

Finite Element Method

Course Code:

ME 477

Course Type:

Area Elective

Credits:

3

Theoric:

3

Practice:

0

Laboratory Hour:

0

ECTS:

5

Prerequisite Courses:

Strength of Materials [1]

Course Language:

English

Course Content:

Interpolation functions and shape functions. 1-D elements: bars and beams under mechanical and thermal loads. 2-D elements: constant strain and linear strain triangular elements, rectangular elements. Isoparametric elements, integration rules; quadrilateral and hexahedral elements. Advantages of and problems associated with all these elements. Applications to mechanically and thermally loaded structures.