

NATIONAL INSTITUTE OF TECHNOLOGY, TIRUCHIRAPPALLI
Department of Mathematics

Course Title	Mathematics - I		
Course Code	MAIR11	No. of Credits	3(L)+1(T)=4
Department	Mathematics	Faculty	Dr. C. Priya
Pre-requisites Course Code	-	Programme	B.Tech. Production (Section A & B)
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Course Type	General Institute requirements		

COURSE OVERVIEW

This course will introduce

- eigenvalues and eigenvectors of a matrix and its applications.
- theory of convergence of sequences and infinite series of real numbers.
- theory of functions of several variables.
- multiple integrals and its applications in engineering problems.

COURSE OBJECTIVES

The course objective is to

- familiarize eigenvalues and eigenvectors of a square matrix and its properties.
- classify quadratic forms and explain the approach to convert the given quadratic form into canonical form.
- introduce various test to discuss the convergence of sequences and infinite series of real numbers.
- Introduce limit, continuity, derivative of function of several variables.
- discuss the maxima and minima of function of several variables
- explain the multiple integrals and its applications in evaluating area and volume.

COURSE OUTCOMES (CO)