# Theoretical Physics 6a - WS 2017/18
# Relativistic Quantum Field Theory

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**Website**

*http://wwwth.kph.uni-mainz.de/1915.php*

**Lecture hours**

Mo 10:00 - 12:00, Wed 10:00 - 12:00
(Newton room)

**Exam**

Thu 15 Feb 2018

# Overview

1. The Klein-Gordon Field
2. The Dirac Field
3. The Photon Field, Abelian Gauge Theory
4. Interacting Fields and Feynman Diagrams
5. Elementary processes in Quantum Electrodynamics
6. Renormalization of Quantum Electrodynamics
7. Functional Methods / Path Integrals
8. Introduction to Non-Abelian Gauge Theory

# Literature


1. F. Mandl and G. Shaw
   **Quantum Field Theory**
   (Wiley, 2010)

2. M.E. Peskin, D.V. Schroeder
   **An Introduction to Quantum Field Theory**
   (Westview Press, 1995)

3. M. Srednicki
   **Quantum Field Theory**
   (Cambridge University Press, 2006)