Course title: Bioinformatics and Computational Biology – Part I

Course code: BBP 174

No. of credits: 2

L-T-P: 22-8-0

Learning hours: 30

Pre-requisite course code and title (if any): Science graduate

Department: Department of Biotechnology

Course coordinator: Dr. Shashi Bhushan Tripathi

Course instructor: Dr Sakshi Chaudhary

Contact details: shashi.tripathi@terisas.ac.in

Course type: Core Course offered in: Semester 1

## **Course description:**

This course is designed to introduce students of various academic backgrounds to the interdisciplinary knowledge that underlies Bioinformatics and Computational Biology. The students will get acquainted with fundamentals of computers, operating systems and basic concepts in computing and networking. The students will be trained to use computational tools and approaches to extract information from different types of bioinformatics data (gene, protein, disease, etc.) and to analyse them in their area of research work.

## **Course objectives:**

- 1. To educate the interdisciplinary nature of advances in bioinformatics and computational biology.
- 2. To provide basic understanding of how biological data is stored and retrieved from various biological databases.
- 3. To develop an understanding of algorithms of sequence alignment (pair-wise and multiple) and scoring algorithms.