Undergraduate Seminar in Discrete Mathematics
Course 18.304, Spring 2011
Professor Fabrizio Zanello
SYLLABUS

Class Schedule: MW 9.30-11 am (Room 2-139)

Office hours: MW 5.30-7 pm, or by appointment (Room 2-336)

E-mail: [Removed]

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

1) Students will give (approximately) **three, 40-minute talks** each during the course of the semester, on a topic to be decided at least one week in advance. Ideally, students will primarily focus on a single topic of their choice for all three talks, and their presentations will escalate from the basics of the chosen area (the first talk) to materials selected from a research paper (the third talk). Alternatively, giving each talk on a different topic and at a more introductory level, will also be acceptable.

Before a presentation, students will hand out an **abstract** of their talk, and by the following class meeting, they will provide me with some **quiz questions**, which might be part of the quizzes described at point 2). The talks determine **40% of the final grade**.

2) There will be **three, 80-minute** in-class **quizzes**, scheduled on dates Q1, Q2 and Q3 below. Their focus will be the material of the talks up until that point. The quizzes determine **30%** (10% each) **of the final grade**.

3) Finally, there will be **one term paper**, to be completed by the end of the semester, on a topic of discrete mathematics to be decided and approved by date P1 below. One first draft and one possible revision must be submitted by deadlines P2 and P3. The final version, to be 8 to 12 pages in length (in a standard format), is due by date P4.

The papers do not need to contain original results, must be successfully written in the style of an actual research or expository journal article, and may be on the topic chosen by the students for their own talks. The papers determine **30% of the final grade**.

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

1. Very brief presentation by the students (no more than 5 minutes) of a definition/nice example/theorem/etc. of their interest: **Monday, February 7**
2. Brief presentation by the students (no more than 10 minutes) of the topic of their term paper: **Monday, April 11 and Wednesday, April 13**

Q1. Quiz 1: **Monday, March 7**

Q2. Quiz 2: **Monday, April 4**

Q3. Quiz 3: **Wednesday, May 11**

P1. Selection and approval of term paper topic: **Monday, March 14**

P2. First draft of term paper: **Monday, April 4**

P3. Second (possible) draft of term paper: **Wednesday, April 20**

P4. Final version of term paper: **Wednesday, May 11**