

**BIOCHEMISTRY (BS-ADP 8<sup>th</sup> Semester)**

<b>Module Code:</b>	<b>Chem-484</b>
<b>Module Title:</b>	<b>Biochemical Techniques</b>
<b>Name of scheme:</b>	<b>BS-ADP 8<sup>th</sup> Semester</b>
<b>Department:</b>	<b>School of Chemistry</b>
<b>Faculty:</b>	<b>Science</b>
<b>Module Type:</b>	<b>Compulsory</b>
<b>Module Rating:</b>	<b>2 credits</b>

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**OBJECTIVES**

After studying this course, students will be able to understand proteins extraction and purification techniques, chromatographic techniques, different biochemical techniques used for separation, types of PCR and its applications.

**SYLLABUS OUTLINES**

General methods for extraction, fractionation and purification of proteins. Principles of chromatography, ion exchange chromatography, paper chromatography, affinity chromatography, gas chromatography and column chromatography. High performance liquid chromatography (HPLC), Filtration, Polyacrylamide and agarose gel electrophoresis, SDS PAGE, Southern blotting, Western blotting, Northern blotting. Immunoelectrophoresis. Enzyme linked immunosorbent assay (ELISA) and its types, Radioisotopes and their applications in Biochemistry. PCR and its types,

**RECOMMENDED BOOKS**

1. Principles of Biochemistry by Lehninger AL, Nelson DL and CoxMN,2000  
Pub: 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. Immunology by J. Kuby 2nd ed. 1996 Pub: W. H. freeman and Co.
5. Harpers Biochemistry, 27th ed. (2006) McGraw Hill Inc.
6. (Methods in Molecular Biology) - Histopathology (2014) [PDF] [UnitedVRG]