Real Analysis I
Math 323, Fall 2012

Instructor: Marius Ionescu (mionescu@colgate.edu)
Office Hours: McGreg 201K, We 1:00-2:30pm, Th: 3:00–4:30
Course web site: http://www.math.colgate.edu/~mionescu/math323f12/

Overview: This course is a bridge from introductory calculus to higher-level analysis. The main focus will be on developing the logical skills required to analyze and construct mathematical proofs. This will be done in the setting of familiar ideas from basic calculus, which will be revisited in rigorous detail.

Text: *Understanding Analysis* by Stephen Abbott, Springer Verlag

Office visits Visits to my office may be made during the office hours indicated on this syllabus. If you wish to see me at another time, please make an appointment with me at least 24 hours in advance.

Webpage: Homework assignments and other important communications will be conveyed via the course web page:
http://www.math.colgate.edu/~mionescu/math323f12/

Preparing for class: Before each lecture, students are required to read the relevant sections from the textbook, and make an attempt at understanding the material. It is not expected that everything will be clear after the first reading; the purpose of lecture is to clarify things.

Participation: Participation in class is strongly encouraged. It is much better to ask your questions while we are still discussing a topic.

Planned Coverage: I hope to cover Chapters 1 through 7. More specifically, the plan is:

Chapter	Sections
1	1,3,5
2	1–7
3	1–3
4	1–6
5	1–4
6	1–6
7	1–6

The list of sections given above includes more sections than the syllabus established by the Department of Mathematics for this course. If time does not permit, some of the "extra" sections will not be covered. The most up to date information will be always posted on the course webpage.

Homework: Homework will be posted on the course webpage:
http://math.colgate.edu/~mionescu/math323f12/
The homework will be, usually, due on Fridays. Full credit for the homework will require solutions which are mathematically correct AND which are written with

clarity. You are encouraged to work with others as long as you write your solutions in your own words and indicate the names of your collaborators on the assignment. I will drop your lowest homework score when computing the final grade.

In addition, I will suggest extra problems from the textbook to help you prepare for the exams.

Starting with the fourth homework, I will accept the solutions **only** if you type them using LaTeX.

Exams: There will be two midterm exams and one final. Exam solutions must be entirely your own work. The first midterm will take place on Friday, October 5 in class; the second midterm will take place on Friday, November 9 in class. The final exam, which is cumulative, will be held during finals week as determined by the university-wide schedule: Tuesday, Dec. 11, 9:00 - 11:00 a.m..

Grading:

Homework	20%
Midterm 1	25%
Midterm 2	25%
Final	30%.

Class Attendance Attendance to all class meetings is expected but there is no formal penalty for absence from a class meeting.

Class Participation I strongly encourage you to be actively involved in class by asking questions, suggesting answers and solutions to my questions, etc.

How to install and use LaTeX

- If you are using Linux then you should install Texlive using your favorite software manager. Suggested editors are: texmaker, kile, emacs (for the power users)
- If you are using Windows then you should install Miktex http://miktex.org/; suggested editor: texmaker; there are many other Latex editors for Windows but I am not familiar with them.
- If you are using MacOSX then you should install TexShop http://pages.uoregon.edu/koch/texshop/. It comes with its own editor. You can also use texmaker. The web address for texmaker is http://www.xm1math.net/texmaker/.

You can find more information about using LaTeX on the course webpage. I will post the LaTeX file of each of the assignment; you should start building on it. Please feel free to ask for my help!

Students with disabilities Any student who feels s/he may need an accommodation based on the impact of a disability should contact me privately to discuss your specific needs. Please contact Lynn Waldman, Director of Academic Support and Disability Services, at 315-228-7375 in the Center for Learning, Teaching, and Research to coordinate reasonable accommodations for students with documented disabilities.

Other: Please turn off your cell phones. No talking and **no text messaging** during the lectures allowed.