## Module title
Advanced Laboratory Course Master Part 4

## Abbreviation
11-P-FM4-Int-201-m01

## Module coordinator
Managing Director of the Institute of Applied Physics

## Module offered by
Faculty of Physics and Astronomy

## ECTS
3

## Method of grading
Only after succ. compl. of module(s)

## (not) successfully completed
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## Duration
1 semester

## Module level
graduate

## Other prerequisites
Preparation and safety briefing.

## Contents
Foundations of particle, atomic and molecular physics, low-temperature experiments and correlated systems, solid state properties, surfaces and interfaces. Experiments covering the topics x-ray radiation, nuclear magnetic resonance (NMR), quantum Hall effect, optical pumping and spectroscopy with visible light, Hall effect, superconductivity, lasers, solid state optics

## Intended learning outcomes
Solid skills in performing an experiment and analyzing and documenting the experimental outcome. Basic knowledge of how to prepare a scientific publication and use state-of-the-art analysis systems and software. Knowledge of experimental methods, of using scientific publications, of performing and evaluating an experiment, and presenting and discussing the results in the form of a scientific publication.

## Courses
(type, number of weekly contact hours, language — if other than German)
P (3)

Module taught in: English

## Method of assessment
(type, scope, language — if other than German, examination offered — if not every semester, information on whether module is creditable for bonus)

practical examination

Students must successfully prepare, perform, document (lab notebook) and evaluate (in the form of a scientific publication) an experiment to be considered to have successfully completed this experiment. Students must successfully complete two experiments to be considered to have successfully completed this module. Detailed regulations are laid down in the respective module description.

Language of assessment: 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
keinem Studiengang zugeordnet

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