Quantum Field Theory I (T) - QFT I

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

Module	**Elective Advanced Lectures: BCGS Courses**
Module No.	physics70d

Course	**Quantum Field Theory I (T)**
Course No.	QFT I

Category	**Type**	**Language**	**Teaching hours**	**CP**	**Semester**
Elective	Lecture with exercises	English	4+2	8	ST

Requirements for Participation:

Preparation: Training in theoretical physics at the B.Sc. level

Form of Testing and Examination: Written or oral examination

Length of Course: 1 semester

Aims of the Course: Methods of quantum field theory are in use in almost all areas of modern physics. Strongly oriented towards applications, this course offers an introduction based on examples and phenomena taken from the area of solid state physics.

Contents of the Course:

Second quantization and applications

Functional integrals

Perturbation theory

Mean-field methods

Recommended Literature: A. Altland and B.D. Simons, Condensed Matter Field Theory (Cambridge University Press, Cambridge, second edition: 2010)