

Math 2200 – Discrete Mathematics and Its Applications

Instructor: Adam Brown
Class Meetings: M, W, F 11:15am-12:15pm
Class Location: JTB 320
Office Hours: M, W 10:00am-11:00am or by appointment
Credits: 3
Office Location: LCB Loft
E-mail address: abrown@math.utah.edu
Website: Canvas

Course Description:

Fundamentals of logic, set theory, order, relations, functions. Elementary number theory, modular arithmetic. Combinatorics; counting permutations, generating functions, matrix operations. Basic algebraic structures; groups, rings. Discrete probability. Introduction to graph theory, trees, search optimization problems. Boolean algebra.

Course Objectives: This course is aimed at developing your ability to understand and construct rigorous mathematical proofs, as well as your analytic thinking and problem solving techniques. We will develop these skills while studying several spectacular topics in mathematics, including mathematical logic, sets and relations, number theory, graphs, algorithms, groups, etc. This approach to mathematics should give you an excellent foundation for higher mathematics and computer science.

Textbook: Rosen, Kenneth H., Discrete Mathematics and Its Applications, seventh edition. ISBN 978-0-07-338309-5

Grading: The grades will be calculated as follows:

- Quizzes 10% (Given in class every Friday)
- Homework 20% (Written and handed in every Friday)
- Midterm Exams 45% (Three total, each worth 15%)
- Final Exam 25% (Thursday, July 31, 2014, 10:00am-12:00pm)

Weekly Homework/Quizzes: There will be a weekly problem set assigned and due every Friday. There will also be a quiz administered every Friday (except on the days of the midterms). The weekly quizzes will be closed notes and closed book, but you will be able to use your solutions for that weeks homework assignment during the quiz. This is designed to encourage you to show all of your work on the homework assignments. At the end of the quiz, you will hand in your homework assignment with the quiz. I will drop your two lowest quiz scores at the end of the semester.

Midterms: There will be three midterm exams and a final comprehensive exam at the end of the semester. The dates for the midterm exams will be:

Exam 1	6/6/14
Exam 2	6/27/14
Exam 3	7/18/14
Final Exam	7/31/14

Make sure to bring any conflict you may have with the announced dates to me as soon as possible.

Canvas: All the course materials can be found on Canvas (<http://learn-uu.uen.org> or access via CIS). You will find your grades there as well. To log in, you use the same student id and password that you use for Campus Information System. I do my best to update the grades on a regular basis and keep everything accurate. However, I would advise you to check your grades often to make sure there were no data entry mistakes.

Grading Scale: The grade scale will be the usual:

A (93-100), A- (90-92), B+ (87-89), B (83-86), B- (80-82), C+ (77-79), C (73-76), C- (70-72), D+ (67-69), D (63-66), D- (60-62), E (0-59).

ADA:

The University of Utah seeks to provide equal access to its programs, services and activities for people with disabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability Services, 162 Union Building, 581-5020 (V/TDD). CDS will work with you and the instructor to make arrangements for accommodations.

Other Policies:

Any form of cheating or academic dishonesty will not be tolerated. If someone is found cheating on any assignment, everyone involved will receive a 0 for that assignment (this means that if you help someone else cheat, you will also receive a 0). If you are caught cheating a second time, you will receive a 0 for the course. The Dean of Students will also be notified of any instances of academic dishonesty.

University of Utah Student Code: The Student Code is spelled out in the Student Handbook. Students have specific rights in the classroom as detailed in Article III of the code. The code also specifies proscribed conduct (Article XI) that involves cheating on tests, plagiarism, and/or collusion, as well as fraud, theft, etc. Students should read the Code carefully to become aware of these issues. Students will receive sanctions for violating one or

more of these proscriptions. The faculty will enforce the code. Students have the right to appeal such action to the Student Behavior Committee.

Turn your cell phones OFF. It is this a matter of courtesy, and minimizing distractions. If you refuse to turn off your cell phone in class, I will ask you to leave.

Computers will not be permitted in class. They are a distraction to students sitting behind you, and they will not be needed for this class. I require that notes be taken with pencil / pen and paper.

You may take an alternate exam if you talk to me about it first and explain the extenuating circumstances that make it necessary. Needing to work, babysitting your siblings, oversleeping, or needing more time to study do not pass as acceptable. Getting in a car crash or having to attend your child's birth, on the other hand, is sufficient reason to request to take an alternate exam (I reserve a right to ask for a written evidence of any claims you make). But, it is 100% your responsibility to communicate with me as soon as is possible, before the exam occurs. **Talking to me *after* the exam will be sufficient reason for you to receive a zero on that test.** I reserve the right to make alternate exams more difficult than the scheduled exam.

I will demand respectful behavior in my classroom. Examples of disrespect include reading a newspaper or magazine in class, social chatting with your friend in class, text-messaging your buddies during class or cuddling with your girl/boyfriend in class. In all of these instances I may decide to ask you to leave the class which will result in the loss of participation points, but more importantly in reduced opportunities for your learning.

I will regularly send emails to the class through CIS and expect you to be responsible for receiving that information. Please, make sure that CIS sends your announcements to an email address you check REGULARLY.

I expect you to **READ** everything I send you: emails, syllabi, homework problems, announcements, any pertinent documents and so forth. You are always welcome to ask questions if something is unclear, and I usually respond very quickly. If I don't that must mean that your question had already been answered in one of the documents I sent that you have not read, or it was addressed in class!