

MATH 4107 Syllabus

Abstract Algebra I, 3 credits

MWF 12:20 - 1:10 pm, Skiles 246

Instructor Information

Instructor
Jennifer Hom

Email
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Office Hours & Location
Skiles 208B
Tues 1-2 pm, Wed 10-11 am

General Information

Pre-Requisites

MATH 2406 or MATH 2106.

Course Goals and Learning Outcomes

Students should demonstrate an understanding of the fundamental definitions, theorems, and proofs in groups, rings, and fields through proofs, examples, counterexamples, and computations.

Course Materials

Course Text

Concrete Abstract Algebra: From Numbers to Grobner Bases, by Niels Lauritzen

Course Website

<http://people.math.gatech.edu/~jhom6/4107>

Course Requirements & Grading

Homework

Homework will be assigned on a regular basis and collected at the beginning of class on the day that it is due. I will accept late homework with a penalty of 25% for each late day, for up to two days, i.e., being 1-24 hours late will earn you 75% credit and being 25-48 hours late will earn you 50% credit.

Try to solve as many problems as you can by yourself before consulting other sources. Resist the temptation to search the internet for solutions, which is cheating yourself out of a learning opportunity! Some struggle is expected and is necessary in learning mathematics. However, if you don't understand the problem or if the wording is unclear, then please do ask for clarification. You are welcome to discuss the problems and solutions with your classmates and with me after you have put in a good attempt. You must write up your own solutions independently, i.e., you must not be looking at other people's solutions while writing yours. Write clearly in complete sentences. If you use other people's ideas, including from an online source, state this on the homework.

A random selection of problems will be graded for correctness and the rest will be graded for effort. A 10% extra credit will be given for typing up the homework solutions. LaTeX is recommended. Your lowest two homework scores will be dropped. I will not post solutions to homework problems. You can find on the internet many similar problems with solutions, but you will not learn very much from just reading them without having to work through them yourself. If you want to know how to do a problem from a previous assignment, you are welcome to come talk to me or your classmates or post on Piazza.

Tests

There will be two in-class tests and a cumulative final exam. The tentative dates of the exams are:

| | |
|------------|------------------------------|
| Test 1 | Fri Sept 28, in class |
| Test 2 | Fri Nov 9, in class |
| Final Exam | Wed Dec 12, 11:20 am-2:10 pm |

Grading Scale

Your final grade will be computed as the highest of the following schemes:

| | Standard | Option 1 | Option 2 |
|-------------|----------------|--------------------|----------------|
| Homework | 30% | 30% | 30% |
| Tests 1 & 2 | 40% (20% each) | 20% (highest test) | 50% (25% each) |
| Final | 30% | 50% | 20% |

Your final grade will be assigned as a letter grade according to the following scale:

| | |
|---|---------|
| A | 90-100% |
| B | 80-89% |
| C | 70-79% |
| D | 60-69% |
| F | 0-59% |

Course Expectations & Guidelines

Academic Integrity

Georgia Tech aims to cultivate a community based on trust, academic integrity, and honor. Students are expected to act according to the highest ethical standards. For information on Georgia Tech's Academic Honor Code, please visit <http://www.catalog.gatech.edu/policies/honor-code/> or <http://www.catalog.gatech.edu/rules/18/>.

Any student suspected of cheating or plagiarizing on a quiz, exam, or assignment will be reported to the Office of Student Integrity, who will investigate the incident and identify the appropriate penalty for violations.

Accommodations for Students with Disabilities

If you are a student with learning needs that require special accommodation, contact the Office of Disability Services at (404)894-2563 or <http://disabilityservices.gatech.edu/>, as soon as possible, to make an appointment to discuss your special needs and to obtain an accommodations letter. Please also e-mail me as soon as possible in order to set up a time to discuss your learning needs.

