Prove It!
Math 3040, Spring 2013
Tuesdays & Thursdays 10:10-11:25am in Malott 207

Instructor Information
Tasia Raymer
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Office: Malott Hall 587
Office Hours: Monday 10-11:30am & Thursday 2pm-3:30pm

TA Information
Voula Collins
Email: vcc28@cornell.edu
Office: Malott 218
Office Hours: Monday 3-4pm & Friday 1-2pm

Webpage and Textbook
Class Website: http://blackboard.cornell.edu (If you are registered, you should have access.)
Text: *Proofs and Fundamentals*, 2nd Ed., by Ethan Bloch
The text is freely available on the web through the Cornell University library website.

Course Description and Objectives
This is a course on mathematical reasoning and rigorous mathematical proof. Prove It! is different from lower division math courses in that it emphasizes writing in mathematics and explaining the *why* of concepts rather than just how to use them. As we learn to read proofs and strategies for writing proof, students will learn content that will help them transition to higher level mathematics, including: axiomatic set theory, functions, congruency relations and cardinality.

This class will be very interactive. Students will participate in class discussions and group work, which will improve their ability to collaborate with colleagues and verbally articulate ideas. Students will also aid each other in improving their problem solving and writing skills.

Classroom Etiquette
- We will strive to create an atmosphere in which all students are comfortable asking and answering questions. Thus, students will behave in a respectful manner toward the instructor and their peers.
• Students are required to switch off their cell phones and any other electronic devices that may cause a disturbance.

• Text messaging and laptop use for anything other than note taking are not permitted, (even if sitting in the back row).

Student Expectations

• Students are responsible for reading the assigned sections of the text book before coming to class, and will be required to fill out a brief reading survey. (see below)

• All students are expected to cooperate during group activities and make an honest effort to give useful feedback during peer review exercises.

• It is the students’ responsibility to check Blackboard for new announcements daily.

• Students should seek help when having difficulty understanding the material conceptually and/or how to apply concepts and write proofs.
  
  – Talking to either the instructor or TA during office hours in a more one-on-one environment is a great way to clear things up, so don’t hesitate to stop by! If there is something you prefer to discuss privately, feel free to schedule an individual meeting.

  – Setting up a study group with fellow students is also highly recommended.

Required Reading

Students are required to complete assigned reading before coming to class so that we may have informed discussions in class and time for additional examples and activities. A reading schedule is posted under the Information tab on Blackboard. There will also be a link to a reading survey which students are to fill out by 7pm the day before the reading is due.

Assessment

Homework (23%)

The best way to learn is by doing. Homework will be due each week (usually on Tuesdays) and is to be submitted in class before the lesson begins. Assignments will be posted under the Content tab on the course Blackboard site. Guidelines for homework write ups will also be posted on Blackboard. Assignments are equally weighted and your lowest score will be
dropped.

**Miscellaneous (17%)**

This consists of filling out reading surveys, participation in class discussions, participation in and quality of work submitted for in-class group assignments, and occasional short additional assignments that are to be done at home between class meetings.

**Midterm Exams (30 %)**

There will be two in-class midterm exams, each with a weight of 15%. The tentative dates for the midterm exams are Thursday, 2/28 and Thursday, 4/11. Details about exam content will be given as the date approaches.

**Final Exam (30 %)**

The final exam will be on Friday, May 10, 2013 at 9am. The final is a 2.5 hour exam and will be cumulative.

**Homework and Exam Policies**

- Late homework will not be accepted by either the instructor or the TA.

- If you will be unable to submit an assignment due to illness you must email the instructor *before* you miss class and a doctors note must be provided. Only then will you be permitted to submit the assignment at the following class meeting.

- Exams and assignments will cover material from lectures, as well as all content from the book whether or not it is stressed in lecture.

- There will be no make-up or rescheduling of midterms or the final exam.

**Add/Drop**

February 8th is the last day to add and March 8th is the last day to drop. For all add/drop inquires please see Heather Peterson (hko1@cornell.edu) in the math department office.

* Disclaimer: Although major changes are not anticipated, the above is subject to change at the instructor’s discretion.