

**Math 430                      Real Analysis for Teachers I                      Fall 2012**  
**Wednesday 5:00 - 8:00    600 SEO**

Instructor: Bonnie Saunders, 622 SEO, 312-413-1417 E-mail: [saunders@math.uic.edu](mailto:saunders@math.uic.edu)  
Webpage: [www.math.uic.edu/saunders](http://www.math.uic.edu/saunders) Office Hours: Tuesday 3 - 4 or by appointment.

This course will cover the basic properties of numbers, the completeness of the real numbers, and a rigorous development of Calculus through the fundamental theorem. Applications to high school mathematics will be considered throughout the course.

**Prerequisite:** Grade of C or better in MATH 210 and MATH 215.

The **required text** for the course is *Real Analysis* by Frank Morgan, 2005. The book is available through the UIC bookstore. If you look for it elsewhere use either ISBN-10: 0-8218-3670-6 or ISBN-13: 978-0-8218-3670-5. It is published by the American Mathematical Society (AMS). There is a similarly named book by the same author which is NOT the book for the course, so make sure to get the right ISBN number. This book is also available as an ebook. You can find it on Google books ([books.google.com](http://books.google.com))

We will also be using *Calculus* by Tom M. Apostol, 1967, pages 17 - 47. These pages will be handed out in class. The entire book may be on reserve in the UIC library.

**Text for further reading** *Calculus*, by Michael Spivak, is another text with a different point of view that you may find interesting and helpful. It may also be on reserve in the library.

**Grading** for this course is based on the following:

30% Homework and attendance

30% Midterms

40% Final

**Homework** is due weekly. Assignments are completed during the week on GoogleDocs. There will be a quiz on the same material at the beginning of class. The weekly grade will be the higher of the two scores. In addition, students have the opportunity to compete the assignment orally. No homework can be accepted late, but early homework is acceptable. Students are expected to type group work using **GoogleDocs**, using the equation editor and good mathematical style. If you do not have a GoogleDocs account it is easy to register: you just need to establish a username and password. Current gmail accounts work, but any email address can be used including your uic email. You may want to use [GoogleApps@UIC](mailto:GoogleApps@UIC): see [www.uic.edu/depts/acc/google/](http://www.uic.edu/depts/acc/google/) to learn how to set up an account.

**Attendance** is required. If for any reason a class is missed, the student is responsible to make an appointment to meet with the instructor to make-up missed work. Class final grade will be reduced by 3% if one class is missed, reduced by 15% if two classes are missed, and reduced by 30% if three class periods are missed. In most cases missing three classes will result in failing the course.

**Students with disabilities** who require special accommodations for access and participation in this course must be registered with the Office of Disability Services (ODS). Students who need exam accommodations must contact ODS in the first week of the term to arrange a meeting with a Disability Specialist. Please contact ODS at 312/413-2183 (voice) or 312/413-0123 (TTY).