

Syllabus for Math 306 Galois Theory

Spring 2012

Instructor Info

<u>Instructor:</u>	Ismar Volic
<u>Meeting days:</u>	Mondays and Thursdays, and the following Wednesdays: January 25, February 15, February 29, March 14, April 4, April 18, May 2 <i>Please leave the other Wednesdays free as I might schedule more meetings on those days</i>
<u>Meeting time and place:</u>	1:30—2:40, in SCI 364 on Mondays and Thursdays 2:15—3:25, in SCI 364 on Wednesdays
<u>Office hours:</u>	Mondays 11—12, 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, Google Group, and Webpage

<u>Text:</u>	<i>Galois Theory</i> , by I. Stewart, 3 th edition, Chapman & Hall, 2004. This is the required text. We will cover most of the material in it.
<u>Google group:</u>	The Google group for this class is <i>MATH-306-01-SP12</i> . Please add yourself as a member if I haven't already done so. 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.
<u>Webpage:</u>	I will also post the materials for this course on my web page at http://palmer.wellesley.edu/~ivolice/classes/MATH306GaloisTheorySpring12.html . This page will not contain anything that is not already on our Google group and is just meant to be a backup source of information in case you cannot access the Wellesley system for whatever reason.

Prerequisites and Policies

<u>Prerequisites:</u>	MATH 305 Abstract Algebra.
<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 natural continuation of first-semester abstract algebra, but the material is more focused. The basic goal is to establish a connection between solutions of polynomial equations and group theory. Some topics are rings of polynomials, irreducibility tests, field extensions, Galois groups, and solution by radicals.

The more general objective of this course is to continue providing you with a deeper understanding and working knowledge of mathematics, while in the process strengthening your analytical skills, increasing your ability to communicate mathematics symbolically and orally, making you comfortable with reading and understanding mathematics on your own, and continuing to develop your appreciation for abstract mathematics.

Assignments, Exams, and Grading

- Workload: You should expect to spend 3—4 hours of studying on your own for each hour of lecture.
- Homework: Homework sets will be posted on our Google group 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*** which I will send 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 two in-class midterms, given on March 8 and April 12, and a self-scheduled final exam.
- Makeup Exams: Please do not ask me for a postponement of an examination. I will not determine if you deserve a postponement, 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: personal illness or family crisis. If either of these prevents you from taking an 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.
- If a postponement is taken, the following steps must be followed:
1. Prior to the class period at which the exam is to be given, notify me (x3103 or ivolic@wellesley.edu) or the department administrator Melanie Chamberlin (x3148) that you will not be present at the exam. This notification must be made before the actual class begins.
 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 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 that she will be unable to be present 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 make-up 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 http://www.wellesley.edu/Math/activities_lectures.html http://www.wellesley.edu/Math/activities_seminars.html.
- Grading: 40% homework
15% each midterm
30% final

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).

Solutions: I will also do my best to provide you with the solutions to homework and exam problems. However, please keep in mind that I am under no obligation to do this and may in fact not have the time to do it for all the problems. It is your responsibility to solve all the problems and you are more than welcome to talk to me in office hours about them.

Other resources: Variety of assistance is available to you through the Pforzheimer Learning and Teaching Center. Please visit their website at <http://www.wellesley.edu/PLTC/>. Your academic dean is also a good source of information and advice.

Important Dates

Friday, February 3	Last day to add
Friday, February 17	Last day to drop. Credit/non ends
Monday, February 20	No classes (Presidents' Day)
Thursday, February 23	Monday schedule
Monday—Friday, March 19—23	No classes (spring break)
Monday, April 16	No classes (Patriots' Day)
Friday, April 20	Monday schedule
Friday, May 4	Last day of classes
Wednesday, May 9	Final exams begin
Tuesday, May 15	Final exams end

For a more complete list of important dates, see <http://www.wellesley.edu/Registrar/AcadCalComp1112.pdf>.