Course Information

Instructor:

Name:	Jake Wildstrom
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Phone number:	(502)852-5845 (x5845)
Office:	Natural Sciences Building 231
Office hours:	M15:00–16:00, W14:00–15:00
Alternative office hours:	M12:30–13:30, R11:00–12:00, or by appointment

Course Websites:

`http://blackboard.louisville.edu/bin/redirect_temp.pl?course_id=MATH-311-02-4112`
`http://aleph.math.louisville.edu/teaching/2011SP-311`

Lecture: MWF 11:00–11:50 in Natural Sciences Building 212F

Prerequisites: MATH 205 or ENGR 101.

Description: Introduction to abstract mathematics with particular attention to developing proof-reading and proof-writing skills. The basics of set theory, functions, relations, number systems, countability.

Text: *Mathematical Proofs: A Transition to Higher Mathematics*, by Chartrand, Polimeni, and Zhang, second edition (ISBN 9780321390530)

Objectives: We will learn in this class how to read and write mathematics, and how to craft proofs. We will learn the specific proof tools of direct implication, contradiction, and induction, and we will apply our mathematical reasoning to results in set theory, number theory, and combinatorics.

Responsibilities: You are responsible for attending class daily and maintaining comprehension of the material presented in class. Participation in class and presentation of results is necessary. You shall complete problem sets promptly, and attend examinations on **March 4 during class** and **May 2 from 11:30–14:00**. Extracurricular interaction with your fellow students, and with the instructor, will be very useful in developing your comprehension.

Special needs: Any scheduled absence during the examinations, or any other special needs, *must* be brought to my attention during the first week of class.

Assignments: Except in cases of long-term illness or other long-term emergency situations, assignments must be turned in on time; assignments turned in within a week of their due date will receive half credit. **All assignments must be typed.** It is suggested (but not mandated) that you use the LaTeX document preparation system for your assignments; I am happy to provide assistance to anyone wishing to do so.

Assignment revision: Up to half the lost credit may be recovered for revising imperfect free-response questions on assignments before the due date of the next assignment; do so by editing the original work rather than writing it anew, and turn in your revised version accompanied by the original.

Honesty: There are many resources available to help you succeed in this class, particularly consultation during office hours 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 35% of your grade, class participation will be 10%, the midterm examination will be worth 25%, and the final examination will 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.