

# NOC:Basics of Finite Element Analysis - II - Video course

## COURSE OUTLINE

This course is intended for all those who want to learn FEA from an application standpoint. Currently, many users of FEA have limited understanding of theoretical foundation of this powerful method. The consequence is that quite often they use commercial codes inaccurately, and do not realize that their results may be flawed. The course is intended to address this limitation by making the student aware of the underlying mathematics in easy to understand format. The course is open to all engineering students who have at the minimum successfully completed two years of their B. Tech (or equivalent) degrees.

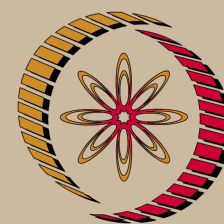
The course is also open to all professionals in industry who wish to learn fundamentals of FEA in a semi-formal but structured setting, and plan to use this knowledge in their workplace.

## COURSE DETAIL

Week	Topics
1	Review of concepts.
2	Errors.
3	Numerical integration.
4	2D Single variable problem.
5	Examples: Heat conduction.
6	2D/2-Variable problem.
7	Examples.
8	Examples and closure.

## References:

1- An Introduction to the Finite Element Method, by J. N. Reddy



NP-TEL

# NPTEL

<http://nptel.ac.in>

## Mechanical Engineering

### Pre-requisites:

Must be enrolled into a B. Tech. program or equivalent and should have completed second year of his 4-year program

### Coordinators:

**Prof. Nachiketa  
Tiwari**  
Department of  
Mechanical  
Engineering IIT  
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