

The Hong Kong University of Science and Technology

Introduction to Finite Element Analysis

MECH4450

No. of Credits 3

pre-/co-requisites: MECH2040

Name: Wenjing Ye

Email: mewye@ust.hk

Course Description

This course will cover the following topics: basic concepts of finite element methods, element equations for basic structural elements, implementation and application of FEMs in 1-D and 2-D structural analysis and heat conduction and some advanced topics.

The mode of teaching is lectures with a few tutorial classes on the teaching of MATLAB and ANSYS software.

Course Homepage: <http://canvas.ust.hk>

Assessments:

[List specific assessed tasks, exams, quizzes, their weightage]

Assessment Task	Contribution to Overall Course grade (%)
Homework	20%
Midterm Exam	40%
Group Design Project	40%

Required Texts and Materials

Textbook: Notes provided by the instructor

[Optional] Additional Resources

Reference books:

T. R. Chandrupatla, A. D. Belegundu, *Introduction to Finite Elements in Engineering*, Third Edition, Pearson Education, New Jersey, 2002.

Moaveni, *Finite Element Analysis: Theory and Applications with ANSYS*, Second Edition, Pearson Education, New Jersey, 2003.