Attendance and/or Participation

Regular attendance is expected. Exceptions will be accommodated only for valid, documented reasons including (1) official representation of the Institute and (2) medical emergencies

Extensions, Late Assignments, & Re-Scheduled/Missed Exams

In the event of an absence due to an institute sponsored event, such as an intercollegiate sports competition, please notify me at least two weeks in advance to arrange an early test or other alternative. If you miss an exam due to family or medical emergency, please bring me a note from the Office of the Dean of Students.

Student-Faculty Expectations Agreement

At Georgia Tech we believe that it is important to strive for an atmosphere of mutual respect, acknowledgement, and responsibility between faculty members and the student body. See <http://www.catalog.gatech.edu/rules/22/> for an articulation of some basic expectation that you can have of me and that I have of you. In the end, simple respect for knowledge, hard work, and cordial interactions will help build the environment we seek. Therefore, I encourage you to remain committed to the ideals of Georgia Tech while in this class.

Classroom Decorum

Out of respect for your classmates and our learning environment, please arrive to class on time every day. If you are late, please enter quietly and quickly. Cell phones, laptops, tablets, and other electronic devices are not permitted in class, except for notetaking or unless required for an in-class activity.

Campus Resources for Students

In your time at Georgia Tech, you may find yourself in need of support. Below you will find some resources to support you both as a student and as a person.

Academic support

- Center for Academic Success <http://success.gatech.edu>
 - 1-to-1 tutoring <http://success.gatech.edu/1-1-tutoring>
 - Peer-Led Undergraduate Study (PLUS) <http://success.gatech.edu/tutoring/plus>
 - Academic coaching <http://success.gatech.edu/coaching>
- Residence Life's Learning Assistance Program <https://housing.gatech.edu/learning-assistance-program>
 - Drop-in tutoring for many 1000 level courses
- OMED: Educational Services (<http://omed.gatech.edu/programs/academic-support>)
 - Group study sessions and tutoring programs
- Communication Center (<http://www.communicationcenter.gatech.edu>)
 - Individualized help with writing and multimedia projects
- Academic advisors for your major <http://advising.gatech.edu/>

Personal Support

Georgia Tech Resources

- The Office of the Dean of Students: <http://studentlife.gatech.edu/content/services>; 404-894-6367; Smithgall Student Services Building 2nd floor
 - You also may request assistance at https://gatech-advocate.symplcity.com/care_report/index.php/pid383662?
- Counseling Center: <http://counseling.gatech.edu>; 404-894-2575; Smithgall Student Services Building 2nd floor
 - Services include short-term individual counseling, group counseling, couples counseling, testing and assessment, referral services, and crisis intervention. Their website also includes links to state and national resources.
 - *Students in crisis may walk in during business hours (8am-5pm, Monday through Friday) or contact the counselor on call after hours at 404-894-2204.*

- Students' Temporary Assistance and Resources (STAR): <http://studentlife.gatech.edu/content/need-help>
 - Can assist with interview clothing, food, and housing needs.
- Stamps Health Services: <https://health.gatech.edu>; 404-894-1420
 - Primary care, pharmacy, women's health, psychiatry, immunization and allergy, health promotion, and nutrition
- OMED: Educational Services: <http://www.omed.gatech.edu>
- Women's Resource Center: <http://www.womenscenter.gatech.edu>; 404-385-0230
- LGBTQIA Resource Center: <http://lgbtqia.gatech.edu/>; 404-385-2679
- Veteran's Resource Center: <http://veterans.gatech.edu/>; 404-385-2067
- Georgia Tech Police: 404-894-2500

Statement of Intent for Inclusivity

As a member of the Georgia Tech community, I am committed to creating a learning environment in which all of my students feel safe and included. Because we are individuals with varying needs, I am reliant on your feedback to achieve this goal. To that end, I invite you to enter into dialogue with me about the things I can stop, start, and continue doing to make my classroom an environment in which every student feels valued and can engage actively in our learning community.