

Protein chemistry - Web course

COURSE OUTLINE

To acquire basic knowledge related to structure and properties of proteins and their most important functions To understand different analytical techniques used in protein chemistry

Concepts related to: Proteins, enzymes, structure, kinetics, protein interactions, function of proteins, modifications, analyses methods

COURSE DETAIL

Lectures	Topic/s
1	Amino acids and the Peptide Bond
2	Protein Architect
3	Levels of Protein Synthesis-I
4	Levels of Protein Synthesis-II
5	Protein Folding and Denaturation-I
6	Protein Folding and Denaturation-II
7	Protein isolation and characterization-I
8	Protein isolation and characterization-II
9	Protein isolation and characterization-III
10	Protein isolation and characterization-IV
11	Metalloproteins-I
12	Metalloproteins-II
13	Motor Proteins-I
14	Motor Proteins-II



NP-TEL

NPTEL

<http://nptel.iitm.ac.in>

Chemistry and Biochemistry

Pre-requisites:

Introductory Biochemistry

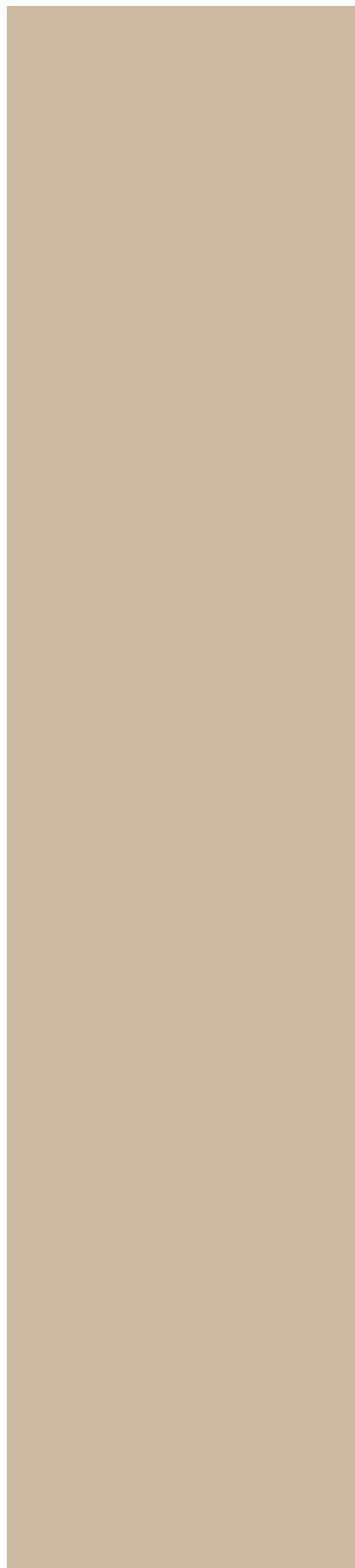
Additional Reading:

1. Biophysical Chemistry by C.R. Cantor and P.R. Schimmel
2. Advances in Protein Chemistry series

Coordinators:

Prof. S. Dasgupta
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15	Membrane Proteins-I
16	Membrane Proteins-II
17	Families of enzymes
18	Enzyme substrate complexes
19	Enzyme kinetics and Enzyme inhibition-I
20	Enzyme kinetics and Enzyme inhibition-II
21	Enzyme mechanisms-I
22	Enzyme mechanisms-II
23	Cofactors & Coenzymes
24	Protein-Protein interactions-I
25	Protein-Protein interactions-II
26	Protein-Protein interactions-III
27	Protein-ligand interactions-I
28	Protein-ligand interactions-II
29	Protein-ligand interactions-III
30	Protein aggregation-I
31	Protein aggregation-II
32	Electron Transfer in Proteins-I
33	Electron Transfer in Proteins-II
34	Protein Structure analysis-I
35	Protein Structure analysis-II



36	Protein Simulations-I
37	Protein Simulations-II
38	Protein Simulations-III
39	Ribozymes: Catalytic mechanism & applications-I
40	Ribozymes: Catalytic mechanism & applications-II

References:

1. Introduction to Protein Structure: Second Edition by Carl Branden and John Tooze
2. Proteins: Structures and Molecular Properties by Thomas E. Creighton
3. Physical Biochemistry by K.E.van Holde, C. Johnson, P. S. Ho
4. Protein-Ligand Interactions by S. E.Harding and B. Z. Chowdhry.