

BIOCHEMISTRY (BS-ADP 8th Semester)

Module Code:	Chem-480
Module Title:	Molecular Biology
Name of Scheme:	BS-ADP 8th Semester
Department:	School of Chemistry
Faculty:	Science
Module Type:	Compulsory
Module Rating:	2 credits

OBJECTIVES

After studying this course, students will be able to understand molecular biology, DNA as hereditary material, DNA replication, reverse transcription, DNA damage and repair. It will also assist to understand Transcription and Translation of DNA, machinery of protein synthesis and process of protein synthesis.

SYLLABUS OUTLINES

Introduction of molecular biology and history. DNA as genetic material. Chromatin and structure of Eukaryotic chromosomes, DNA replication and transcription in prokaryotes and eukaryotes. Translation; synthesis and splicing of RNA, Protein synthesis. DNA damage, repair and recombination. Restriction enzymes. Regulation of gene expression in prokaryotes, eukaryotes and Operon model. Plasmids, bacteriophages, and cosmids. Method of Recombinant DNA.

RECOMMENDED BOOKS

1. Principles of Biochemistry by Lehninger AL, Nelson DL and CoxMN,2000Pub: worth Publishers
2. Biochemistry by Lubert Stryer (2006) Pub: Freeman and Company
3. A biologist's guide to Principles and Techniques of Practical Biochemistry by Bryan L Williams and Keith Wilson Pub: Edward Arnold Ltd.
4. Harpers Biochemistry, 27th ed. (2006) McGraw Hill Inc.
5. Lippincott's Biochemistry by champ c; Harvey.R.A and Ferrie. D .R. 3rd edition., Pub: J. B. Lippincott company
6. BRS Biochemistry, Molecular Biology,and Genetics 5th edition