

COURSE DETAIL

PROTEIN STRUCTURE AND FUNCTION

Country

Australia

Host Institution

University of Melbourne

Program(s)

University of Melbourne

UCEAP Course Level

Upper Division

UCEAP Subject Area(s)

Biological Sciences

UCEAP Course Number

112

UCEAP Course Suffix**UCEAP Official Title**

PROTEIN STRUCTURE AND FUNCTION

UCEAP Transcript Title

PROTEIN STRUCT/FUNC

UCEAP Quarter Units

6.00

UCEAP Semester Units

4.00

Course Description

This course examines the wide range of structures, functions and interactions of proteins and their importance in biological processes, biomedicine and biotechnology. Emphasis will be on the three-dimensional structure of proteins and their interactions with biological molecules. We will describe experimental and computational techniques and how they help in determining and predicting protein structure and function and aid in the development of new drugs. The subject matter addresses the general properties of protein structure; the major classes and topologies of proteins; evolution of sequence, structure and function; protein synthesis, folding, misfolding, targeting and trafficking; bioinformatics analysis of protein sequence and structure; binding of small molecules to proteins and drug design; protein-protein interactions; effects of mutations on tertiary structure, protein stability and biological functions; enzyme reaction kinetics and mechanisms; motor proteins; transporters.

Language(s) of Instruction

English

Host Institution Course Number

BCMB30001

Host Institution Course Title

PROTEIN STRUCTURE AND FUNCTION

Host Institution Course Details

<https://handbook.unimelb.edu.au/subjects/bcmb30001>

Host Institution Campus

Parkville

Host Institution Faculty

Host Institution Degree

Host Institution Department

Biochemistry

Course Last Reviewed

2026-2027

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