### Module Title

**Advanced Undergraduate Laboratory (Atomic Physics, Nuclear Physics, Basic Semiconductor Circuits)**

**Abbreviation**

11-PGB-PGN-072-m01

### Module Coordinator

Managing Director of the Institute of Applied Physics

### Module offered by

Faculty of Physics and Astronomy

### ECTS

<table>
<thead>
<tr>
<th>Duration</th>
<th>Module Level</th>
<th>Other Prerequisites</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 semester</td>
<td>undergraduate</td>
<td>Recommended: 11-PGA-PGR</td>
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</tbody>
</table>

### Contents

Physical laws of Atomic Physics, Nuclear Physics and wave optics. Basic measuring methods using computers and storage oscilloscopes.

### Intended Learning Outcomes

The students have knowledge and skills of physical measuring instruments and experimental techniques. They are able to independently plan and conduct experiments in cooperation with others, and to document the results in a measurement protocol.

### Courses

- Wellenoptik (Physical Optics, WOP): P (2 weekly contact hours)
- Atom- und Kernphysik (Atomic and Nuclear Physics, AKP): P (2 weekly contact hours)
- Computer und Messtechnik (Computers and Measurement Technology, CMT): P (2 weekly contact hours)

### Method of Assessment

This module has the following assessment components

1. Lab course in part 1: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes).
2. Lab course in part 2: a) Preparing, performing and evaluating the experiments will be considered successfully completed if a Testat (exam) is passed. b) Talk (with discussion) to test the students' understanding of the physics-related contents of the course (approx. 30 minutes).

Students must register for assessment components 1 and 2 online (registration deadline to be announced). Students will be offered one opportunity to retake element a) and/or element b). To pass an assessment component, they must pass both elements a) and b).

To pass this module, students must successfully complete two out of the three courses.

To pass this module, students must pass both assessment component 1 and assessment component 2.

### 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

- Bachelor' degree (1 major) Physics (2007)
- Bachelor' degree (1 major) Physics (2009)
- Bachelor' degree (1 major) Physics (2008)

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