Module: Specialization: Theoretical Physics

Module No.: physics61c

Course: Solid State Theory I

Course No.:

Category	Type	Language	Teaching hours	CP	Semester
Elective	Lecture with exercises	English	3+1	6	WT

Requirements for Participation:

Preparation:
training in theoretical physics at the B.Sc. level, experimental solid state physics

Form of Testing and Examination:
written or oral examination

Length of Course:
1 semester

Aims of the Course:
this course gives an introduction to the physics of electrons and phonons in solids together with theoretical concepts and techniques as applied to these systems.

Contents of the Course:
The lecture investigates basic concepts to describe solids and their excitations. Various applications are discussed with emphasis on experimental and theoretical research directions of the physics department in Cologne.

Recommended Literature:
Ashcroft/ Mermin: "Solid State Physics"