COURSE INFORMATION

Section No.: 24321
Instructor: Garret J. Etgen
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Text: ANALYSIS with an Introduction to Proof, 5th edition
Author: Steven R. Lay
Publisher: Pearson

SYLLABUS

Chapter 3: The Real Numbers
Mathematical Induction, the real number system, completeness of the real numbers, the topology of the real line, compactness.

Chapter 4: Sequences
Convergence of sequences, limit theorems, monotone sequences, Cauchy sequences, subsequences.

Chapter 5: Limits and Continuity
Limits of functions, continuous functions, uniform continuity.

Chapter 6: Differentiation
The derivative, the mean-value theorem, L’Hopital’s rule, Taylor’s theorem, Taylor series.

Chapter 7: Integration
The Riemann integral, properties of the definite integral, the fundamental theorem of calculus.
ASSISTANCE
There will be weekly Q & A sessions to answer questions about the course material. The sessions will be held on Microsoft Teams. While the primary focus will be on the Assignments, there will also be time for more general questions on concepts and techniques.

Immediate help will also be available via e-mail.

EVALUATION
Students will be evaluated on:

1. Written homework assignments (20%)
2. Exam 1 (mid-term, Chapters 3 & 4) (40%)
3. Exam 2 (end of term, Chapters 5, 6, 7) (40%)