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 Campus
Engineering

Host Institution Faculty

Host Institution Degree

Host Institution Department
Engineering- Biophysicalic Chemistry

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