
Syllabus for CHEM504500 PROTEIN STRUCTURE AND CHEMISTRY, Spring 2022

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Lecture:

Time: T3T4R2

Room: CHEM R326

Method: Lecture, 3 credits

Course Outline:

- Protein chemistry
 - Overview on amino acid chemistry and properties
 - Peptide/protein sequence analysis
 - Peptide synthesis
 - Chemical ligation
- Protein structure
 - Secondary structures
 - Common structure motif
 - Noncovalent interactions in proteins
 - Globular and fibrous proteins
 - Membrane proteins
 - Protein aggregations
- Basic principles of protein folding
- Basic biophysical spectroscopy

Note:

Some handouts are available on the NTHU **eeclass** platform. Print out your own copy and bring it to the class.

Grading:

Homework	30%
Two exams	2 x 35% = 70%
■ 2022/4/19 (Tue)	
■ 2022/6/14 (Tue)	

References:

- T.E. Creighton (2010), *The biophysical chemistry of nucleic acids & proteins.*
- T.E. Creighton (1999), *Proteins – Structures and Molecular Properties*, 2nd Ed.
- A.V. Finkelstein & O.B. Ptitsyn (2002), *Protein Physics.*
- A. Fersht (1999), *Structure and Mechanism in Protein Science.*
- C. Branden & J. Tooze (1999), *Introduction to Protein Structure*, 2nd Ed.
- S.M. Hecht (Ed.) (1998), *Bioorganic Chemistry: Peptides and Proteins.*
- W.C. Chan & P.D. White (Ed.) (2000), *Fmoc Solid Phase Peptide Synthesis: A Practical Approach.*