

## Math 8: A Transition to Higher Mathematics, Spring 2011

<http://math.ucsb.edu/~helena/teaching/math8>

### Instructor:

Helena McGahagan

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**Lectures:** TR 9:30-10:45 GIRV 2119

**Office Hours:** Monday 1:30-3pm and Tuesday 11:30-1pm

**Textbook:** *A Concise Introduction to Pure Mathematics*, third edition, by Liebeck

**Discussion:** The discussion sections for this course meet MW, and the TA for the course is Derek Smith ([dls@math.ucsb.edu](mailto:dls@math.ucsb.edu)). His office hours will be held Wednesday 2-3:30pm and Thursday 1-2:30pm in SH 6431D.

**Course Description:** This course covers set theory, logic, functions and equivalence relations, and techniques of proof, including induction. We will also cover topics in number theory relating to integers and primes. The goals of the course are to introduce fundamental mathematical concepts and definitions and to be able to use them to write clear, logically correct proofs.

**Homework & Quizzes:** There will be approximately one problem set each week; the problems will be posted on the course website and should be turned in at the beginning of class on the due date. The lowest homework grade will be dropped from your average. Please note that, although discussion of problems is encouraged, the written homework sets you turn in are to be your own work and reflect your own understanding of the material. There will also be a few short quizzes, often covering definitions, simple examples, or specific proofs. The lowest quiz grade may be replaced by your final grade.

**Midterm:** There will be one midterm, tentatively scheduled for Thursday, May 5<sup>th</sup>. Make-ups will be given only for documented reasons and only if you contact me before the exam begins (except in emergencies).

**Final Exam:** The final exam will be on Tuesday, June 7<sup>th</sup>, from 8-11am. An incomplete for the course will be given only for documented medical reasons or emergencies.

### Grading:

Attendance & Participation: 10%

Homework: 20%

Quizzes: 15%

Midterm: 25%

Final: 30%