FINITE ELEMENT METHOD

Instructors: Wu, Chih-Ping (吳致平)

Offices: 4508 教授室

Textbooks:

- 1. Reddy, J. N., An Introduction to the Finite Element Method, Fourth edition, McGraw-Hill.
- 2. Becker, E. B., Carey, G. F. and Oden, J. T., Finite Elements An Introduction (Volume I).
- 3. Hutton, D.V., Fundamentals of Finite Element Analysis, McGraw-Hill.
- 4. Hildebrand, F.B., Methods of Applied Mathematics, Prentice-Hall.

Course outline

- 1. Introduction
- 2. Calculus of Variations and Applications
- 3. Weak Formulation of Boundary Value Problems
- 4. Variational Methods of Approximation
- 5. Finite Element Analysis of One-Dimensional Problems(a) bar problems (b) beam problems (c) frame problems
- 6. Programming of the finite element method
- 7. Finite Element Analysis of Two-Dimensional Problems(a) potential problems (b) 2D elasticity problems

Grade:

(a) 1 st Midterm Exam	20%
(b) 2 nd Midterm Exam	20%
(c) 3 rd Midterm Exam	20%
(d) Assigned Homework	20%
(e) Programming Projects	20%