

**Course:** Introduction to Analysis (MATH 301)

**Instructor:** Dr. Jonathan Kane

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**CLASS WEB PAGE:** <http://math.uww.edu/faculty/kanej/analysis.htm>

**Office Hours:**

MONDAY 1:00 – 2:00, 5:00 – 7:00 (NOT Sep. 28)

TUESDAY 8:30 – 9:30, 2:00 – 3:30

WEDNESDAY NOON – 1:00

THURSDAY 2:00 – 3:30

When no meeting: Tuesday 11-NOON Thursday 11-NOON

If you cannot get in to see me at these times, arrange an appointment.

I will generally not be on campus on Fridays.

**TEXT:** *Analysis with an Introduction to Proof* by Steven R. Lay

**PREREQUISITES:** Students in this course are expected to have completed the Calculus sequence and a course in Discrete Mathematics. It would also be very helpful to come to class with an open mind, to be willing to do a lot of work, and to look forward to making a lot of mistakes.

**GOAL:** The main goal of this course is to train mathematics students to read and write mathematical proofs. Most of the proofs we will discuss in this course will be in analysis which comes out of calculus. You will find many of the topics very familiar and intuitive because of your study of calculus. Since most students will have had little experience writing proofs, most of the proofs you will write for this class will contain errors. Through discussion of these errors, you will develop an appreciation for what makes a valid proof and exit the course as a real mathematician. Class discussions of proofs should be professional, critical, and even lively, but any student who is caught laughing at or attempting to embarrass another student will have their final course grade lowered one full letter grade. This class should be hard, fun, interesting, exciting, and eye-opening, but it must not be degrading or demoralizing.

**TENTATIVE SCHEDULE:**

The class will work on proofs covering much of the material in Chapters 3, 4, 5, and possibly 6. We will also cover Section 8 in Chapter 2. Remember, the course is more about learning about proofs than getting through a lot of chapters.

September 3 - October 1	Chapter 3
October 6	<b>TEST #1</b>
October 8 - November 10	Chapter 4 & 5
November 12	<b>TEST #2</b>
November 17 - December 10	Chapter 5 & 6

**FINAL EXAM:** Tuesday December 15 10 - NOON

**GRADES:** Your grade will contain three parts: class participation (10 %) , homework (40 %), and tests (50 %). **Class participation** will be based on attendance and participation in class discussion. Class attendance is required. Students missing class more than three times without adequate excuse will have their participation grades reduced. **Homework** will be collected on most class days. Each homework assignment will be worth 20 points. Assignments turned in late will be penalized 5 points. If you miss a test for any reason, contact me within 24 hours either by speaking with me or by leaving a message by calling my home phone or my office phone telling me why you have missed the exam and when you will be returning to campus to make up the test.

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