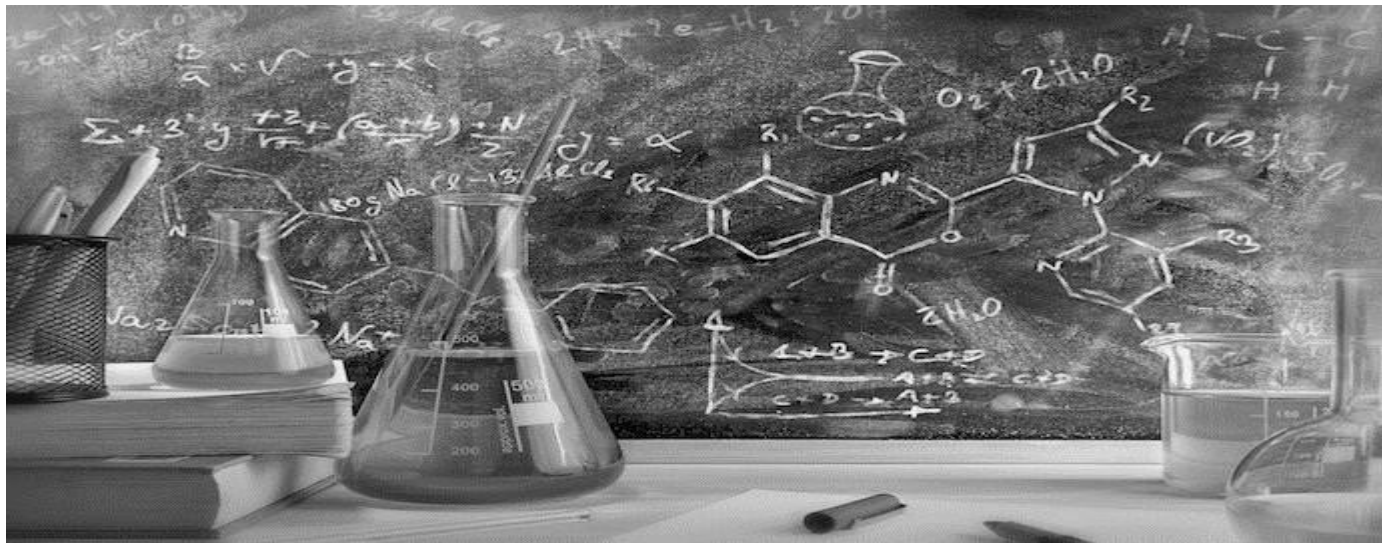


Branch: Physics Engineering



Code: PHYCMP

Option: Physics (condensed matter physics)

Level: Master

Prerequisites:

Opportunities:

Description:

The Master's program in Condensed Matter Physics represents one of the most comprehensive areas of physics and combines fundamental research with innovative application areas.

What is the purpose of this study program?

The field of condensed matter research represents one of the richest areas of physics. It focuses on a series of fascinating phenomena that are governed by the complex interaction and spatial organization of a variety of atomic or molecular constituents. The understanding and control of the material systems, interfaces and nanostructures studied place the highest demands on experimental art and theoretical description. The knowledge gained is used in particular to develop new properties for tailor-made materials and functional devices.

Depending on individual interests, the following specializations are possible, for example

Advanced Solid State Physics - with topics such as advanced statistical physics, theoretical solid state physics, quantum multi-particle theory, correlation phenomena and magnetism, electronic structure of solids, advanced

semiconductor physics, interface and surface physics, spins, spin electronics, superconductivity and low-temperature physics,...

Experimental techniques, numerical methods and simulation methods

Physics of Nano science, including understanding advanced concepts for Nano electronic and Nano photonic systems and devices. Quantum optics and Nano photonics

Soft matter physics.

Quality and competences :