

Course Information

Instructor: *Name:* Jake Wildstrom
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Office: Natural Sciences Building 113
Office hours: *Primary:* W13–14, F11–12
Secondary: T17:30–18:30, W12–13, and by appointment

Course Websites:

https://blackboard.louisville.edu/webapps/uofl-redirect-bb_bb60/course_redirect.jsp?course_id=MATH-387-01-4178

<http://aleph.math.louisville.edu/teaching/2017FA-387>

Lecture: TR 11:00–12:15 in Natural Sciences Building 130

Prerequisites: MATH 206 or EAC 102, and MATH 325.

Description: Pigeon-hole principle, counting techniques, binomial coefficients, generating functions, Stirling and Catalan numbers, permutations and graphs.

Textbook: *Applied Combinatorics, 2016 Edition*, by Keller and Trotter. This book is readable online, available as a free download, and is sold via print-on-demand at <http://www.rellek.net/appcomb/>.

Objectives: In this class, we will study the fundamentals of discrete mathematics, including deductive proof, inductive proof, counting techniques, binomial coefficients, the pigeonhole principle, the inclusion-excluding principle, recurrence relations, generating functions, and graphs.

Responsibilities: You are responsible for attending class on a regular basis and maintaining comprehension of the scheduled class objectives for each day. You are expected to be active participants in class, to turn in assignments promptly, and to attend the two midterm examinations held in class on **Thursday, September 28th** and **Thursday, November 16th**, and the final exam on **Thursday, December 7th from 11:30–14:00**. Except in case of emergency, late assignments will only be accepted for half credit within one week of the original due date. It is important that you show your work or outline the process of discovery for each problem on the homework assignments. No credit will be given for answers which do not include work, unless otherwise stated.

Special needs: Any scheduled absence during an examination, or any other special needs, *must* be brought to my attention before the end of the second week of class. Unscheduled absences will be handled on a case-by-case basis, with exceptions generally made only for documented emergencies.

Honesty: There are many resources available to help you succeed in this class, including consultation during office hours, secondary texts, 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: Homework problems account for 40% of your grade. Each of the two midterm examinations will be 15% of your grade, and the final examination will contribute 30%. A 90% overall guarantees a grade of A–, 80% guarantees a B–, 70% guarantees a C–, and 60% guarantees a D–. Grade cutoffs may be lower than those indicated here, but will not be higher.

Title IX/Clery Act Notification: Sexual misconduct (including sexual harassment, sexual assault, and any other nonconsensual behavior of a sexual nature) and sex discrimination violate University policies. Students experiencing such behavior may obtain confidential support from the PEACC Program (502-852-2663), Counseling Center (502-852-6585), and Campus Health Services (502-852-6479). To report sexual misconduct or sex discrimination, contact the Dean of Students (502-852-5787) or University of Louisville Police (502-852-6111). Disclosure to University faculty or instructors of sexual misconduct, domestic violence, dating violence, or sex discrimination occurring on campus, in a University-sponsored program, or involving a campus visitor or University student or employee (whether current or former) is not confidential under Title IX. Faculty and instructors must forward such reports, including names and circumstances, to the University's Title IX officer. For more information, see the Sexual Misconduct Resource Guide (<http://louisville.edu/hr/employeerelations/sexual-misconduct-brochure>).

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