

Math 490: Topics in Mathematics (Discrete Math)

Fall 2008

MWF 3:00–3:50, Frey 349

Instructor Chris Staecker

Email: cstaecker@messiah.edu

Phone: x7122

Office: Frey 327

Office Hours: M 2–3, W 9–11, 2–3, F 12–1

Course Website Follow links from <http://www.messiah.edu/~cstaecker>

Textbook Johnsonbaugh, *Discrete Mathematics*, seventh edition

Final Exam Wednesday December 17, 4:00–6:00

Objectives

The main content of the course is discrete mathematics, the study of discrete (i.e. non-continuous) mathematical structures. The first weeks will focus on rigorous mathematical proof writing structure and style. Students will learn to write correct proofs in modern style and language. The proof-focused approach will be extended into the course topics: algorithms, recurrence relations, graphs, trees, networks, and boolean algebras.

Exams

There will be midterm exams in class on Friday, October 3, and Friday, November 7. Each of these will cover material up to and including the previous Monday. Exam makeups or rescheduling will be permitted only in extreme circumstances. The final exam is on Wednesday December 17.

The two midterm exams will be weighted equally in your course grade, with the final exam weighted double. The final exam will be cumulative, but the midterm exams will not be.

Homework

Homework assignments are a significant part of the course. Assignments will be excerpts from the textbook exercises, and will be posted at the course website. Students are encouraged to work together on assignments, but each must hand in their own papers. Late homework is like guff: The professor will not take it.

Homework will be due each Wednesday, with assignments covering material up to and including the previous Friday. Selected problems from each assignment will be graded.

Quizzes

In the class meeting following each homework assignment due-date, a short quiz will be given, covering the same material as the homework. Quiz questions are meant to be similar to the easier questions on the homework. Missed quizzes will only be excused with good reasons.

Class wiki

Students will contribute to the class wiki, an ongoing semester-long collaborative writing project. Each student is expected to make three minor contributions per week, and one major contribution every two weeks. More detailed information is provided in the wiki itself.

Semester paper

A semester paper will be due on Monday, November 14. The paper will be written with small groups on a topic of the group's choosing. Group sizes will be from 1 to 3.

Office hours

The Professor regards visits to office hours as part of the instruction for this course. Responsible students in this course are expected to visit the Professor occasionally for help with homework and other class material. Class assignments are meant to stretch the abilities of the students, and the Professor expects even the best students to benefit from individual discussion. Students are encouraged to come in small groups if they don't want to come alone.

Extra credit

The Professor will not entertain requests for extra credit work. Students whose grades have fallen late in the term because of lack of effort or discipline early in the term are especially discouraged from asking for extra credit. Any such requests will be denied with extreme prejudice.

Grading

Your course grade will be inspired by an average, with the lowest quiz and homework scores dropped. The Professor reserves the right to adjust the course grade at his discretion. The grades are weighed as follows:

Homework:	25%
Quizzes:	25%
Class wiki:	10%
Semester paper:	10%
Exams:	30%

Math Help Room

The math department offers the Math Help Room as a resource to any students enrolled in math department courses. Upperclass math majors will inhabit Frey 341 between the hours of 7 and 9PM, Monday through Thursday nights. They will be prepared to answer questions and help with most problems.

Calculator Loans

TI-83s will be loaned to students with a security deposit of \$50 in the form of cash or check (payable to Messiah College). The security deposit will be returned to the student when the calculator is returned in good condition before the day after final exams end. If it is lost, stolen, or not returned, the student will lose their security deposit. Students are responsible for replacing the batteries as necessary while the calculator is in their possession. To borrow a calculator for the semester, please see Jean McCauslin, in Frey 222, during normal business hours.

Disability services

From the College office of disability services: Any student whose disability falls within the *Americans with Disabilities Act* guidelines should inform the instructor within the first two weeks of any special accommodations or equipment needs necessary to complete the requirements for this course. Students must register documentation with the Office of Disability Services (Hoffman 101). If you have questions, call extension 5382.

Inclusive language

From the College administration: Messiah College calls for all members of the College community to be informed and intentional about the use of inclusive language. Further, Messiah College expects members of the College community to use inclusive language in official written and oral communication intended for internal and external audiences. For some, this requires an intentional shift from habitual usage; grace should be exercised as community members conscientiously try to adhere to the policy. This policy should be understood within the context of the basic tenets of academic freedom, and is a complement to, rather than an infringement of, the College's policy on Academic Freedom.

Titular nomenclature

You may address the professor as "Your Excellency," "Sir Staecker," "Dr. Staecker," "Professor," "Professor Staecker," or "Chris." I consider these options to be: ridiculous, technically incorrect, technically correct yet overly formal, acceptable, appropriate, and preferred, respectively. Please do not mispronounce the "Staecker."

Protractors???

Protractors will not be required for this course.