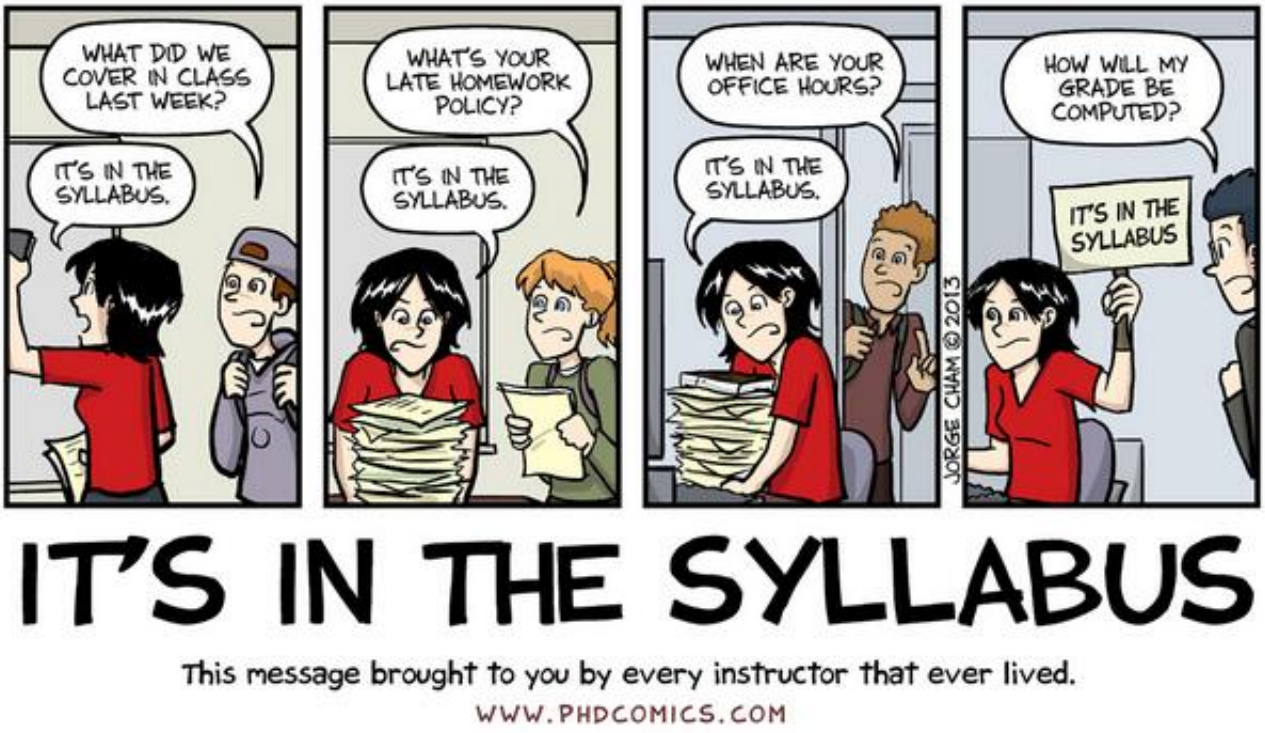
Course Syllabus
Mathematics 2200, Section 01, Summer 2019
Discrete Mathematics



Instructor: Allechar Serrano López
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Class Hours: MWF, 8:45AM-9:45AM, LCB 225

Office Hours: TH, 8:30AM-9:30AM (308 JWB will be reserved 8:00AM-10:00AM on both days) or by appointment.

Text and Online Material: Discrete Mathematics and its Applications by K. H. Rosen, 7th Edition, ISBN 9780073383095.

Prerequisites: C or better in one of Math 1220, 1250, 1260, 1270, 1311, 1320, 1321, 2210, or AP Calc BC score of 5.

Course description: This is a course on the fundamentals of discrete mathematics. It includes an introduction to proofs and rigorous analytic thinking; students will learn how to understand and write short proofs. We will introduce basic elements of mathematics such as fundamentals of logic, sets and relations, functions, number theory, modular arithmetic, and counting. Math 2200 provides a good foundation for higher mathematics or computer science courses.

Our Class Culture: We will model our class based on the axioms proposed by Federico Ardila:

Axiom 1 Mathematical talent is distributed equally among different groups, irrespective of geographic, demographic, and economic boundaries.

Axiom 2 Everyone can have joyful, meaningful, and empowering mathematical experiences.

Axiom 3 Mathematics is a powerful, malleable tool that can be shaped and used differently by various communities to serve their needs.

Axiom 4 Every student deserves to be treated with dignity and respect.

Grading Policy: The grades will be calculated as follows:

Weekly Problem Sets	15%
Quizzes	15%
Project	10%
Midterm exams	35%
Final Exam	25%

Grades (Evaluation and criteria): Final letter grades will be determined by overall percentage as follows:

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

Approach: Before class you are to read the assigned sections from the textbook. You will usually do some small exercises to try out some of the new ideas in the reading. In class I will review and highlight material that you have read about. I will avoid lecturing as much as possible, preferring to devote most of our meeting time to making sure you understand the material and working through some more challenging problems together. After each class, you should be ready to tackle the relevant problems from the weekly problem set.

