MATH 480O – SENIOR SEMINAR
UNIVERSITY OF HAWAII AT MANOA
SPRING 2013

Professor Info: Dr. Xander Faber
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Office Hours — MW 10:30–11:30, or by appointment

Meeting Coordinates:  
MW 1:30–2:20pm
Keller 402

Course Page: Linked from the teaching section of my home page

Course Description: We will review and synthesize the most fundamental mathematics you have learned during the course of your studies. For the first half of the semester we will discuss calculus, linear algebra, differential equations, and proof techniques. These class meetings will be occupied by short lectures summarizing the main ideas, problem discussions, and occasional undergraduate colloquia on a variety of topics. The second half of the semester will be occupied by your presentations.

Text: There is no text for this course.

Course Grade: Math 480 is graded on a pass/fail basis (CR/NC). Your grade will be determined by my professional assessment of your performance in the course, based on attendance at the class meetings, written assignments, a presentation, and your participation in the Mathematics Department Assessment Exam.

• Attendance: Attendance is mandatory. The rules governing attendance are as follows:

  – Excused absences: An excused absence is when you miss a class period and provide me with a valid excuse. I alone determine validity of an excuse. You are allowed two excused absences. Subsequent excused absences must be made up in a manner to be determined by me.

  – Unexcused absences: An unexcused absence is when you miss a class period and do not provide me with a valid excuse. Again, validity of an excuse is determined by me alone. If you have a single unexcused absence you will receive the grade NC (fail).

• LaTeX: You will have several short writing assignments during the semester. All of your written assignments must be typed using LaTeX. Due dates will be announced later.

• Presentation: Math 480 has an “O” focus. This means that you will be required to give several small presentations during the semester. These will involve demonstrating problem solutions and talking about mathematics. Your work will culminate in a final project, which can be either an in–class presentation (about 15 minutes) or a video demonstration. The
topic of the presentation should be from a 400-level course you have taken, or another topic of higher-level mathematics, subject to my approval. The level of the presentation should be such that others in the class can understand it. You will also prepare a write-up of your presentation in LaTeX (about 3–5 pages in length). In summary, a presentation has two parts:
- An in-class presentation of a mathematical topic of your choice.
- A 3–5 page write-up of your presentation to be distributed to the class.

- **Assessment Exam:** The Mathematics Department administers an assessment exam to all graduating seniors. The exam is offered in three parts:
  - **Exam 1: February 20 — in class**
    Problems from the calculus sequence and linear algebra (Math 241–244 / 251–253 / 307 or 311)
  - **Exam 2: March 20 — in class**
    Problems on elementary logic and proof techniques (Math 321)
  - **Exam 3: May 10, 2:15–4:15 (final exam period)**
    Problems from the advanced courses you have taken

In order to pass Math 480 you must take the assessment exam, even if you are not a graduating senior. If you do not take the assessment exam, you will receive the grade NC (fail). *However, your grade in Math 480 is not predicated on your performance on the exam, just that you take it.*

**Summary:** You can fail Math 480 in one of the following ways:
- Having one unexcused absence.
- Failing to make up an excused absence as required.
- Not completing one of the LaTeX assignments.
- Not doing a presentation, or doing a poor presentation.
- Not taking the assessment exams.

**Academic Integrity:** The integrity of a university depends upon academic honesty, which consists of independent learning and research. Academic dishonesty includes cheating and plagiarism, and these actions will not be tolerated in our community.