

Branch: Physics Engineering

BIOPHYSIQUE

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Code: BIOPHY

Option: Biophysics

Level: Master

Prerequisites:

Opportunities:

Description:

The Master's program in Biophysics deals with the physical description of biological matter. It provides an in-depth understanding of the elementary molecular components of a cell and their interaction at the system level. What is the focus of this course of study?

Biophysics deals with the physical description of biological matter. On the one hand, the elementary molecular components of a cell and the interaction of these components at the system level are studied. To this end, new experimental measurement methods and theoretical descriptions are developed and applied. The aim of the research is to gain as complete an understanding as possible of the fundamental mechanisms that ultimately make life possible or cause disease. This knowledge could ultimately contribute to the diagnosis and cure of diseases, for example, or enable the development of new biologically inspired technologies, such as artificial photosynthesis or self-organized manufacturing. The complexity of living matter offers the fascinating possibility of discovering completely new laws of physics, far from chemical or thermodynamic equilibrium.

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

Molecular biophysics

Cellular biophysics

Theoretical Biophysics

Systems biophysics

Biomedical Physics.

Quality and competences: