

Math 141 VAINTROB

Syllabus, Fall 2019

Basics

INSTRUCTOR. Dmitry Vaintrob,

INSTRUCTOR'S EMAIL. vaintrob@math.berkeley.edu. Please use email or come to my office during office hours to get in touch with me.

INSTRUCTOR'S OFFICE. 1073 Evans Hall

CLASS LOCATION. 3109 Etcheverry

CLASS TIME. Tuesdays and Thursdays, 3:30-5:00 PM.

OFFICE HOURS. Thursday 1:30-2:30, Monday 2-4 (subject to change).

GSI AND GRADER. TBD

TEXTBOOK. *Differential Topology*, by Guillemin and Pollack, ISBN:0821851934

COURSE WEBSITE. <https://math.berkeley.edu/~vaintrob/141/math141.html>

Content

OVERVIEW. This is a first course on manifolds. Familiarity with proofs and comfort with material from 110 and 104 will be assumed.

Exam dates

Midterm #1 will be on Thursday, **October 10**, during regular class time.

Midterm #2 will be on Thursday, **November 21**, during regular class time.

The Final exam will be on Friday, **December 20**, 7-10 PM.

Exam dates are not subject to change and there will be no makeup exams given (except in cases of documented medical or family emergency).

There will be a big quiz (Midterm #0.5) on **September 12**, as an opportunity to get feedback before the add/drop deadline. Students who missed or did badly on the big quiz can make it up by doing a supplementary reading project later in the semester. There may be additional quizzes: see below.

Grading

40%: Homeworks, quizzes and other in-class assignments.

25%: Final exam.

15%: Midterm I (see note below).

15%: Midterm II (see note below).

5%: Big quiz.

Note. If it benefits your score, the lowest midterm grade will be replaced by your grade on the final exam.

Homework: due dates and submission

- Homeworks will be due each Tuesday, at the beginning of class. Any homework that is not in the submission pile within the first 10 minutes of class will be docked 10%.
- **No late submissions will be accepted**, except in cases of emergency, or an agreement with instructor at least one week prior to due date.
- Students will be expected to typeset homeworks (using L^AT_EX or equivalent). Clear and well-organized handwritten submissions will be accepted but may lose points for unclear or sloppy penmanship.
- The grading will be based on expectation of mature, rigorous proofs from all students. Proofs must be logically correct and concise within reason. Even if a proof is correct but is written unclearly, or if in addition to a correct proof the writeup includes superfluous unnecessary pieces, points may be taken off.
- **Collaboration is encouraged.** You are welcome to get ideas and techniques from other students and online sources, but your proof and write-up must be your own: *do not look at another solution* (whether another student's or from an online source) *while writing up your own*. Please list collaborators and any external sources that helped generate the ideas in your proof.
- **Plagiarism will not be tolerated.** Any homework or write-up that contains an instance of plagiarism (content that looks like it is derived from another student or from an online source) will void the score for the entire homework for all parties involved, and result in further penalties (or administrative action, in serious cases). As a rule of thumb: if you need to look at another proof while writing up your own, skip the problem instead.

Quizzes and in-class assignments

On the third week of classes, we will have “Midterm #0.5”, something in between a quiz and a midterm. The purpose of this exam is to let students gauge their performance before the add-drop deadline. This exam is worth 5% of your grade, but is fully recoverable. Students who do badly or miss this exam can make it up by doing a supplementary project assigned by the professor: usually, a short reading project (on class-related material) later in the class.

There may be several in-class quizzes on units of class material. These will be announced at least a week in advance, and will be worth between 5% and 10% of your grade, taken out of the homework component. For each graded quiz I will assign optional “quiz preparation problems” to be done before the quiz and “quiz make-up” problems after, as part of the homework. You can get a full score for any given quiz either by correctly answering all problems, or by doing both all the pre- and post-quiz problems correctly (or some combination). No make-up quizzes will be given: if you miss a quiz, you can do all associated problems instead.

There may also be collaborative in-class assignments, again worth cumulatively at most 5% of your grade.

Exams

- Exams are closed book, without notes, calculators or other external aids.
- Each midterm will cover all material in the class so far, with emphasis on the new material since the previous midterm.
- The final exam will cover all material in the course (unless otherwise specified).
- *There are no make-up exams* (except documented medical or family emergency).

Attendance

- Please be respectful of yourselves and others: refrain from talking or checking cell phones during class.
- Lectures will not follow the course book exactly: some material will be presented differently and we may diverge from the book at some points. Anything done in class can be on a homework set or test, unless stated otherwise. If you have to miss class for some reason, it will be your responsibility to get notes from someone else.

Miscellaneous Information

- If you will need special accommodations approved by the Disabled Students Program, make sure you discuss these with me as soon as possible.
- Incomplete “I” grades are almost never given. The only justification is a documented serious medical problem or genuine personal/family emergency. Falling behind in this course or problems with workload in other courses are not acceptable reasons.
- Academic dishonesty will not be tolerated. Any such incidents will be reported to the appropriate authorities and will almost certainly result in you failing the course.