* handout you received when you entered Wellesley (this can also be found online).

Other resources: Variety of assistance is available to you through the Pforzheimer Learning and Teaching Center. Please visit their website for more information. Your academic dean is also a good source of information and advice.

Important Dates

Please familiarize yourselves with the important dates those listed on this syllabus (exam dates, Wednesday meeting dates, etc.). Also familiarize yourselves with the college-wide important dates such as breaks, holidays, add/drop deadline, credit/non deadline, reading period, finals period, and so on. All of these dates are listed on the registrar's website. It is your responsibility to stay abreast of the deadlines and other scheduling matters. If there are any changes in the schedule, either for our class or at the college, I will announce them in class.