



Module PMRF-ISSS071/II/2023

Introduction and Techniques of Biological Chemistry

Name of the PMRF student

Subhashini Murugan

Details of the content of the module

Required background of the students taught

Anyone interested in understanding the role of chemistry in biological systems
Basic understanding of biology (undergraduate level) and chemistry (undergraduate level) would help understand the course better

This course will cover introductory concepts and utilisation of knowledge of chemistry to understand, explore, mimic and manipulate biomolecules. The highlights of the field and hot topics of related research will also be discussed. Tutorials on commonly used software to visualise and analyse biomolecules and chemical structures will also be conducted to give hands on training. This course will help in understanding the application of interfacial science for solving various problems.

Course Contents:

- Introduction and basics of biomolecules
- Building blocks of biomolecules – Nucleic acids, Proteins, Sugars, Lipids
- Bioinorganic chemistry: Role of metals in biology
Peptide and nucleic acid synthesis
- Enzyme engineering techniques for novel and more efficient biocatalysis
- Bioorthogonal reactions and conjugation techniques
- Spectroscopic and chromatographic techniques to analyse biomolecules.



Schedule of the module

Start Date: 19.12.23

End Date: 16.03.24 (Tentative)

Timings: Tuesdays, Thursdays (7:00 to 8:30 p.m.)
(tentative) + additional discussion sessions as required on mutual convenience

Total hours: ~ 30 (3 hr/ week)

Meeting link : Will be shared later

[Link](#)

Contact email ID: issf.forum@gmail.com

Registration link:

<https://forms.gle/s5JbdWVMGN18sMZj9>