

Math 417, Fall 2023

Instructor: Dr Phil Kopel (philip.kopel@colostate.edu). Office hours after class or otherwise by appointment.

Lectures: Lectures are 12:00-12:50, MWF, in Military Sciences 105.

Prerequisites: MATH-317 is prerequisites for this course.

Suggested, Optional Reference: Basic Analysis: Introduction to Real Analysis by Jiri Lebl (available for free online).

About the Course This class will introduce analysis in multidimensional Euclidean space. Topics will include topology of Euclidean space, continuity, differentiability and integration, calculus on manifolds, differential forms, closed and exact forms, generalized Stokes theorem and it's applications.

Homework: Homework will be assigned on an approximately weekly basis, and will not only reinforce but will build on material presented in class. Active engagement with the homework is a vital part of the class experience. Homework will be graded for completion, accuracy for clear, precise communication (so you can lose points for a solution which is needlessly difficult to follow or overly elaborate, even if the solution is technically mathematically correct). A random subset of problems will be graded for a given assignment.

Exams: Four midterm exams will be given during the semester at approximately four week intervals. The exams are scheduled for September 15, October 13, November 10, and Wednesday December 6. Please inform your instructor of a legitimate absence from an exam (medical emergency or university excused absence) promptly, along with full documentation – excessive tardiness can be deemed grounds to not provide a make-up, even in the event of a genuine excuse.

Grading: Your grade will be determined by your performance on the exams (22 % each) and on the homework assignments (12 %). Please take prompt responsibility to make sure that all of your grades make sense to you and are recorded correctly on Canvas, excessively late requests to alter or correct a score will not be considered.

Accommodations: If you require Student Disability Center Accommodations for exams, you must make arrangements with the Student Disability Center and provide formal documentation to the course coordinator and your instructor at least one week in advance of every exam.

Life Circumstances: If you are experiencing a serious, unexpected life circumstance that is affecting your ability to participate in the course fully, the best thing to do would be to confer with the CSU Student Case Management, which deals with these situations in a safe, confidential and professional manner. The URL is: <https://studentcasemanagement.colostate.edu/>

Academic Honesty Policy: The University Policy on Academic Integrity is enforced in this course and the academic honesty penalties for this class are quite serious, to the extent that it is usually not possible to pass the course after even one infraction. Penalties are predicated on a 'less than zero' philosophy, which states that it is much better to not hand in an assignment at all than it is to hand one in in violation of the honesty code. Please be advised that these situations are appraised on a preponderance of evidence basis.

All work submitted must be reflective of your own understanding, so you must be able to adequately explain and justify all of the work which you turn in, including homework assignments. Using a solution which was either obtained online or otherwise authored in the main by someone else is strictly prohibited, including use of online utilities. Submitting work that is excessively and unreasonably similar to that of another students is also prohibited, and if such a situation occurs, identical academic honesty penalties will be incurred by all students in question (including situations where multiple students obtain a common set of solutions from a third party).

Please note that simply having access to forbidden materials – such as notes, a calculator, a smart phone, etc – during an exam constitutes a breach of academic honesty, whether or not you are observed actually using them. Likewise, making misrepresentations to your instructor about any issue related to the operation of the course, providing fraudulent or misleading documentation, or otherwise creating a situation in which it is not possible to reliably assess whether or not your actions conformed to course and university honesty code is also considered a violation of that same code.