Hands-on Seminar: Experimental Optics and Atomic Physics (E/A) - physics740

Degree - M.Sc. in Physics (PO von 2014)

Module	**Elective Advanced Lectures: Experimental Physics**
Module No.	physics70a

Course	**Hands-on Seminar: Experimental Optics and Atomic Physics (E/A)**
Course No.	physics740

Category	**Type**	**Language**	**Teaching hours**	**CP**	**Semester**
Elective	Laboratory	English	2	3	WT/ST

Requirements for Participation:

Preparation: Fundamentals of optics and quantum mechanics

Form of Testing and Examination: Credit points can be obtained after successful carrying out the experiments and preparing a written report on selected experiments

Length of Course: 1 semester

Aims of the Course: The students learn to handle optical setups and carry out optical experiments. This will prepare participants both for the successful completion of research projects in experimental quantum optics/photonics and tasks in the optics industry.

Contents of the Course:

Practical training in the field of optics, where the students start their experiment basically from scratch (i.e. an empty optical table). The training involves the following topics:

- diode lasers
- optical resonators
- acousto-optic modulators
- spectroscopy
- radiofrequency techniques

Recommended Literature: Will be given by the supervisor