

18.304: Undergraduate Seminar in Discrete Mathematics

Syllabus, Spring 2014

Instructor: Jacob Fox, fox@math.mit.edu, Room E17-316

Class schedule: MWF 2-3pm (Room E17-133)

Office hours: Friday 3:00pm or by appointment

Webpage: math.mit.edu/~fox/18304/

Goals and description of the course. The main object of this seminar course is to prepare students to **successfully read, present, discuss and write mathematical research**. The focus will be on several areas of combinatorics and discrete mathematics.

- (1) Students will give **three 45 minute talks** each during the course of the semester. Prior to each talk, a student must do the following **at least one week in advance**:

1. Find a topic of interest and ask for approval.
2. Once the topic has been approved, send title and abstract.

The material can either be selected either from a book (paper) in the reference list or any other book (paper) dealing with discrete mathematics.

Out of the first two talks, **one should be a chalkboard talk**, and **the other one should be using slides**. The third talk should be about the term paper, and each student can choose his/her preferred method to deliver the talk (chalkboard or slides).

The talks **determine 50% of the final grade**.

- (2) There will be **one term paper**. The topic is to be decided and approved by date P1 below. One first draft and one possible revision must be submitted by dates P2 and P3. The final version, to be at least 5000 words in length has to be written in Latex and is due by date P4.

The papers do not necessarily need to contain original results, but must be successfully written in the style of an actual research or expository journal article. The paper determine **30% of the final grade**.

As mentioned above, the last talk of each student will be on his/her term paper.

- 3) **Participation** is very important, and determines **20% of the final grade**. Participation includes (but is not limited to) attendance, paying attention at other students presentation, and asking good questions.

Important dates. Below are the main dates and deadlines. No exceptions, delays, or make-ups are allowed. These dates may be subject to change.

- P1. Selection and approval of term paper topic: March 19, 2014
- P2. First draft of term paper: April 14, 2014
- P3. Second draft of term paper (if necessary): April 25, 2014
- P4. Final version of term paper: May 14, 2014