Class Meetings: Students are expected to attend and actively participate in class. I am expected to make class worth attending.
Participation in class involves:

- being present in class (physically and mentally),
- coming to class prepared and on time,
- asking questions when appropriate,
- making positive contributions to class discussion by volunteering and when called upon, and
- working effectively and respectfully with other students.

If your participation or non-participation causes problems for other students, I will invite you to visit office hours to discuss the issue.

Weekly Problem Sets: Weekly problem sets, due every Friday at the beginning of class. Weekly problem sets will comprise 15% of your overall grade.
I encourage you to work with a partner on weekly problem sets. However, *do not split up the work.* Instead, I recommend that you attempt each problem on your own, meet to compare approaches/solutions, and prepare a joint solution set that you both understand and agree on. Remember that exams will hold all students equally responsible understanding the material.
To further ensure that you are holding yourself responsible for learning the material, you may not work with the same partner two weeks in a row. You might find a group of three where you alternate working alone versus with a partner, or you might form a group of four or more where you rotate partners every week.
If you know LaTeXor want to learn it, you are welcome to type your solutions. Handwriting is equally acceptable.
All grades will be recorded in the gradebook on Canvas.
Practice makes perfect. Assigned problems are for practicing new skills. It's important to put in regular practice-hence the daily exercises and weekly problem setsbut it's also important to master the material. After you receive your graded problem sets back, you may redo any problem that you did not receive full points on. If you do not understand my comments or do not see how to address them, I encourage you to visit my office hours to discuss them. Resubmit your work up to one week after you get it back for up to full credit. If you do not receive full credit the second time, you may resubmit again under the same rules, up until the final exam.
I will not accept late assignments, but I will drop the lowest two.

Quizzes: Quizzes will be due on Wednesday at the beginning of class. I will hand out the quizzes on Friday and assigned groups will be posted on Canvas. I expect you to start working on the problems over the weekend. On Monday, you will have 30 minutes to work with your group and discuss ideas and approaches. Every member of the group is expected to contribute to the solution of each problem. You will write your solutions individually and submit them on Wednesdays at the beginning of class. I do not accept late quizzes; I will drop the quiz with the lowest grade.

Project: There will be project consisting of a written 4-page report and a 10-minute oral presentation. You will research the contributions of a mathematician of your choosing; however, the mathematician has to belong to an underrepresented group. I will assign partners on May 20, and you will email me once you have decided which mathematician you will write the report on. I will keep an updated list on Canvas so that two groups do not choose the same individual. I encourage you to think outside the box. The project and presentation will be due on June 24, you will bring a copy of your report to class and you will email me your presentation. I will inform you of the order in which we will present in class on June 25. The project will comprise 10% of your overall grade. I will base your grading on the written report, oral presentation, and attendance to all presentations that we have in class.

Exams: There will be two midterm exams throughout the semester, and a final exam. The exams are closed-book, with no calculators.

1. Monday, June 14, 8:45AM-9:45AM : Midterm 1
2. Friday, July 12, 8:45AM-9:45AM : Midterm 2
3. Friday, August 2, 7:30-9:30AM : Final

Absence from an exam will be excused only if you can provide verifiable and convincing evidence that you have a significant illness or serious family crisis that will prevent you from attending. Except under extremely unusual circumstances, you must inform me in advance of the missed test. **It is your responsibility to promptly make arrangements with me to make up the test, I reserve the right to not give you a make-up exam if I think your excuse is not valid or if you contact me more than one week after the missed test.** I reserve the right to make alternate exams more difficult than the scheduled exam.

ADA Statement: The University of Utah seeks to provide equal access to its programs, services and activities for people with isabilities. If you will need accommodations in the class, reasonable prior notice needs to be given to the Center for Disability and Access, 162 Olpin Union Building, 581-5020 (V/TDD). CDA will work with you and the instructor to make arrangements for accommodations. All information in this course can be made available in alternative format with prior notification to the Center for Disability and Access.

Student Responsibilities: All students are expected to maintain professional behavior in the classroom setting, according to the Student Code, spelled out in the Student Handbook. You 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, collusion, fraud, theft, etc. Students should read the Code carefully and know you are responsible for the content. According to Faculty Rules and Regulations, it is the faculty responsibility to enforce responsible classroom behaviors, beginning with verbal warnings and progressing to dismissal from class and a failing grade. Students have the right to appeal such action to the Student Behavior Committee. http://regulations.utah.edu/academics/6-400.php

Tutoring: The Rushing Math Center offers free drop-in tutoring, a computer lab, and study areas for undergraduates. The Rushing Student Center is adjacent to the LCB and JWB.

Classroom Etiquette: Please turn off your cell phones while you are in class. I do not allow laptops in class. I will expect respectful behavior in my classroom. If I think that your behavior is disrespectful or distracting, I will ask you to leave the class.

Cheating: If you cheat on any homework or exam, I will give you a grade of zero for that work. Depending on the severity of the cheating, I may decide to fail you from the class. In all cases, I will report the incident to the Dean of Students, and to the International Students Office in the case of an international student.

Webpage: All information concerning this class will be posted on the Canvas webpage of the class. Any important information will be given in class and on the Canvas webpage. **You are responsible for checking the webpage on a regular basis** (you can have the communication from Canvas forwarded to your email address).

Disclaimer: If I do any modification to this syllabus, I will let you know in class and update the webpage.