MATH 228: DISCRETE MATHEMATICS

MW 2:50 PM - 4:10 PM, Exley 58

Spring 2017

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Office hours:	Monday 11:00 AM - 11:50 AM, Thursday 1:30 PM - 2:30 PM, and by appointment

Teaching Assistant(s).

Alicia Marino
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Sam Raby
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Recitation Sessions: Sun, 3 – 4 PM, Exley 121 and Wed, 8:30 – 9:30 PM, Exley 121

Text. *Mathematics: A Discrete Introduction*, Edward R. Scheinerman, 3rd edition, Brooks/ Cole Cengage Learning. ISBN: 0-8400-4942-0. This book is stupidly expensive so I suggest you rent a copy or buy it used.

Moodle. Three copies of the textbook are available on reserve at the Science Library in Exley. All other course materials for Math 228 will be available online on Moodle. This includes any course announcements, reference materials, homework assignments, and midterm exam solutions.

Syllabus. In this course we will learn how to read and write mathematics, especially in the context of mathematical proofs. Clarity and precision is of utmost importance, but it takes practice to write mathematics well! My goal by the end of the semester is to send you off into the summer break knowing what a good proof looks like and how to write one! Whereas other mathematical courses such as calculus study continuous math (i.e. the real numbers), *discrete* mathematics focuses on different properties of integers, with a wide berth of applications varying from counting problems and probability to computer programming. I plan to cover most of chapters 1-4 of the text as well as the beginning of chapter 5, but we will touch on some topics in later chapters as well. Topics include definitions and theorems, proof techniques, sets, quantifiers, logic, induction, recursion, counting problems, number theory problems, and possibly some graph theory problems.

Classroom expectations. In order to ensure that we cover all planned material and our course runs smoothly, please abide by these expectations:

- Attend every class. If you will be absent due to illness or scheduled conflict, please notify me in advance.
- Arrive for class a few minutes early so that we may all start on time.
- ASK QUESTIONS!
- Please keep your cell phones on silent and put away unless I tell you otherwise.
- Food is permitted as long as it will not disrupt others.

Disability Resources. Wesleyan University is committed to providing reasonable accommodations to students with documented disabilities. Students, however, are responsible for registering with Disabilities Services, in addition to making requests known to me in a timely manner. Note that accommodations are not provided retroactively.

If you believe that you need accommodations for a disability, please contact Dean Patey in Disability Resources, located in North College, Room 021, or call (860) 685-5581 for an appointment. See http://www.wesleyan.edu/studentaffairs/disabilities/Student/index.html for more information.

If you require accommodations in this class, please make an appointment with me as soon as possible, so that appropriate arrangements can be made.

Office hours. You are encouraged to use my office hours whenever you have questions about the course material. Sometimes one-on-one conversations with me can save you hours of study time on your own! If you can't attend office hours, don't hesitate to email me at ahildum@wesleyan.edu to ask for an appointment for another time.

Recitation sessions. There will be optional recitation sessions held by our course assistant(s). The time(s) and location(s) will be determined shortly.

Math Workshop. The Math Workshop is now located in the basement of the Science Library, room 88. It is open Sunday through Thursday from 7-10 pm and Monday through Friday from 11:45 am - 1:15 pm. More information can be found here:

http://www.wesleyan.edu/mathcs/math/math_workshop.html

There are always two staff members on duty, who may be either experienced undergraduates or math graduate students. This is a drop-in tutoring service, FREELY available to all members of the Wesleyan community. Staff members provide a friendly, relaxed atmosphere while answering questions about mathematics. The workshop is a good place to go when you get stuck on your math homework.

Assignments. This course consists of a lot of reading and writing. You will have a reading assignment to complete before each class and a written assignment due weekly. Written assignments will more-or-less alternate between traditional homework and formal proofs. Homework assignments will consist of traditional problem sets, where I may ask you to solve short problems or to provide examples or counter-examples to statements. Certain answers will require justification or proof, but I will not ask you to write up anything formal. Proof assignments will be more formal and details will be discussed separately. All of your written work will be graded for correctness as well as clarity, and should have a "final draft" quality to it.

Late homework policy: You are allowed a 4–day grace period on any of your homework assignments. This means you can be 4 days late on one assignment, or 1 day late on 4 assignments, etc.

Exams. There will be two midterm exams and a final exam.

- Midterm 1: March 6
- Midterm 2: April 26
- Final Exam: Tuesday, May 16 2:00 PM – 5:00 PM **

The midterm exams will be held during class time, in Exley 58. The final exam time is scheduled by the registrar. PLEASE NOTE that this date and time is *tentative*, to be finalized after spring break. If you have an academic conflict with a midterm exam (such as a class, lab, or another exam), inform me **at least one week before the exam**.

Grades. Your grade in the course will be based on the following:

(1) Homework Assignments (10% of your grade).
    All homework assignments are weighted equally and averaged.
(2) Proof Assignments (15% of your grade).
    All proof assignments are weighted equally and averaged.
(3) Participation (5% of your grade).
(4) Two midterm exams (each 20% of your grade).
(5) Final exam (30% of your grade).

Academic Integrity.

I encourage you to discuss homework problems and proofs with your classmates, but **you must write up your own solutions and proofs in your own words**. If you do choose to work together, write your collaborators' names at the top of your paper.

You are expected to follow the University's policy on academic integrity. Any violation of the Student Honor Code will be referred to the Honor Board, without exception. The Honor Code can be found in the Student Handbook. Before you hand in an assignment or a test, pledge the following:

In accordance with the Honor Code, I affirm that this work has been completed without improper assistance. All content taken from other sources has been properly acknowledged.