MATH 109 SYLLABUS
SPRING 2017

Lectures MWF 10:00-10:50, MANDE B-210
Instructor James M^{c}Kernan, APM 6260, phone (858)-534-6347
Office Hours M 1:00-3:00PM (subject to change)
or by appointment, if you cannot make these times.
Teaching Assistants Iacopo Brivio ibrivio@ucsd.edu; Daniel Smith des006@ucsd.edu; Calum Spicer calumspicer@gmail.com
Sections M 5:00-5:50PM, 6:00-6:50PM, 7:00-7:50PM, APM5402
Office Hours TBA SDSC E292, TBA APM6422, TBA SDSC E296
Text *Peter J. Eccles, An Introduction to Mathematical Reasoning: numbers, sets, and functions.* See web site for some other suggestions.
Websites TED, `https://ted.ucsd.edu` (grades only), and the course webpage `http://www.math.ucsd.edu/~jmckerna/Teaching/16-17/Spring/109/109.html`
Exams, Final Monday June 12th, 8:00-11:00am, TBA.
Midterms Wednesday April 26th, Wednesday May 17th.
Grading Homework 30%, Midterms 30%, Final 40%.
Syllabus This course uses a variety of topics in mathematics to introduce students to rigorous mathematical proof, emphasizing quantifiers, induction, negation, proof by contradiction, naive set theory, equivalence relations and epsilon-delta proofs. Required of all departmental majors.
Prerequisites Math 18 or Math 20F or Math 31AH, and Math 20C, or consent of instructor.
Homework Homework will be assigned on the website every Monday. It will be due one week later every Tuesday at 5pm, in a dropbox in the basement of APM. Late problem sets are **not accepted**, however the lowest problem set score will be dropped.

As this is a course devoted to developing skills in the presentation of mathematics, the only way to really learn the material in this class is to put a lot of effort into the homework. Please pay attention to how you present your answers and *expect* to be graded on this basis.

At the top of every of each assignment should appear

(1) Your name.
(2) Your section leader's last name.
(3) Your section time.
(4) Either the text "Sources consulted: none" or a list of all sources consulted other than the main textbook, supplementary notes,

and your own notes from lecture and section. This is *required*. (Examples of things that should be listed if used: office hours, names of study group partners, Wikipedia, etc.)

You should not expect to be able to solve every single problem on your own; instead you are encouraged to discuss questions with each other or to come to office hours. If you meet with a study group, you may find it helpful to do as many problems as you can on your own beforehand. But write-ups must be done independently. (In practice, this means that it is OK for other people to explain their solutions to you, but you must not be looking at other peoples solutions as you write your own.) Use examples in the book as a model for the level of detail expected. Write in complete sentences whenever reasonable. If you have questions about the homework, it is best to ask these in office hours.