



End competences of Relativity Theory and Quantum Mechanics are sufficient.

### **Final competences**

The student has a working knowledge of particle physics and field theory and is prepared for research in quantum field theory, elementary particle physics and theoretical physics in general (for ex: theoretical solid state physics).

### **Conditions for credit contract**

Access to this course unit via a credit contract is determined after successful competences assessment

### **Conditions for exam contract**

This course unit cannot be taken via an exam contract

### **Teaching methods**

Online lecture, Lecture, Online seminar: coached exercises, Seminar: coached exercises

### **Extra information on the teaching methods**

The exercises are guided and are based on Feynman diagrams.

### **Learning materials and price**

Syllabus. Cost: 12 EUR

### **References**

An introduction to quantum field theory. M. Peskin and D. Schroeder, Addison Wesley (1995)

### **Course content-related study coaching**

Support orally or via email by teacher and collaborators.

### **Assessment moments**

end-of-term assessment

### **Examination methods in case of periodic assessment during the first examination period**

Oral examination

### **Examination methods in case of periodic assessment during the second examination period**

Oral examination, Written examination with open questions

### **Possibilities of retake in case of permanent assessment**

not applicable

### **Extra information on the examination methods**

Theory: orally and written.

Exercises: written. The emphasis is on the understanding of physical concepts and their relation with the mathematical model.

### **Calculation of the examination mark**

$1/2(\text{theory})+1/4(\text{oral})+1/4(\text{exercises})$