MATH 150A Winter 2020: Modern Algebra
MWF 1:10-2:00 – Wellman 212 (lecture)
R 7:10-8-00 – Wellman 205 (discussion)

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Course Topics: The required text for the course is *Algebra* by Michael Artin, second edition. The course will focus on group theory, which is covered primarily in chapters 2,6,7, with some digressions into linear algebra. Here is a brief list of topics:

- Groups and subgroups
- Group homomorphisms and isomorphisms
- Permutation groups, cyclic groups, and other families of examples
- Symmetry groups
- Product and quotient groups
- Conjugation, cosets, normalizers, centers
- Modular arithmetic
- Sylow Theorems
- Generators and relations

Course Website: The main site is `http://rckr.one/MAT150Aw20/index.html`.
Grades will be posted on Canvas: `https://canvas.ucdavis.edu/courses/415627`

Homework: There will be proof-based problem sets assigned weekly, posted on the course website, due on Fridays in lecture. It is encouraged that you type up your problem sets (with LaTeX) but it is not required. You may collaborate with groups of up to four to work on the problems, but each student must write up and submit their answers individually. The problem sets are worth 50% of the course grade.

Exams: There will be one midterm exam during the semester, and a final exam. The midterm is 50 minutes long during lecture on Wednesday February 12 and is worth 20% of the course grade. The final exam will be a 2 hour exam on Tuesday, March 17 (during finals week), 10:30 am - 12:30 pm in the lecture room and is worth 30%.

Midterm Exam . . . . February 12
Final Exam . . . . March 17

No calculators or notes are permitted on exams. I will do my best to construct exam questions that avoid complicated arithmetic. Please notify me at least a week in advance if you can't attend an exam and need to take a make-up. Otherwise the only accepted reasons for missing an exam are severe illness or family emergency.

Regrade Policy: If you think that a mistake was made in grading your exam, you must notify me within one week of when the exam is returned. After that, grades will be final.

Grading Scheme: The course grade will be computed as follows:

- Midterm Exam: 20%
- Final Exam: 30%
- Problem Sets: 50%

All grades will be posted on the Canvas course website.

LaTeX: LaTeX (or LaTeX) is the standard typesetting system for written mathematics. While not required, it is strongly encouraged that you type up your problem sets using LaTeX. The easiest way to get started is to make an account with a web-based LaTeX editor (such as Overleaf). You can also try installing a LaTeX editor and compiler to your computer. Both of these options are free.

- LaTeX installation guide: `https://en.wikibooks.org/wiki/LaTeX/Installation`.

- Overleaf: `https://www.overleaf.com/`.

Extra Help:

- Please come to my office hours or the TA's for questions about the material, or for additional practice. You can send me questions about the material or homework problems by email.

- Free tutoring is available from the Student Academic Success Center (SASC). For details see: `http://success.ucdavis.edu/services/mathematics.html`.

- The STEM Café is a program on Tuesdays 4-6 hosted by the Womens Resources and Research Center (WRRC) where you can discuss math with peers and receive help from grad students and professors. STEM Café is open to all students, regardless of gender. `https://www.math.ucdavis.edu/undergrad/stemcafe/`

Students with Disabilities and/or in need of Special Accommodations: If you have a disability or health consideration that may require accommodations, please contact the Student Disability Center (SDC) as soon as possible at `https://sdc.ucdavis.edu/`. Students with accommodations approved through SDC are responsible for contacting the course instructor well in adance to arrange accommodations, such as separate rooms and time extensions for exams.