Course title: Conceptual Foundations of Molecular Biology			
Course code: BBP 158	**No. of credits:** 2	**L-T-P:** 30-0-0	**Learning hours:** 30
Pre-requisite course code and title (if any): None			
Department: Department of Biotechnology			
Course coordinator(s): Prof. Ramakrishnan Sitaraman		**Course instructor(s):** Prof. Ramakrishnan Sitaraman	
Contact details: rkraman@terisas.ac.in			
Course type: Core		**Course offered in:** Semester 1	

Course description: The objective of this foundational course is to familiarize students of varied academic backgrounds (including non-biology degree holders) with the interdisciplinary knowledge that underlies molecular biology. The approach will not only ensure the transmission of this knowledge, but also emphasize the scientific method, creative thought processes, fortuitous discoveries and elegant experimental approaches that led to classic insights and discoveries in this field. The course will be taught with a special focus on the overarching framework of evolutionary theory that underlies all of biology. Original research articles, book excerpts and reviews highlighting seminal insights in the field will be discussed in detail. Finally, the value of this information will be underscored by a detailed description of instances of gene regulation.

Course objectives:

1. To provide students of varied backgrounds the history of ideas in, and the theoretical bases of molecular biology.
2. To highlight the interdisciplinary nature of major advances in molecular biology.
3. To present an overview of gene regulation.
4. To emphasize the importance of evolutionary theory in the understanding of biological phenomena.