# Introductory Solid State Physics

<table>
<thead>
<tr>
<th>Module</th>
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<tbody>
<tr>
<td>Code</td>
<td>70913</td>
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<tr>
<td>ECTS</td>
<td>5</td>
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<tr>
<td>Language</td>
<td>English</td>
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<tr>
<td>Duration</td>
<td>1 Semester</td>
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<tr>
<td>Cycle</td>
<td>Each winter term</td>
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<tr>
<td>Coordinator</td>
<td>Prof. Dr. Paul Ziemann</td>
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<tr>
<td>Instructors</td>
<td>Prof. Dr. Paul Ziemann</td>
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<tr>
<td>Study programmes</td>
<td>Advanced Materials, M.Sc. (elective), 1. Semester</td>
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## Prerequisites

This introductory course aims at providing the basic knowledge as well as some fundamental practical tools of Solid State Physics necessary to understand all the forthcoming more advanced Materials Science courses.

## Syllabus plan and content

- a) Basic classification of solids by bonds and structure
- b) Lattice vibrations and phonons
- c) Electronic properties of solids

## Literature

- Handouts related to specific problems are distributed in the lectures.

## Teaching methods

- Lecture (2 SWS)
- Exercise (1 SWS)

## Contact hours per week

3

## Student study time

- 42 h lecture (presence)
- 14 h exercises (presence)
- 50 h preparation and postprocessing lecture
- 28 h solution of exercises, postprocessing
- 16 h exam preparation
- Total: 150 h

## Assessment

Written examination.

## Grading

Result of the examination.

## Useful for

## Last updated

02/04/2011