

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

<b>Module Code:</b>	<b>Chem-482</b>
<b>Module Title:</b>	<b>Microbiology &amp; Drug Metabolism</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 development of drug resistance. Students will learn the mode of action of different drugs which in turn will help to understand physiology, biochemistry, and genetics of microorganisms.

**SYLLABUS OUTLINES**

Microorganisms and their gross Classification, Bacterial growth and cultivation techniques. Identification of Microorganisms, Factors for the growth of microbes. Methods of Growth measurement, Growth under extreme environments. Mutation and protoplast fusion in cultures and its benefits. Gene transfer: transformation, transduction and conjugation. Bacteriophages chemistry, metabolism and mechanism of action of anti-malarials, anti-bacterials, antivirals and antifungal drugs. Drug resistance, Biochemical transformation of drugs. Anticancer drugs.

**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. Harpers Biochemistry, 27th ed. (2006) McGraw Hill Inc.