

COURSE OUTLINE
CE-552
FINITE ELEMENT METHOD

Office: 637 Engineering Science Building
Office Hours: 2:00 – 3:00 pm, Tuesday, Thursday
Telephone: 293- 9946

TEXT: NONE

Reference: Concepts and Applications of Finite Element Analysis, 4th Edition, by Cook, Malkus, Plesha, and Witt, John Wiley and Sons, Inc., 2002.

OBJECTIVE:

The finite element method has gained tremendous attention and popularity among practicing engineers in industry and government agencies, and researchers in all fields of engineering. The objectives of this course are:

- (1) To present the motivation for applications of the finite element method
- (2) To introduce the student to background and theory of finite element methods by starting with elementary problems and their solutions.
- (3) To provide a broad treatment so that students from various disciplines can benefit from the course.

TOPICS:

1. Introduction
2. Steps in the Finite Element Formulation
3. One-Dimensional Element Formulation
4. Triangular Element Formulation
5. Interpolation Functions
6. Isoparametric Element Formulation and Numerical Integration
7. Computer Applications
8. Applications in Other Fields

METHOD OF INSTRUCTION: Lecture

GRADING POLICY

The final grade in this course will be base on the following:

(a)	Homework Assignments and Class Project	20%
(b)	Test No. 1	40%
(c)	Test No. 2	<u>40%</u>
	TOTAL	100%

ATTENDANCE POLICY

Attendance will not be taken in lecture, but it is strongly encouraged.