Module title
Semiconductor Physics

Abbreviation
11-HLPH-161-m01

Module coordinator
Managing Director of the Institute of Applied Physics

Module offered by
Faculty of Physics and Astronomy

ECTS
6

Method of grading
Numerical grade

Only after successful completion of module(s)

Duration
1 semester

Module level
Graduate

Other prerequisites
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Contents
1. Symmetry properties
2. Crystal formation and electronic band structure
3. Optical excitations and their coupling effects
4. Electron-phonon coupling
5. Temperature-dependent transport properties
6. Magnetic semiconductors

Intended learning outcomes
The students are familiar with the principles of Semiconductor Physics. They understand the structure of semiconductors and know their physical properties and effects. They know important applications.

Courses
V (3) + R (1)
Module taught in: German or English

Method of assessment
Written examination (approx. 90 to 120 minutes) or oral examination of one candidate each (approx. 30 minutes) or oral examination in groups (groups of 2, approx. 30 minutes per candidate) or project report (approx. 8 to 10 pages) or presentation/talk (approx. 30 minutes).
If a written examination was chosen as method of assessment, this may be changed and assessment may instead take the form of an oral examination of one candidate each or an oral examination in groups. If the method of assessment is changed, the lecturer must inform students about this by four weeks prior to the original examination date at the latest.
Assessment offered: In the semester in which the course is offered and in the subsequent semester
Language of assessment: German and/or English

Allocation of places
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Additional information
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Referred to in LPO I
(examination regulations for teaching-degree programmes)
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Module appears in
Master's degree (1 major) Mathematics (2016)
Master's degree (1 major) Physics (2016)
Master's degree (1 major) Nanostructure Technology (2016)
Master's degree (1 major) Computational Mathematics (2016)
Master's degree (1 major) Functional Materials (2016)
Master's degree (1 major) Gymnasium MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
Supplementary course MINT Teacher Education PLUS, Elite Network Bavaria (ENB) (2016)
Master's degree (1 major) Computational Mathematics (2019)
Master's degree (1 major) Mathematics (2019)