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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