Math 467: Introduction to Real Analysis (3 credits)
Spring 2020

Instructor: Dr. John Beam
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Office Hours: Mon   5:00-6:00
                    Tue   1:00-2:00
                    Wed   5:00-6:00
                    Thur   3:00-4:00
                    Also by Appointment

Course Meeting Times: Mon, Wed 6:00-7:30 pm (Swart 3)

Prerequisites: Math 222 and Math 256.

Textbook: *Real Analysis* by Frank Morgan, published by the American Mathematical Society, ISBN # 978-0-8218-3670-5. (Note: This is not the "with Applications" version.) Available at the university bookstore.

Course Description: This course offers a proof-oriented, abstract approach to many of the concepts covered in Calculus. Topics include real number properties, the topology of the real numbers, functions, limits of functions, continuity, uniform continuity, differentiation, integration, sequences, series, pointwise and uniform convergence of sequences of functions, and series of functions. Reading and writing proofs are an integral part of the course.

Math 467 is an upper-level course for mathematics majors. The course takes a rigorous look at the theoretical foundations of calculus.

Learning Outcomes: Students in this course will:

- Strengthen their ability to read and write clear, rigorous proofs;
- Study the topology of the real numbers;
- Study sequences and series of numbers;
- Rigorously define and study limits;
- Study continuity and uniform continuity of functions;
- Rigorously define and study the derivative;
- Rigorously define and study the Riemann integral;
- Study pointwise and uniform convergence of sequences and series of functions.

Assessment

Attendance: Regular attendance is expected. If you miss a class, you are responsible for all assignments and announcements made on that day.

Homework: Homework will be assigned on most class days and collected approximately once a week. I will carefully grade a portion of each assignment for the correctness of your responses, and I will grade the remaining portion based on your attempts. (So each homework grade will reflect a blend of whether you are getting things right and whether you are at least making an effort.) Homework assignments will account for 40% of your course grade.

Exams: Three in-class exams, each worth 20% of your course grade, are tentatively scheduled as follows:

> EXAM 1: Wednesday, February 26
> EXAM 2: Wednesday, April 8
> EXAM 3: Wednesday, May 13

Grade Summary:
40% Written homework
60% Three exams

Grading Scale: Course grades will be assigned according to the following approximate cutoffs:

	Grade -	Grade	Grade +
A	90%	93%	
B	80%	83%	87%
C		70%	77%
D		60%	67%
F		below 60%	

Academic Policies

You are expected to behave with integrity and honor. The official UWO policy regarding academic misconduct can be found at:
https://uwosh.edu/deanofstudents/student-conduct/academic-misconduct/

Students are advised to see the following URL for disclosures about essential consumer protection items required by the Students Right to Know Act of 1990:
https://uwosh.edu/financialaid/resources/consumer-information/

It is the policy and practice of UW Oshkosh to create inclusive learning environments. If there are aspects of the instruction or design of this course that result in barriers to your inclusion, please notify me as soon as possible. You are also welcome to contact Services for Students with Disabilities at 920-424-3100 or accessibilitycenter@uwosh.edu. For more information, visit the Services for Students with Disabilities website at:
http://www.uwosh.edu/deanofstudents/disability-services