Syllabus for CHEM504500 PROTEIN STRUCTURE AND CHEMISTRY, Fall 2019

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Lecture:

Time: W2F3F4 Room: CHEM114 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

Note:

Some handouts are available on iLMS system. Print out your own copy and bring it to the class.

Grading:

Homework & Problem set 30%

Two exams 2 x 35% = 70%

- 2019/11/1 (Fri)
- 2020/1/3 (Fri)

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*.