

COURSE DETAIL

CONDENSED MATTER PHYSICS

Country

Norway

Host Institution

University of Oslo

Program(s)

University of Oslo

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Physics

UCEAP Course Number

129

UCEAP Course Suffix**UCEAP Official Title**

CONDENSED MATTER PHYSICS

UCEAP Transcript Title

CONDENS D MATTER PHY

UCEAP Quarter Units

8.00

UCEAP Semester Units

5.30

Course Description

This course introduces condensed matter physics on a broad basis. The course provides an overview of different types of materials and illustrates how their properties depend on their microscopic structure. The course delivers basic knowledge, but it also serves as an orientation on the current issues in the different branches of condensed matter physics. The course discusses topics including different types of solids and an understanding of how their microscopic structure affects their mechanical, thermal, and electrical properties; crystalline and disordered structures; interrelations between ordering and different interactions in materials; applying diffusion theory; periodicity and electrical, thermal, and mechanical properties in crystals; electrical properties of crystals; types of defects in crystals and how they affect their properties; and numerically modelling disordered materials and how properties change with varying degrees of disorder. The course requires students to have met specific prerequisites in order to enroll in the course.

Language(s) of Instruction

English

Host Institution Course Number

FYS3400

Host Institution Course Title

CONDENSED MATTER PHYSICS

Host Institution Campus

Mathematics and Natural Sciences

Host Institution Faculty

Host Institution Degree

Host Institution Department

Physics

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