

Math 316-01 Intermediate Analysis  
Tuesday – Thursday 12:00 – 1:15 PM  
Wissink Hall 286A  
My Office: Wissink Hall 263

Professor: Dan Singer  
Webpage: <http://mavdisk.mnsu.edu/singed/>  
Email: dan.singer@mnsu.edu  
My Office Hours: to be determined

**Course Description:** This is a first course in Mathematical Analysis. We will study all the topics you have already encountered in Calculus I and II, but at a more sophisticated level and with an emphasis on rigorous definitions and proofs: limits, sequences, continuity, differentiation, integration, infinite series, and sequences and series of functions.

**Prerequisite:** Math 223 and 290 with a grade of C or better.

**Textbook:** *Analysis, With an Introduction to Proof, Fourth Edition* by Steven R. Lay, 2003, Pearson Prentice Hall. ISBN: 0-13-148101-0.

**Course Format:** I will cover all 9 chapters of the textbook, omitting the optional sections and sections 6 and 8. I will distribute a list of questions for you to think about for each section that we cover. Please think about these questions as you read a section, and be prepared to answer the questions in class. I will call on people in class to answer these questions, and award points for correct answers. My goal is to help you think through the material and participate actively in the class. I will give lectures as needed, but I am relying on students to read the textbook carefully and work with me in class to understand and apply the ideas. I will also encourage students to present homework solutions in class. There will be three regular exams and a final exam.

**Exam Policy:** You may bring in a single sheet of notes to refer to during each exam. You may use a calculator as directed.

**Homework Policy:** Homework must be written up carefully and stapled. I will look over your homework and make comments as necessary.

**Attendance Policy:** Please attend regularly. I would appreciate it if you would send me an email in advance of any unavoidable absences or emergencies.

**Student Conduct:** Please do the following: Arrive to class on time. Turn off your cell phone if you have one. Let me know in advance if you need to leave the classroom early for some reason.

**Office Hours:** To be determined. I welcome you to come in as much as needed.

**Grades:** Class participation: 50 points, Homework: 100 points, Exam 1: 100 points, Exam 2: 100 points, Exam 3: 100 points, Final Exam: 100 points

A: 495 – 550 points	D: 330 – 384 points
B: 440 – 494 points	F: 0 – 329 points
C: 385 – 439 points	

## **Class Schedule:**

<u>Date</u>	<u>Agenda</u>
Tues Jan 13	discuss sections 1 and 2
Thurs Jan 15	discuss sections 3 and 4, turn in sections 1 and 2 hw
Tues Jan 20	discuss sections 5 and 7, turn in sections 3 and 4 hw
Thurs Jan 22	discuss sections 10 and 11, turn in sections 5 and 7 hw
Tues Jan 27	dicuss sections 12 and 13, turn in sections 10 and 11 hw
Thurs Jan 29	discuss section 13, turn in section 12 hw
Tues Feb 3	discuss section 14, turn in section 13 hw
Thurs Feb 5	turn in section 14 hw, review for exam 1 REVISION: CONTINUE DISCUSSING 14, TURN IN HW MON
Tues Feb 10	exam 1 on chapters 1, 2, 3
Thurs Feb 12	discuss sections 16 and 17
Tues Feb 17	discuss section 17, turn in section 16 hw
Thurs Feb 19	discuss sections 18 and 19, turn in section section 17 hw
Tues Feb 24	discuss sections 19 and 20, turn in section 18 hw
Thurs Feb 26	discuss sections 21 and 22, turn in sections 19 and 20 hw
Tues Mar 3	discuss sections 22 and 23, turn in section 21 hw
Thurs Mar 5	turn in sections 22 and 23 hw, review for exam 2
Tues Mar 17	exam 2 on chapters 4, 5
Thurs Mar 19	discuss section 25
THESE TWO HAVE BEEN REVERSED (3/17, 3/19)	
Tues Mar 24	discuss section 26, turn in section 25 hw
Thurs Mar 26	discuss sections 27 and 28, turn in section 26 hw
Tues Mar 31	discuss sections 29 and 30, turn in sectinos 27 and 28 hw
Thurs Apr 2	discuss sections 30 and 31, turn in section 29 hw
Tues Apr 7	turn in sections 30 and 31 hw, review for exam 3
Thurs Apr 9	exam 3 on chapters 6, 7
Tues Apr 14	discuss section 32
Thurs Apr 16	discuss section 33, turn in section 32 hw

REVISION: EXAM 3 ON THUR APR 16, SECTIONS 32 AND 33 ON THURS APR 9  
AND TUES APR 14

Tues Apr 21	discuss sections 34 and 35, turn in section 33 hw
Thurs Apr 23	discuss sections 35 and 36, turn in section 34 hw
Tues Apr 28	discuss sections 36 and 37, turn in section 35 hw
Thurs Apr 30	turn in sections 36 and 37 hw, review for final exam
Mon May 4	final exam on chapters 8 and 9, 10:15 a.m. - 12:15 p.m.