Department of Chemical Sciences

Graduate Course on

Biochemistry and Biophysics of Proteins

Course Content

- The chemical components of a cell and their importance
- Chemical properties of amino acids and peptides
- Molecular forces and types of interactions between molecules
- Conformational properties of macromolecules
- Proteins structure – Secondary, tertiary and quaternary associations
- Protein Function with many examples
- Enzyme catalysis – Theories and kinetics
- Regulation of enzyme activity – Inhibition and allostery
- Fundamental rate processes
- Protein translocation and degradation – Mechanisms

Suggested text books:

1. Principles of Biochemistry by Lehninger, Nelson and Cox
2. Proteins: Structures and Molecular Properties) by Thomas E. Creighton
3. Molecular and Cellular Biophysics by Meyer B. Jackson
4. The Molecules of Life by Kuriyan, Konforti, Wemmer

The duration of the course will be roughly of 30 lectures.
Mode assessment: 30% assignment, 30% mid-sem exam, and 40% Final exam.

Instructor: **A. Sri Rama Koti**
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Tel. no. 2790
E-mail: koti@tifr.res.in
Venue: **Lecture room AG80**
Days: **Tuesdays and Fridays**
Time: **11:30 hr to 13:00 hr**
The first lecture starts on January 22, 2019.