Math 148: Discrete Mathematics
Winter 2017

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Office Hours:	Tuesday 1:00pm - 3:00pm, Wednesday 11:00am - 12:00pm, Thursday 4:00pm - 5:00pm, and other times by appointment

Teaching Assistant: Lily Silverstein (lsilver@math.ucdavis.edu)

Course Content: Coding theory and error correcting codes, as well as any algebraic concepts needed in their development, including finite fields. Additional topics will be coverd as time permits.

Resource Material: The textbook is *Discrete Mathematics*, 2nd Edition, by Norman L. Biggs, ISBN: 978-0198507178.

Prerequisites: Math 67, or both Math 22A and Math 108.

Course Organization: The class will be organized as follows.

- Monday and Wednesday each week, I will lecture on course material.
- Each Thursday discussion section will be a problem session, completed in small groups.
- Fridays will be spent finishing the discussion problems, and will involve lecture and/or continued groupwork, depending on the week.

A problem list will be distributed at the beginning of each problem session, containing the in-class work problems (which generally **will introduce new material**) as well as the weekly homework problems. All completed homework probems will be turned in for credit, usually the following Wednesday. Any in-class problems not completed during the discussion should be finished with the homework.

The day before each discussion, a short list of "preliminary problems" will be assigned, and should be completed before the discussion. These assignments will be short, usually requiring at most 10 minutes to complete, and will be computational in nature (i.e. no proofs).

Although I intend to use this format throughout the course, I reserve the right to restructure the course as the quarter progresses, based on student feedback and performance. Potential changes include (but are not limited to) the introduction of quizzes, and a restructuring of lecture problem session schedule. I will periodically collect anonymous feedback in class, but feel free to come talk to me if you have suggestions or concerns as the course progresses.

Grading Policy: Your grade will be determined by one midterm exam, a cumulative final exam, and weekly homework submissions, weighted as follows.

Participation	10%
Homework Average	30%
Midterm Exam	30%
Final Exam	30%
Total	100%

Midterm Exam: February 17
Final Exam: March 20

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

The Final Exam will be comprehensive, and will take place on Monday, March 20th from 3:30pm-5:30pm. Keep this date in mind when making travel plans for the end of the quarter.

Exams: All exams will take place in the same classroom as our lecture, on the dates given above. **No makeup exams will be given**. If you miss an exam for a university approved reason (illness, etc), your grade will be replaced with your grade on the other exam. However, you must notify me via email **on the day of the missed exam**, and provide sufficient documentation (doctor's note, etc). Otherwise, you will receive a 0. Any questions regarding grading/scoring must be done within one week of returning the exam, and cannot be done the day the exam is returned.

Participation: Attendance on discussion days is vital to success in this class, since **new material** will be covered. Your participation grade will be based on the following:

- attending and participating in lectures;
- attending and engaging in discussions; and
- completing the preliminary problems before each discussion.

Missing class will result in a lowered participation grade, and only university excused absences with **advance notice** to the instructor will be accepted. I reserve the right to deduct one **additional full letter grade** if you miss too many classes, or if sufficient participation is not demonstrated during discussions.

Homework: There will be one homework assignment given each week, as well as a short list of preliminary problems to be completed before each discussion. Completed homework assignments will be submitted to the instructor for a grade, but preliminary problems will not be collected. Collaboration on homework is encouraged, but solutions should be written individually, and collaborators should be identified on the front of your assignment.

Homework assignments, along with their due dates, will be posted on the course webpage as they are assigned. Out of fairness to the other students, late homework assignments will not be accepted for credit. However, the lowest homework grade of the quarter will be dropped.

Class Announcements, E-mail Policy and Communications: Class announcements will be posted to my class web page and sent to your university e-mail account. Be sure to regularly check your e-mail. If you send me an e-mail, please include your name and course information (i.e. class and section) as well as any additional information that I might need to respond to your e-mail.

Attendance, Absence, and Makeup Work Policies:

- Attendance is strongly encouraged.
- No makeup exams will be given. If you miss an exam for a university approved reason (e.g. illness), your grade will be replaced with the average of the remaining exams. However, if you fail to (i) notify me via email on the day of the missed exam and (ii) provide sufficient documentation (e.g. doctor's note), you will receive a 0.
- Late homework will not be accepted. However, your lowest homework grade will be dropped.
- The last day to drop this class is **February 6th**.

A.D.A. Policy Statement: The Americans with Disabilities Act (ADA) is a federal anti-discrimination statute that provides comprehensive civil rights protection for persons with disabilities. This legislation requires that all students with disabilities be guaranteed a learning environment that provides for reasonable accommodation of their disabilities. If you believe you have a disability requiring accommodation, please contact the Student Disability Center.

If you require additional time on quizzes and/or exams, you must **contact me at the start of the course**. You will not be given extra time if you present this information just before an exam.

For additional information, visit `https://sdc.ucdavis.edu/`.

Copyright Policy: The handouts used in this course are copyrighted. By "handouts," I mean all materials generated for this class, which include but are not limited to syllabi, quizzes, exams, in-class materials, review sheets, and additional problems sets. Because these materials are copyrighted, you do not have the right to copy the handouts, unless I expressly grant permission.

Scholastic Dishonesty: *An Aggie Does Not Lie, Cheat, or Steal, or Tolerate Those Who Do.* The UC Davis Code of Academic Conduct will be enforced in this course. For the purpose of this course, cheating will be defined as (but not limited to) access or use of unauthorized material during exams and quizzes, collaboration between students during exams, quizzes or assignments for which group work is not allowed, perusal of another student's work during exams and quizzes, copying other student's work or allowing other students to copy your work on any assignment, quiz or exam, and having unauthorized programs or other information stored on calculators when these calculators are accessible during an exam or quiz. Note: Falsifying documentation is considered scholastic dishonesty and may result in a grade of F for the course.

For additional information about UC Davis Code of Academic Conduct, visit `http://sja.ucdavis.edu/cac.html`.