Syllabus: Math 521, Advanced Calculus I (Real Analysis), UNC 2019 Spring

**Content**: Completeness of real numbers, countable an uncountable infinities, sequences, Bolzano, Weierstrass, Cauchy theorems; topology of reals, Cantor set, continuous functions, differentiation, function sequences and series, Taylor series, Riemann integral, Lebesgue’s criterion.

**Meeting time:** Tu, Th 3:30pm-4:45pm, PH-385

**Instructor:** Richard Rimanyi, CP-429, [rimanyi@email.unc.edu](mailto:rimanyi@email.unc.edu)

**Class website:** rimanyi.web.unc.edu/math521-2019-spring/ (no sakai will be used)

**Piazza**: piazza.com/unc/spring2019/math521002. This is a website where you may ask questions, make comments on the material, see other students’ questions/comments/responses.

**Office hours**: T,Th 2:30pm in CP-429

**Text**: S. Abbott: Understanding Analysis, Springer

**Prerequisites**: math381

**Final exam** will be given in compliance with UNC final exam regulations and calendar (Tuesday, 30th of April, 4-7pm) in PH-385.

**Midterms.** There will be 2 midterms announced about two weeks in advance. There will be no make-up midterms.

**Grading** will be based Midterms (2 x 20%), Final (40%), HW (20%). I expect that 90% will earn an A, 80% a B, etc.

Reading the textbook is required, but is not sufficient. You will need to review your class notes regularly. It is also very important that you work many problems every week beyond the HW problems. Group study is encouraged; questions in class are also encouraged.

It is expected that each student will conduct him or herself within the guidelines of the UNC **Honor System**.

The instructor reserves the right to make changes to the syllabus. These changes will be announced as early as possible.