

COURSE DETAIL

MODERN EXPERIMENTAL MECHANICS

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Mechanical Engineering Engineering Civil Engineering

UCEAP Course Number

179

UCEAP Course Suffix**UCEAP Official Title**

MODERN EXPERIMENTAL MECHANICS

UCEAP Transcript Title

MOD EXPERIMNTL MECH

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course introduces the techniques and possibilities in modern experimental mechanics for the characterization of the mechanics of solid, porous, and granular materials using a range of physics techniques and full-field analyses. The course pays particular attention to full-field analyses using optical methods (with a focus on digital image correlation), x-ray and neutron imaging and scattering approaches, and wave propagation. The course includes both theoretical and practical parts, and involves study visits to MAX IV and ESS. Inverse analyses and digital image/signal processing in the context of experimental analyses are also covered.

Language(s) of Instruction

English

Host Institution Course Number

FHLN10

Host Institution Course Title

MODERN EXPERIMENTAL MECHANICS

Host Institution Campus

Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department

Engineering- Solid Mechanics

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