This PhD course deals with quantum electrodynamics (QED), the quantum field theory of photons and charged leptons (i.e., electrons, positrons). QED is the most accurate theory known in physics. The course covers the following topics: Lorentz transformations and covariant vectors, scalar field, electromagnetic field, Dirac field, photon-electron Interactions, photon-electron interactions, e-μ scattering, real photons, decays, $\pi \dashrightarrow \gamma\ \gamma$

The basic reference: An Introduction to Quantum Field Theory by Michael Peskin and Daniel Schroeder

Dear Student, please be informed that all information related to the course description, content, and study materials can be accessed through the Blackboard platform. I recommend regularly checking the platform for the latest updates and important content