Review
Fundamental Concepts and Techniques of Calculus

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Aug 26–Aug 30, 2019, 2–5 pm in 3108 JKB

Objective

The students should be able to recall and apply the fundamental concepts and techniques of Calculus I and II essential for a successful completion of classes like Advanced Engineering Mathematics, Ordinary Differential Equations, Multivariable Calculus, etc and engineering classes, which build upon a solid working knowledge of Calculus I and II.

Topics

1. Basic Techniques of Algebra: manipulating terms and equations, solving algebraic equations etc;
2. Trigonometry: definition and basic properties of the trigonometric functions, fundamental trigonometric identities;
3. Differential Calculus: limits, continuity, differentiability, techniques of differentiation, applications, etc;
4. Integral Calculus: definite and indefinite integrals, Fundamental Theorem of Calculus, techniques of integrations, applications, etc;
5. Sequences and Series: convergence, improper integrals, L’Hospital’s rule, convergence criteria for series, Taylor series, etc.

Schedule and Format

The tentative format of the review is

2–5 pm Class lecture focusing on instructive examples;
5–8 pm Independent study, homework with TA's in 159a TMCB (Math Lab);

However, adjustments to the schedule and topics covered will be made in response to the needs of the students participating in the course.

The Math Lab

The Math Lab is located on the main floor, north wing of the TMCB, room 159, (801) 422-4695. It can be reached from the northernmost doors of the building or by entering the east doors and going down the first hallway on the right.

Text: “Re-Integration, Brushing up on Calculus”, by Reinhard Franz. This text is also used for EngT 295r offered during Fall and Winter Semester and Spring Term.