Contact Information

- **Instructor:** Benjamin Cooper
  - Office Location: 25L MLH
  - Office Hours: 12:30-2pm TH and by appt.
  - Office Phone: 319-335-0760
  - Email: ben-cooper@uiowa.edu

- **Teaching assistant:** Nick Cecil
  - Office Location: 325C MLH
  - Office Hours: TBA
  - Email: nicholas-cecil@uiowa.edu

- **DEO Contact:** Ryan Kinser, 14 MLH, ryan-kinser@uiowa.edu

Goals and Objectives

- Our course will follow the textbook:

- Our goal is to learn the fundamental concepts, methods and techniques of smooth manifolds. Including Euclidean spaces $\mathbb{R}^n$ as smooth manifolds, tangent vectors and vector fields, derivations, exterior algebra, covectors, manifolds, submanifolds, tangent spaces, tangent bundles, vector bundles, partitions of unity, Lie groups, differential forms, orientations and integration. Concepts covered between §1 and §23.
• This course is the second in the topology qualifying sequence. It contains essential materials for students who wish to do graduate level work in the mathematical or physical sciences. Students are expected to know and understand material from the first course in the series.

Homework and Participation

• Problems will be assigned on a regular basis. These will be collected and graded for completeness, effort and correctness. Further details about homework (format, grading, late assignments etc) will be determined by the grader (N.C.) and he will make additional announcements about the homework during the first discussion session. All questions about homework grades should also be directed to him.

• Students are expected to attend all lectures, all discussion meetings and do all of the homework regularly.

• Students are responsible for everything covered in the lectures, textbook and the prerequisites.

• Important announcements about changes (if necessary) to the syllabus, homework, exams, etc. will be done in the lectures.

Student Collaboration

Students may collaborate on homework assignments. Any take-home tests, quizzes or other materials should be completed without collaboration unless otherwise specified. Students must make proper attributions in their homework. If work comes from any source then it must be properly attributed in order for the student to receive credit.

However, students are encouraged to try the homework on their own before seeking help from classmates, the TA or other sources. If you work on homework with others then each person needs to write up their own solutions and must acknowledge anyone they worked with. Please be sure that when working on homework together each person contributes to and completely understands the solution.

Exams

• Taking all exams (midterms and final) is mandatory.

• There will be two midterms

  – Midterm 1: 3/8/2023
  – Midterm 2: 4/17/2023
• There will be a final exam
  – Final exam: TBD

• The exams will be cumulative.

• There will be no make-up exams. If you believe that you have an exceptional circumstance, please notify me in advance. In case of illness I will ask for a doctor’s note.

**Grading**

A grade will be assigned to each class participant using their scores in the following proportions:

• 20% Midterm 1
• 20% Midterm 2
• 35% Final exam
• 25% Homework, assigned on Mondays and usually due the following Monday

Grades are A+ (rarely used), A, A-, B+, B, B-, C+, C, C-, D+, D, D- and F.

**Attendance**

Any of the following are considered an absence: not attending class, showing up late, or leaving early. If you are absent four or more times you may be dropped from the class. If you believe you have an exceptional circumstance, please let me know.

**Academic Honesty**

There will be serious consequences for anyone caught cheating in any way. Cheaters will be punished according to the standards and practices of the University of Iowa. This may include being reported to CLAS and receiving an “F” on any fraudulent tests or quizzes.

**Other Policies**

• I will not give an incomplete to someone who is failing the class.
• I reserve the right to modify the course syllabus at any time.
• **Cell phones and laptops** must be turned off during the lectures and exams. If you have to read or text a message during the lecture, please do it outside of the classroom. During the exams, the cell phones are required to be put (far) away, preferably at the bottom of your backpack. During the exams, you cannot hold them in your hand, not keep them on your desk, chair, or anywhere easily accessible, and you cannot use it as a calculator.

**Other Course Resources**

There is a TA for this course, you will meet her during the discussion section, two hours a week. You should utilize the office hours of your TA and lecturer. Beyond that, help is also available through the Math Tutorial Lab, see

http://www.math.uiowa.edu/MathTutorialLab/index.shtml

. You are *strongly encouraged* to attend office hours as needed.

**Important Dates**

• 1/17/2020: First day of class
• 1/30/2020: Add-drop deadline
• 3/8/2023: First Midterm
• 3/13/2023-3/17/2023: Spring break
• 4/17/2023: Second midterm
• 4/17/2023: Last day to drop
• 5/5/2023: Last day of class
• 5/8/2023-5/12/2023: Final exam week
CLAS Insert

Administrative Home
The College of Liberal Arts and Sciences is the administrative home of this course and governs matters such as the add/drop deadlines, the second-grade-only option, and other related issues. Different colleges may have different policies. Questions may be addressed to 120 Schaeffer Hall, or see the CLAS Academic Policies Handbook at http://clas.uiowa.edu/students/handbook.

Electronic Communication
University policy specifies that students are responsible for all official correspondences sent to their University of Iowa e-mail address (@uiowa.edu). Faculty and students should use this account for correspondences.

Accommodations for Disabilities
A student seeking academic accommodations should first register with Student Disability Services and then meet with the course instructor privately in the instructor’s office to make particular arrangements. See www.uiowa.edu/sds/ for more information.

Academic Honesty
All CLAS students or students taking classes offered by CLAS have, in essence, agreed to the College’s Code of Academic Honesty: “I pledge to do my own academic work and to excel to the best of my abilities, upholding the IOWA Challenge. I promise not to lie about my academic work, to cheat, or to steal the words or ideas of others; nor will I help fellow students to violate the Code of Academic Honesty.” Any student committing academic misconduct is reported to the College and placed on disciplinary probation or may be suspended or expelled (CLAS Academic Policies Handbook).

CLAS Final Examination Policies
The final examination schedule for each class is announced by the Registrar generally by the fifth week of classes. Final exams are offered only during the official final examination period. No exams of any kind are allowed during the last week of classes. All students should plan on being at the UI through the final examination period. Once the Registrar has announced the date, time, and location of each final exam, the complete schedule will be published on the Registrar’s web site and will be shared with instructors and students. It is the student’s responsibility to know the date, time, and place of a final exam.

Making a Suggestion or a Complaint
Students with a suggestion or complaint should first visit with the instructor (and the course supervisor), and then with the departmental DEO. Complaints must be made within six months of the incident (CLAS Academic).

Understanding Sexual Harassment
Sexual harassment subverts the mission of the University and threatens the well-being of students, faculty, and staff. All members of the UI community have a responsibility to uphold this mission and to contribute to a safe environment that enhances learning. Incidents of sexual harassment should be reported immediately. See the UI Comprehensive Guide on Sexual Harassment for assistance, definitions, and the full University policy.

Reacting Safely to Severe Weather
In severe weather, class members should seek appropriate shelter immediately, leaving the classroom if necessary. The class will continue if possible when the event is over. For more information on Hawk Alert and the siren warning system, visit the Department of Public Safety website.