Module title			Abbreviation
Advanced Laboratory Course Master Part 3			11-P-FM3-Int-201-m01

Module coordinator	Module offered by
Managing Director of the Institute of Applied Physics	Faculty of Physics and Astronomy

ECTS	Method of grading	Only after succ. compl. of module(s)
3	(not) successfully completed	--

Duration	Module level	Other prerequisites
1 semester	graduate	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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Workload

90 h

Referred to in LPO I (examination regulations for teaching-degree programmes)

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Module appears in

Master's degree (1 major) Physics International (2020)
Master's degree (1 major) Quantum Engineering (2020)