

# Syllabus for Math 100: Intro to Proofs/Problem Solving

2015 Summer Session II

**Instructor:** Richard Gottesman

**Text:** Book of Proof by Richard Hammack

You can download the book for free at the following

website: <http://www.people.vcu.edu/~rhammack/BookOfProof/>

**My Office Hours:** McHenry Cafe --- (If there is not enough room at the McHenry Cafe, then we will go to McHenry 4112 -- it's located in the math department, not the library.)

**Monday 12:00-1:30 pm**

**Tuesday 12:00 - 1:30 pm**

## GRADING DISTRIBUTION

- **Quizzes (20%):**
- **Homework (35%): Start the homework early! I am happy to look at your homework during my office hours before you submit it.**
- **Class Participation/Attendance (5%) -- Class attendance is required.**
- **1 Final (40%)**

**DRC Accommodations:** If you qualify for classroom accommodations because of a disability, please let me know ASAP! Please submit your Accommodation Authorization Letter from the Disability Resource Center (DRC) to me as soon as possible. Contact DRC by phone at [831-459-2089](tel:831-459-2089) or by email at [drc@ucsc.edu](mailto:drc@ucsc.edu) for more information.

## **Suggestions:**

Work with other students and talk with other students about mathematics. That said, be sure to work on problems on your own before you ask others for help. I find that I learn best by talking to other people.

**Come to office hours!!!** You don't have to have a specific question to come by and you will learn a **LOT** by going.

## Course Content:

We will spend a lot of time learning how to come up with and how to write proofs.

We will cover many proofs techniques including direct proof, proof by contradiction, and proving a statement by proving the contrapositive of it's statement.

We also learn how to prove theorems using mathematical induction. We will provide an introduction to elementary number theory including the Euclidean algorithm, properties of prime numbers, and modular arithmetic. We will also provide an introduction to set theory and functions and the cardinality of sets. We will also cover equivalence relations and equivalence classes.