

MATH 3100/5100 - Introduction to Analysis

Class meetings: TuTh, 11:00am - 12:15pm, SC 1320
Instructor: Dietmar Bisch
Office: SC 1405
Office hours: TuTh, 12:15pm-1:00pm, Fr 3:10pm-4:00pm
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Prerequisite. MATH 2501 or both MATH 2300 (or MATH 2310) with either MATH 2410 or MATH 2600.

Textbook. *Introduction to Analysis*, Fifth Edition, by Edward D. Gaughan (ISBN-10: 0821847872).

Syllabus. Introduction to Analysis is designed to bridge the gap between the intuitive calculus usually offered at the undergraduate level and the sophisticated analysis courses the student encounters at the graduate level. In this class, you will learn to read and understand mathematical proofs, and write proofs on your own.

Exams. Three mid-term exams will be given in class during the semester, tentatively on the following dates:

- Thursday, September 19
- Thursday, October 17
- Thursday, November 21

All tests are closed book/notes and no calculator is allowed. There will be no final exam.

Homework. Homework is an important component of this course. Assignments will be collected and graded, usually on a weekly basis. Homework must be turned in at the beginning of class on the due date. I will not accept homework put in my mailbox or slid under my office door. You are allowed, and encouraged even, to work in groups on the homework. However, you must each turn in your own written solutions. The lowest homework score will be dropped.

Late homework. It is your responsibility to have your homework turned in by the beginning of class on the day it is due. This is the case even if you are unable to attend the class yourself. You can also turn in your homework in electronic form via email by the beginning of the class on the due date. Late homework will not be accepted. If you have a valid reason for failing to hand in the homework, please let me know as soon as possible, and before the homework due date.

Homework guidelines. The homework you turn in should look neat and professional. The following guidelines must be followed:

- It must be written on 8.5x11 inch white paper which is either lined or blank. If lined paper is used it should only be three hole punch with no frill.
- It must be either typed, or printed in pencil or black ink.
- It must be stapled.
- The problems must be answered sequentially in the order they are assigned.
- Your homework must not be looked crammed, you should leave a bit of space between problems on in the margins for any possible comments by the grader.
- It must not have scratch work or scribbles on it.
- Your solutions should clearly indicate your reasoning process, credit will not be given if you do not show your work.
- The problems must be written on your homework directly before your solutions.

Grades. The usual grading scale used will be: A:93-100, A-:90-92, B+:87-89, B:83-86, B-:80-82, C+:77-79, C:73-76, C-:70-72, D+:67-69, D:63-66, D-:60-62, F:0-59. The final grade will be based on the homework (34%), and the three tests (22% each). Individual exams may be curved as needed, however the final grade will not be curved.

Grading of Math 5100 students. You will be required to hand in additional problems with each homework assignment. These will be graded and go into your course grade according to the above formula.

Attendance and Make-up policy. There will be no make-up tests or homework assignments. The attendance and make-up policy will follow the guidelines set forth by the College of Arts and Science.

Academic integrity. All work submitted for credit is subject to the provisions of the Vanderbilt Honor Code: http://www.vanderbilt.edu/student_handbook/the-honor-system/.

Students with disabilities. If you need disability related accommodations for this course, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment to speak with me, as well as the Office of Equal Opportunity, Affirmative Action, Disability Services (2-4705 or www.vanderbilt.edu/ead) as soon as possible.

Classroom policy. Texting during class is not acceptable. The use of technologies for audio and video recording of lectures and other classroom activities is allowed only with the express permission of the instructor. In cases where recordings are allowed, such content is restricted to personal use only unless permission is explicitly granted in writing by the instructor and by other classroom participants, including other students. Personal use is defined as use by an individual student for the purpose of studying or completing course assignments. When students have permission for personal use of recordings, they must still obtain written permission from the instructor to share recordings with others.

Departmental policies. The Open Enrollment Period ends on Wednesday, August 28th. This is the deadline for students to add a course or to make other changes in YES. Between August 29th and September 4th, any withdrawals or adjustments in level or in grading status must be completed using the add/drop form. If only the "DROP" section of the form is filled out, the instructor may sign the form. If a student wishes to make any change that involves filling in the "ADD" section of a drop/add form (whether or not it also involves filling in the "DROP" section), then the student must see the DUS (John Rafter) or the Assistant DUS (Jakayla Robbins) in person. Per Math Department policy, the only change to a math course that will be approved is a change to the level of the course (e.g. switching from Math 1301 to Math 1300 or vice versa).