

The Islamia University of Bahawalpur
Department of Biochemistry & Biotechnology
Course: **Biosafety and Bioethics**

Course code & credit hours: BCBT-02804 3(3-0)

Instructor: **Dr. Rozina Aslam**

PURPOSE OF THE COURSE AND APPROACH TO THE SUBJECT:

The aims of the course are: to acquaint principles of biosafety and bioethical perspectives pertaining to biochemistry and familiarize with standard laboratory procedures and safe practices. At the end of the course the students would be able to: Understand the importance of biosafety levels, comprehend the use and significance of personal protective equipment, handle samples in laboratories, apply bioethics to plan and conduct research.

COURSE CONTENTS

Week	Contents
1	Introduction to biosafety
2	Biohazards, Good laboratory practices
3	Classification of laboratories on the bases of biosafety levels
4	Personal Protective Equipment (PPE)
5	Biosafety cabinets and their types
6	Biosecurity
7	Laboratory waste management
8	Introduction to bioethics; Ethical issues to use animals in research
9	<i>Mid Term Examination</i>
10	Ethical issues related to GMOs
11	Transgenic organisms
12	Euthanasia
13	Biological and toxin weapons convention; Ethics related to reproductive and cloning technologies
14	Genetic counseling and related issues; Transplants and eugenics
15	Patenting, commercialization and benefit sharing
16	Role of Institutional biosafety & bioethical committee; Role of national bioethics committee
17	<i>Final Term Examination</i>

PRESCRIBED BOOKS:

1. Laboratory Biosafety Manual, WHO, 2004. 3rd Edition; Centers for Disease Control and Prevention (CDC), Atlanta, GA, USA.

2. Ethical guidelines for the use of animals in research. 2018. 1st Edition;
The Norwegian National Research Ethics Committees