

# COURSE DETAIL

## BIOPHYSICAL CHEMISTRY

**Country**

Sweden

**Host Institution**

Lund University

**Program(s)**

Lund University

**UCEAP Course Level**

Upper Division

**UCEAP Subject Area(s)**

Biochemistry

**UCEAP Course Number**

111

**UCEAP Course Suffix****UCEAP Official Title**

BIOPHYSICAL CHEMISTRY

**UCEAP Transcript Title**

BIOPHYSICAL CHEM

**UCEAP Quarter Units**

6.00

**UCEAP Semester Units**

4.00

## **Course Description**

The course addresses the following topics: the chemical building-blocks and three-dimensional structures of proteins: structure analysis by X-ray crystallography; structure and sequence databases; bioinformatics; protein characterization by optical spectroscopy: physical principles and applications of fluorescence and circular dichroism spectroscopy; polypeptide conformation: models of polymer conformation and conformational transitions; conformational entropy; folding cooperativity; protein energetics and stability: packing; hydration; electrostatics; thermal and solvent-induced denaturation; differential scanning calorimetry; protein dynamics: kinetic models; proton exchange; diffusion control; protein folding; computer simulation of proteins; nuclear magnetic resonance: principles of NMR spectroscopy and relaxation; analysis of structure, interactions and dynamics of proteins in solution; association processes: Ligand binding; Allostery; protein aggregation; isothermal titration calorimetry; surface plasmon resonance.

## **Language(s) of Instruction**

English

## **Host Institution Course Number**

KFKN10

## **Host Institution Course Title**

BIOPHYSICAL CHEMISTRY

## **Host Institution Course Details**

## **Host Institution Campus**

Engineering

## **Host Institution Faculty**

## **Host Institution Degree**

## **Host Institution Department**

Engineering- Biophysical Chemistry

## Course Last Reviewed

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