Course Description  
MA 645-2F, Real Analysis I  
Fall 2016  
Department of Mathematics, UAB

Course Instructor: Dr. Günter Stolz  
Office: CH 483A  
Phone#: 934-3724  
E-mail: stolz@uab.edu  
Office Hours: by appointment, or anytime when in office

Meeting times: Tue, Thu, 3:30pm to 4:45pm. Preferably, I would like to extend meetings until 5:15pm, including a short break in the middle. This would make up for some meetings which will have to be cancelled due to travel (in particular from October 24 to November 11, more details to be announced). Once a week I plan to use 30 minutes at the end of class to discuss homework problems.  
Meeting location: CH 458

Instead of a Textbook: No book purchase is required. Instead I will closely follow the lecture notes by Dr. Weikard, Real Analysis, 2014/2015, which can be found at  
http://people.cas.uab.edu/~weikard/teaching/reals.pdf  
These lecture notes contain no proofs, only some sketches. Detailed proofs will be presented in class.

I will also send you pdf-files of a very good (and quite extensive) set of lectures notes for Real Analysis, including detailed proofs, which was written by my colleague Dr. N. Chernov while teaching this class in 2012/2013. The material covered in Dr. Chernov’s notes is very similar to what we will cover, but not always in exactly the same order. I will occasionally refer to his notes for details not covered in class.

Most or all of the material covered in the Real Analysis I/II sequence can be found in the following books (among numerous others):  
• G. B. Folland, Real Analysis: Modern Techniques and their Applications  
• A. N. Kolmogorov and S. V. Fomin, Introductory Real Analysis  
• W. Rudin, Real and Complex Analysis (see Reading Room)  
These are good books for further reading, if desired, but this is not necessary.

Important dates:  
Fall/Thanksgiving Break: November 21 to 25  
Last Class: Thursday, December 8  
Final Exam: Tuesday, December 13, 4:15pm to 6:45pm, or at a different time which all can agree on
Grades:
In assigning final letter grades, your work will be weighed as follows:

Weekly Homework: 60%
Final Exam: 40%

Approximately four to five homework problems will be assigned per week. The problem set will be provided by email. It is similar but not identical to the problems in Dr. Weikard’s notes. Written solutions are generally due a week after assignment. For a letter grade of A an average of approximately 75% is expected, for a B 50%.

Joint Program Exam:
One of the goals of this class (and of MA 646 in Spring) is to prepare for the Joint Program Exam in Real Analysis. The best way to get ready for this is to work many problems, both homework problems from class and former JPE problems. Old exams as well as a list of exam topics and dates of upcoming exams can be found at

www.uab.edu/cas/mathematics/ph-d-program/jpexam

I will also include former JPE problems on homework (increasingly throughout the year).