

MATH 2020: Solving Discrete Problems, Fall 2011
Lectures: Lockett 112, MWF 1:40 – 2:30

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Website All important course announcements will be found in LSU's *Moodle* system, including lecture information, homework assignments, and exam reviews. Please check it frequently!

Textbook M. Beck and R. Geoghegan, *The Art of Proof: Basic Training for Deeper Mathematics*, Springer, New York, 2010.

Content We will study several topics in Discrete Mathematics, spending two to three weeks each learning introductory material in logic, combinatorial counting, discrete probability, graph theory, and number theory. Our main focus will be to learn how to write formal proofs for basic results in all of these areas. Most of the topics are found in Chapters 1 – 7 in the textbook, which we will cover during the first 8 or 9 weeks of the course. We will then continue with the remaining subjects for the rest of the semester.

Prerequisites You must have completed MATH 1550: Analytic Geometry and Calculus I in order to take this course.

Schedule Due to University holidays, this class will **not** be held on Monday, Sep. 5; Friday, Oct. 14; Wednesday, Nov. 23; or Friday, Nov. 25. If you are unable to attend the regularly held office hours, you may also schedule an appointment.

Grading The assignment of points in the course will be broken down as follows:

	Percentage
Problem Sets	25%
Quizzes	10%
2 Midterm Exams	40%
Final Exam	25%

Grades will be assigned according to the usual scale:

90% – 100%: A, 80% – 90%: B, 70% – 80%: C, 60% – 70%: D, 0% – 60%: F.

These scores are guaranteed to earn the grades listed above, but final grades may also be further curved and adjusted depending on the overall performance of the class.

Exams No supplemental materials are allowed during exams, including calculators, computers, class notes, etc. You may not communicate by any means with other students during exams. If you have any conflicts with the scheduled exam times, or have any University-approved special needs, you must inform me *in advance*.

Exam 1	Friday, Oct. 7 (in-class)
Exam 2	Friday, Nov. 4 (in-class)
Final Exam	Friday, Dec. 9, 3:00 – 5:00 PM

Homework Homework assignments will be due on most **Wednesdays** at the beginning of class (1:40), and returned on Fridays. You will be expected to write rigorous *proofs*, which means that you must carefully and precisely support your reasoning.

Group Work You are allowed, and even encouraged to work in small groups on homework assignments, subject to the conditions:

1. You must list the names of all of the other students with whom you discussed the problems at the top of your assignment;
2. You must write up your own solutions using your own words and arguments.

Quizzes There will be approximately five short in-class quizzes. Each quiz will be given on a **Monday**, and will be announced by the previous Friday at the latest.

Conduct LSU students are expected to maintain high standards of academic integrity. Any incidences of suspected cheating on exams and quizzes will be reported directly to the Judicial Affairs Division in the Dean of Students Office; offenses can result in loss of course credit or expulsion from the university. Instances of direct copying on homework assignments will result in loss of credit for **both** students involved.

Scientific calculators and touchscreen or stylus computers are allowed *solely* for note-taking. Cell phones, MP3 players, and all other electronic devices are not allowed in the classroom at any time.