

Math 1250: Abstract Algebra

Class Times: MWF 12:00PM–12:50PM (103 Allen Hall).

Professor: Bogdan Ion, *email:* bion@pitt.edu, *office:* 423 Thackeray Hall, *phone:* 624-8343.

Office Hours: MWF 2:00–3:00PM or by appointment in 423 Thackeray Hall.

Textbook: *Galois theory. 2nd edition* by David A. Cox. John Wiley & Sons, Inc., Hoboken, NJ, 2012.

Web Site: Announcements and handouts will be posted at <http://www.pitt.edu/~bion/1250.html>

Prerequisites: Math 0430.

Course description: This is a course in Galois Theory, which is one of the most prominent mathematical achievements of all time. It is a theory with deep and rich ramifications, leading, for example, to the resolution of millennia old questions on the impossibility of some straightedge and compass constructions. Highlights of the course will include: the fundamental theorem of symmetric polynomials, the fundamental theorem of algebra, the theorem of the primitive element, the fundamental theorem of Galois theory, straightedge and compass constructions, the Galois theory of origami, Galois groups and solvability by radicals of cubic and quartic equations.

Grading Policy: The final grade will be computed from the following

Homework	30%
Exam 1	30%
Exam 2	40%

The grades will **not be curved**. *Roughly*, the following grading scale will apply:

A: 90-100, B: 80-90, C: 70-80, D: 55-70.

The homework will consist of 4-5 more substantial assignments which will have to be turned in on dates to be specified in class. Late homework is not accepted. In order to be graded all writings must be coherent, legible and submitted in the following format:

1. Do the problems on 8.5"x11" paper in the assigned order, writing only on one side of each sheet - with the assignment and your name written at the top of the first page.
2. For each assigned problem, first state or copy the problem precisely as given in the text, then give its solution. No credit is given for a solution to a misstated assigned problem.
3. Write effectively, with due attention to organization and logical progression of ideas. Each solution should be complete and appropriately supported - by relevant observations, argumentation, drawings etc. - but direct and to the point. The paper should be easily readable by your peers.

Examination schedule:

- Exam 1 Wednesday, March 2 (take home exam)
- Exam 2 Thursday, April 28, 4:00–5:50PM

There are no make-up exams. You may not be excused from an exam, except in the event of a documented emergency, and then only with my permission. Note that travel is *not* a sufficient excuse to have an exam scheduled on a different day.

Other Important dates:

Martin Luther King Day	Monday, January 18
Last day to add/drop classes	Tuesday, January 16
Spring Break	Monday – Friday, March 7–11
Last day to submit monitored withdrawal forms	Wednesday, March 16
Last Class	Friday, April 22

Accommodations and schedule conflicts:

If you have a disability for which you are or may be requesting an accommodation, you are encouraged to contact both me and Disability Resources and Services, 216 William Pitt Union, (412)648-7890/(412)383-7355 (TTY), before the end of the second week of classes. Similarly, students who have any conflicts (including religious observances) with the scheduled examination dates should notify me before the end of the second week of classes.

University of Pittsburgh e-mail Policy 09-10-01:

Each student is issued a University e-mail address (username@pitt.edu) upon admittance. This e-mail address may be used by the University for official communication with students. Students are expected to read e-mail sent to this account on a regular basis. Failure to read and react to University communications in a timely manner does not absolve the student from knowing and complying with the content of the communications. The University provides an e-mail forwarding service that allows students to read their e-mail via other service providers (e.g., Hotmail, AOL, Yahoo). Students that choose to forward their e-mail from their pitt.edu address to another address do so at their own risk. If e-mail is lost as a result of forwarding, it does not absolve the student from responding to official communications sent to their University e-mail address. The link to this policy is located at: <http://www.bc.pitt.edu/policies/policy/09/09-10-01.html>. Instructions on how to forward e-mail messages are at: <http://www.technology.pitt.edu/email-accounts/email/imap/imap-forward.html>