102-2 Preliminary Syllabus, Da-Yeh Univ

Information

Title		Serial No. / ID	2297 / MPR 5012
Dept.		School System / Class	1 1
Lecturer		Full or Part-time	
Required / Credit	Optinal / 3	Graduate Class	No
Time / Place	( )234 / H543	Language	Chinese

Introduction

This course intend to teach students the fundamental theories of
the finite element methods as well as writing codes for finite element
analysis.
Current available commercial finite element analysis softwares are
introduced to assist in learning.

Outline

The following problems are discussed:
Fundamental theories of the finite element methods
Weighted residual method
Variational method.
Energy method
Discrete systems, such as springs and bars
Beams and frames in bending in 2D and 3D
Plane stress problems
Plates in bending
Free vibration of Timoshenko beams and Mindlin plates, including laminated composites
Applications on solid mechanics, heat transfer, fluid mechanics.

Prerequisite

Engineering Mathematics
Mechanics