

COURSE DETAIL

MATERIALS ANALYSIS AT THE NANOSCALE

Country

Sweden

Host Institution

Lund University

Program(s)

Lund University

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics Electrical Engineering Chemistry Chemical Engineering

UCEAP Course Number

120

UCEAP Course Suffix**UCEAP Official Title**

MATERIALS ANALYSIS AT THE NANOSCALE

UCEAP Transcript Title

MATRLS ANA NANOSCL

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course covers an overview of solid-state microanalysis methods, including elastic and inelastic scattering, identification of phases by morphology, chemical composition, electron diffraction, and microscopy. Principles and functions of different types of microscopes for materials analysis as well as spectroscopy for elemental analysis, analysis of spectra are also reviewed. Methods for surface analysis: Atomic force microscopy, scanning tunnelling microscopy, LEED, X-ray photoelectron spectroscopy (XPS) are covered.

Language(s) of Instruction

English

Host Institution Course Number

KASF15

Host Institution Course Title

MATERIALS ANALYSIS AT THE NANOSCALE

Host Institution Course Details

https://kurser.lth.se/lot/course-syllabus-en/25_26/KASF15

Host Institution Campus

Lund

Host Institution Faculty

Engineering

Host Institution Degree

Host Institution Department

Course Last Reviewed

2025-2026

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