

Course Information

Instructor:

<i>Name:</i>	Jake Wildstrom
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<i>Office:</i>	Natural Sciences Building 231
<i>Office hours:</i>	T14:00–15:00, W14:00–15:00, R13:00–14:00
<i>Alternative office hours:</i>	T13:00–14:00, W15:00–16:00, R14:00–15:00 or by appt.

Lecture: TR 4:00–5:15 PM in Natural Sciences Building 317

Prerequisites: MATH 681.

Description: Fundamental topics in Graph Theory and Combinatorics through Ramsey theory and Polya's theorem respectively. Motivation will be through appropriate applications.

Special notes: This course is preparatory to a qualifying exam and will cover several specific objectives for the exam. Specific topics, and past exams, can be seen at <http://erdos.math.louisville.edu/~pksaho01/Graduate/prelims.html>.

Texts: No specific texts will be mandated for this class, but the recommended text covering most of the material we will be working through is Doug West's *Introduction to Graph Theory*. Another text worth mentioning is a somewhat denser work, Reinhard Diestel's *Graph Theory*, which is available for free browsing and download at <http://diestel-graph-theory.com/GrTh.html>.

Objectives: In this class, we will learn about graph-based structures, parameters and problem-solving techniques, including flows, paths, planarity, and coloring problems.

Responsibilities: You are responsible for attending class daily and maintaining comprehension of the material presented in class. You are expected to be active participants in class, to complete problem sets promptly, and to attend examinations on **February 25** and **April 8**. Extracurricular interaction with your fellow students, and with the instructor, may be useful in developing your comprehension.

Special needs: Any scheduled absence during an examination, or any other special needs, *must* be brought to my attention during the first week of class. Unscheduled absences will be handled on a case-by-case basis, with exceptions generally made only for documented emergencies. If you have a scheduled absence on the due date for a problem set, you are responsible for making sure it is turned in early.

Honesty: There are many resources available to help you succeed in this class, including consultation during office hours, secondary textbooks, and cooperation with other students. It is important, however, that all papers handed in be the result of your individual comprehension of the course material. Duplication of others' work is both a disservice to your own education and a serious violation of the university's academic honesty policy.

Grades: Problem sets will account for 40% of your grade, and the two midterm examinations will each be worth 30%. A 90% overall guarantees a grade of A–, 80% guarantees a B–, and 70% guarantees a C–.

Changes: The syllabus is subject to change. Changes will be announced in class and updated online.