AE 211 Aug 3:0

Mathematical Methods for Aerospace Engineers

Instructor

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Department: Aerospace Engineering

Course Time: 9:00 - 10:00

Lecture venue: AE 105

Detailed Course Page:

Announcements

Brief description of the course

This course will cover mathematical methods and tools that are commonly used by the aerospace engineer.

Prerequisites

None

Syllabus

Applied linear algebra and probability theory; Boundary value problems, finite diff erence and fi nite elements ; Fourier series and integrals, Discrete and Fast Fourier transforms; Initial value problems and their numerical solution.

Course outcomes

Recognize and identify the nature of the mathematical problems that are commonly encountered in aerospace engineering; choose and apply appropriate mathematical methods and tools to solve such problems.

Grading policy

3 tests each having 20% weightage in the overall evaluation and each of 1.5 hour duration; 1 end-semester exam at the end of the course having 40% weightage in the overall evaluation and of 3 hours duration.

Assignments

Resources

[1] G. Strang. Computational Science and Engineering. Wellesley-Cambridge Press, Wellesley, MA, USA, 2007.

[2] G. Strang. Introduction to Applied Mathematics. Wellesley-Cambridge Press, Wellesley, MA, USA, 1986.