Math 5615H-5616H, 4 Credits, Spring 2020
Honors: Introduction to Analysis II
— Syllabus —
Arnd Scheel, VinH 509, phone 612-625-4065, scheel@umn.edu

Time & Place. MWF 12:20 – 1:10, Vincent Hall 207

Text. T. Tao, *Analysis I and Analysis II*, Springer Texts and Readings in Mathematics 37, 2007 (3rd edition). The text is available as an e-book through Springer and our library. I recommend purchasing a printed copy. Note that the printed copy through Hindustan Book Agency is practically identical to the Springer e-book. When purchasing the printed copy, be aware that some ship from India with significant shipping delays. Many copies are available for instance on Analysis 1 on http://abebooks.com and Analaysis 2 on http://abebooks.com.

Office Hours. M 11:15-12:05, W 10:10-11:00, F 9:05-9:55, VinH 509 or by appointment.

Contact. All material regarding the course can be found on my homepage `http://www.math.umn.edu/~scheel`. Best way to reach me is email to scheel@umn.edu.

Description. This is a two-semester course on real analysis at the honors level. The first semester will revisit basics of real numbers, sequences and series, functions of a real variable, continuity, derivatives, and the Riemann integral. Much of this material has been covered in calculus classes and the emphasis here is on a deeper understanding of the foundation with mathematical rigor. The second semester will include topics such as metric spaces, power series, Fourier series, multivariable calculus, and the Lesbesgue integral. An important aspect of the course will be learning to read, understand, appreciate, and write rigorous mathematical theorems and proofs.

Homework. Homework will be assigned weekly and is essential to a successful completion of the course. Homework answers must be written individually and independently.

Midterm Exams. In class, open book, open notes.
Wednesday, February 26, 2020 and Wednesday, April 8, 2020

Final Exam. Tuesday, May 12, 10:30 - 12:30
Make-up exams are only possible for verified legitimate reasons as defined by the University policy on makeup work, and then only before the actual exam, except when unavoidable.

Composition of Grade. There will be grades for homework (30%), two midterm exams (20% each), and a final exam (30%). Exams are open book and notes.

Policies and academic conduct.

- Sexual harrassment, sexual assault, stalking and relationship violence
- Equity, Diversity, Equal Employment Opportunity, and Affirmative Action
- Disability Services
- Academic Freedom and Responsibility
- Resources related to mental health, stress management, and counseling