

COURSE DETAIL

HANDS-ON PROJECTS TO FINITE ELEMENT ANALYSIS

Country

Germany

Host Institution

Technical University Berlin

Program(s)

Technical University Berlin

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering

UCEAP Course Number

106

UCEAP Course Suffix**UCEAP Official Title**

HANDS-ON PROJECTS TO FINITE ELEMENT ANALYSIS

UCEAP Transcript Title

FINITE ELEM ANAL

UCEAP Quarter Units

5.50

UCEAP Semester Units

3.70

Course Description

Handling commercial finite element software, solving a complex stress analysis problem, obtaining background information on advanced strength of materials theory, solving engineering problems collaboratively in teams, presenting and documenting results. Preparatory lecture series: introduction to components and materials of microelectronics and the surface mount technology (SMT), basic mechanics of elastoplastic deformable bodies, introduction to the concepts of the commercial finite element software ABAQUS. Homework assignments: learning and using the finite element software ABAQUS. Project period: literature review, finite element based stress and durability analysis of a SMT component, presentation and documentation of achieved results.

Language(s) of Instruction

English

Host Institution Course Number

0530 L 164

Host Institution Course Title

HANDS-ON PROJECTS TO FINITE ELEMENT ANALYSIS

Host Institution Campus

Technische Universität Berlin

Host Institution Faculty

Host Institution Degree

Host Institution Department

Institut für Mechanik

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