PMRF-ISSS Teaching Programme

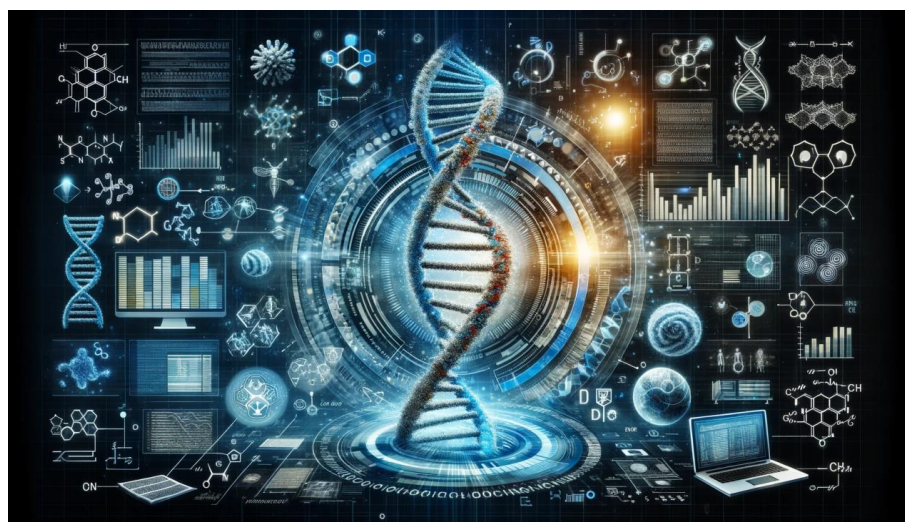Prime Minister Research Fellowship students' teaching requirement facilitated by the Institute of Smart Structures and Systems

Module PMRF-ISSS012/IV/2025

Bioinformatics

Name of the PMRF student

Ranjitha Guttapadu

Required background of the students taught

Knowledge of basic concepts of Biology, Computer Science, and Mathematics.

Details of the content of the module

This course is an introductory course that provides an overview of essential concepts in Bioinformatics. The course will include lectures, discussion sessions, and hands-on tutorials. The topics that will be covered include:

- Overview of various biological databases

- Sequence alignment – whole genome alignment, pairwise alignment, multiple sequence alignment, dynamic programming, phylogenetic analysis

- Genomics and Transcriptomics

- Structural Bioinformatics – Introduction to protein structures, protein structure analysis and visualization, Mass spectrometry applications in proteome and metabolome analyses

- Basics of Unix and R programming

Schedule of the module

Course start date: 18.02.2025

Course end date: 1.04.2025

Schedule: Tuesdays & Thursdays, 6:00 p.m. – 8:00 p.m.

Meeting link : Will be shared later

Contact email ID: isss.forum@gmail.com

Registration link:
https://forms.gle/Dxphyc7XeLHngKUG7