

Vanderbilt University
MATH 6100, Graduate Analysis
(officially known as Theory of functions of a real variable)

1. LECTURE AND OFFICE HOURS

Instructor: Marcelo Disconzi.

Instructor's office: Stevenson Center 1515.

Instructor's office phone: 322-7147.

Instructor's email: marcelo.disconzi@vanderbilt.edu.

Lecture time and location: Tuesday and Thursday, 1:10pm–2:25pm, Stevenson Center 1312.

Course webpage:

<http://www.disconzi.net/Teaching/MAT6100-Fall-15/MAT6100-Fall-15.html>

Instructor's office hours: Thursdays 3-6pm, or by appointment.

2. COURSE INFORMATION

2.1. **Textbook.** There will be no required textbook. Some suggested references are:

- H. Amann and J. Escher, *Analysis I*. Birkhäuser; 2005 edition.
- H. Amann and J. Escher, *Analysis II*. Birkhäuser; 2008 edition.
- H. Amann and J. Escher, *Analysis III*. Birkhäuser; 2009 edition.
- N. Bourbaki, *Integration I*. Springer, reprint of the original 1st ed. 2004 edition (2012).
- N. Bourbaki, *Integration II*. Springer, reprint of the original 1st ed. 2004 edition (2010).
- E. DiBenedetto, *Real Analysis*. Birkhäuser; 2002 edition.
- S. Lang, *Real and Functional Analysis*. Springer; 3rd edition (1993).
- W. Rudin, *Real and Complex Analysis*. McGraw-Hill Education; 3rd edition (1986).

2.2. **Description.** The real number system, transfinite numbers, spaces, point sets in metric spaces, sequences and series of functions, measure. Lebesgue integration, convergence theory, inversion of derivatives.

3. GRADING POLICY AND EXAMS DATES

The course will have one midterm constituting 25% of the grade, and one final exam constituting 35% of the grade. The remaining 40% of the grade will be based on homework given throughout the semester. You will be allowed to take a make-up test only in very special circumstances. If you miss an exam, contact the instructor as soon as possible.

Description	Date and Location	Points
Test 1	Oct 13, in class	25
Final Exam	TBA	35
HW	to be posted on the webpage	40
TOTAL		100

Important: There will be no alternate time for the Final Exam.

3.1. **Homework problems and schedule.** An up-to-date schedule that includes the due date of homework assignments will be maintained on the course webpage.

4. COURSE POLICIES

4.1. **Calculators.** Calculators will not be used on the tests.

4.2. **Classroom Policy.** Students are not allowed to use electronic equipment such as cell phones, music players, or computers during class. Texting during class is not acceptable.

4.3. **Honor Code.** All work submitted for credit must be the students own and is subject to the provisions of the Vanderbilt Honor Code. Details can be found at the Honor Council web site: <http://studentorgs.vanderbilt.edu/HonorCouncil>.

4.4. **Classroom recording policy.** 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 expressly 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.

4.5. **Accommodation Procedure.** A student who needs course accommodations due to a disability, special arrangements in case the building must be evacuated, or has emergency medical information that needs to be shared with the instructor, should contact the instructor as soon as possible. Equal Opportunity, Affirmative Action, and Disability Services (<http://www.vanderbilt.edu/ead>) at Vanderbilt provides specific accommodations for students with physical or learning disabilities. Upon receiving appropriate documentation from the student, the EAD will make arrangements with the instructor for the accommodations.

4.6. **Attendance.** The student who misses a class meeting is responsible for any assignments and/or announcements made. Office hours will not be utilized to re-teach material presented in class. The stated attendance policy of the College of Arts and Science applies in this course: Students are expected to attend all scheduled meetings of classes in which they are enrolled; they have an obligation to contribute to the academic performance of all students by full participation in the work of each class. The faculty of the College of Arts and Science recognizes that occasions arise during the academic year that merit the excused absence of a student from a scheduled class or laboratory during which an examination, quiz, or other graded exercise is given. Examples include participation in sponsored university activities (e.g., debate team, varsity sports), observance of officially designated religious holidays, serious personal problems (e.g., serious illness, death of a member of the students family), and matters relating to the students academic training (e.g., graduate or professional school interviews). Conflicts arising from personal travel plans or social obligations do not qualify as excused absences.

4.7. **Anonymous feedback.** Students are encouraged to bring suggestions and to discuss with the course instructor any concerns they may have, including something they think is not being properly handled in the course. But if you do not feel comfortable about doing that, you have the opportunity to send some anonymous feedback on the course webpage.