

**Module: Specialization I**

Module No.: physics610

**Course:****Solid State Theory I**

Course No.:

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

**Requirements:****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"