

## Quantum Field Theory II (T) - QFT II

<i>Course</i>	Quantum Field Theory II (T)
<i>Course No.</i>	QFT II

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

**Requirements:**

**Preparation:** Quantum Field Theory I

**Form of Testing and Examination:** Written or oral examination

**Length of Course:** 1 semester

**Aims of the Course:** Quantum field theory is one of the main tools of modern physics with many applications ranging from high-energy physics to solid state physics. A central topic of this course is the concept of spontaneous symmetry breaking and its relevance for phenomena like superconductivity, magnetism or mass generation in particle physics.

**Contents of the Course:**

Correlation functions: formalism, and their role as a bridge between theory and experiment

Renormalization

Topological concepts

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

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