

Condensed Matter Physics II (E) - CondMatter II

<i>Course</i>	Condensed Matter Physics II (E)
<i>Course No.</i>	CondMatter II

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture	English	3	4	ST

Requirements:

Preparation: Basic knowledge in condensed matter physics and quantum mechanics

Form of Testing and Examination: Oral examination

Length of Course: 2 semesters

Aims of the Course: Advanced topics in condensed matter physics with examples of current research.

Contents of the Course:

The entire course (Condensed Matter I & II, given in 2 semesters) covers the following topics:

Crystal structure and binding

Reciprocal space

Lattice dynamics and thermal properties

Electronic structure (free-electron gas, Fermi surface, band structure)

Semiconductors and metals

Transport properties

Dielectric function and screening

Superconductivity

Magnetism

Recommended Literature:

Skriptum (available during the course)

Ashcroft/Mermin: Solid State Physics

Kittel: Introduction to Solid State Physics

Ibach/Lüth: Festkörperphysik

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