COURSE DETAIL

STRUCTURAL BIOLOGY
Country Korea, South
Host Institution Korea University
Program(s) Korea University
UCEAP Course Level Upper Division
UCEAP Subject Area(s) Biological Sciences
UCEAP Course Number 104
UCEAP Course Suffix
UCEAP Official Title STRUCTURAL BIOLOGY
UCEAP Transcript Title STRUCTURAL BIOLOGY
UCEAP Quarter Units 4.50
UCEAP Semester Units 3.00

Course Description

This course explores the structure-function relationship of biological macromolecules like proteins, DNA, RNA, and viruses. The course explains biological mechanisms learned from other courses such as biochemistry, cell biology, and molecular biology in atomic detail.

Structural biology is essential for understanding biology at the molecular level. Furthermore, it is a critical technique for rational drug design. This course also covers recent advances in structural biology.

The course covers the following topics:

- Basics of Protein Structure
- The Folding, Folds and Functions of Proteins
- Basics of Membrane Proteins
- Basics of Nucleic Acid Structure
- Basics of Lipids and Membrane Structure
- Basics of Carbohydrates
- Enzymes
- Genome Structure, DNA Replication and Recombination
- Transcription
- Protein Synthesis – Translation
- Protein Folding and Degradation
- Transmembrane Transport
- Cell Motility and Transport, Signal Transduction
- Structural Aspects of Cell-Cell interactions
- The Immune System, Virus Structure and Function
- Bioinformatics tools in Structural Biology

Recommended Prerequisite: Biochemistry I

Language(s) of Instruction
English

Host Institution Course Number
LIBS364

Host Institution Course Title
STRUCTURAL BIOLOGY

Host Institution Course Details
https://infodepot.korea.ac.kr/lecture1/lecsubjectPlanView.jsp?year=2023&term=2R...

Host Institution Campus

Host Institution Faculty

Host Institution Degree

Host Institution Department
Life Sciences

Course Last Reviewed
2023-2024

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