

## Course Information

*Name:* Jake Wildstrom  
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**Instructor:** *Phone number:* (502)852-5845 (x5845)  
*Office:* Natural Sciences Building 113  
*Office hours:* Monday 12–13, Wednesday 16–17, Thursday 11–12, and by appointment

### Course Websites:

[https://blackboard.louisville.edu/webapps/uofl-redirect-bb\\_bb60/course\\_redirect.jsp?course\\_id=MATH-521-01-4192](https://blackboard.louisville.edu/webapps/uofl-redirect-bb_bb60/course_redirect.jsp?course_id=MATH-521-01-4192)  
<http://aleph.math.louisville.edu/teaching/2019SP-521>

**Lecture:** MWF 13:00–13:50 in Natural Sciences Building 317.

**Prerequisites:** MATH 206 or equivalent, MATH 311, and MATH 325.

**Description:** An introduction to the theory of groups, rings, integral domains, and fields.

**Text:** *Contemporary Abstract Algebra*, by Gallian, ninth edition (ISBN 978-1-133-59970-8) chapters 1–11; if time allows, we may also do topics from chapters 24–29.

**Objectives:** We will learn the definition and properties of algebraic groups, and several applications and specific concepts relating to groups.

**Learning Outcomes:** Students will learn the basic theory of groups; improve ability of following the proofs of difficult statements; increase mathematics logic skills and writing proofs skills in the context of a high level course. Outcomes will be assessed via homework and exams.

**Responsibilities:** You are responsible for attending class daily and maintaining comprehension of the material presented in class. Problem sets will be assigned regularly and posted online. You must complete all assigned problems promptly, and attend examinations on the scheduled dates. Extracurricular interaction with your fellow students, and with the instructor, will be very useful in developing your comprehension.

**Special needs:** If you have a documented disability which needs special accommodations in this class, please contact the Disability Resource Center to coordinate your support. Any scheduled absence during the examinations, or any other special needs, *must* be brought to my attention during the first week of class. During a scheduled absence, you are expected to complete assignments on time, submitting them by e-mail if necessary. Absence due to unforeseen emergencies will be dealt with on a case-by-case basis and must be documented.

**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 30% of your grade, the two midterm examinations will each be worth 20%, and the final examination will be worth 30%. A 90% overall guarantees a grade of A–, 80% guarantees a B–, 70% guarantees a C–, and 60% guarantees a D–. Two points above these thresholds (i.e. 92%/82%/72%/62%) guarantees an unmodified grade, and two points below each threshold (i.e. 88%/78%/68%) guarantees a grade with a “+” modifier.

**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.

## Course Schedule

This schedule is tentative and subject to change.

Week	Monday	Wednesday	Friday
1	January 7th Intro and Chapter 0	January 9th Chapter 1	January 11th Drop date Chapter 1
2	January 14th Chapter 2	January 16th Chapter 2	January 18th Chapter 3 Problem Set #1 due
3	January 21st MLK Day	January 23rd Chapter 4	January 25th Chapter 4
4	January 28th Chapter 4	January 30th Chapter 5	February 1st Chapter 5 Problem Set #2 due
5	February 4th Chapter 5	February 6th Chapter 6	February 8th Chapter 6
6	February 11th Chapter 6	February 13th Chapter 7	February 15th Exam #1 Problem Set #3 due
7	February 18th Chapter 7	February 20th Chapter 7	February 22nd Chapter 7
8	February 25th Chapter 8	February 27th Chapter 8	March 1st Chapter 8 Problem Set #4 due
9	March 4th Chapter 8	March 6th Withdrawl date Chapter 8	March 8th Chapter 9
10	March 11th–15th Spring break		
11	March 18th Chapter 9	March 20th Chapter 9	March 22nd Chapter 9 Problem Set #5 due
12	March 25th Chapter 9	March 27th Chapter 9	March 29th Chapter 9
13	April 1st Chapter 10	April 3rd Chapter 10	April 5th Exam #2 Problem Set #6 due
14	April 8th Chapter 10	April 10th Chapter 10	April 12th Chapter 10
15	April 15th Chapter 10	April 17th Chapter 11	April 19th Chapter 11 Problem Set #7 due
16	April 22nd Chapter 11	Thursday, April 25th Final exam, 14:30–17:00	