

# **St. Xavier's College, Burdwan**

## **Department of Biotechnology**

### **SEMESTER-I**

#### **Major (BIOT101) Fundamental of Biotechnology**

##### **Course Outcome**

This paper holds great significance for students as it provides them with essential knowledge of biotechnology and its potential for career development. The main objective is to make students familiar with wide scope of Biotechnology such as microbial biotechnology, recombinant DNA technology, plant and animal biotechnology, computational biotechnology, genomics, and proteomics. By gaining a comprehensive understanding of these branches, students will be equipped to make informed decisions regarding their field of study and future career paths within the biotechnology domain.

#### **Minor (BIOT102) Human Welfare**

##### **Course Outcome**

This course aims to provide students with comprehensive knowledge of biotechnological approaches applied to various aspects of human welfare. This course will introduce societal aspect of the subject Biotechnology. By gaining insights into these approaches, students will be better prepared for their future careers and job opportunities.

## **COURSE OUTCOMES**

### **Multi/Interdisciplinary Course (BIOT1031) Introduction to Biotechnology**

#### **Course outcome**

Encourage students to understand the interconnectedness of Biotechnology and other scientific fields, and to develop a thirst for knowledge and a lifelong commitment to learning in the field of biotechnology.

### **Skill Enhancement Course (BIOT1051) Molecular Diagnostic and Forensic Techniques**

#### **Course Outcome**

This course is designed to provide students with basic knowledge of various aspects of biotechnology and its applications specifically in the domains of health Biotechnology including forensic science. By acquiring knowledge from this course, students will be equipped to apply these techniques effectively in their future employment opportunities.

## **SEMESTER-II**

### **Major (BIOT2011) - Biochemistry and Metabolism**

#### **Course Outcome**

Students will gain a comprehensive understanding of the basic principles of biochemistry, including the structure, function, and metabolism of biological molecules. Students will gain a deep understanding of the major metabolic pathways involved in energy production, including glycolysis, the citric acid cycle, oxidative phosphorylation, and photosynthesis. Overall, successful completion of this biochemistry course will equip students with a strong foundation in the principles and applications of biochemistry, preparing them for further studies or careers in various fields

**Minor (BIOT202) - Developmental Biology**

**Course outcome**

By the end of this course on Developmental Biology, students will be able to describe the key stages and processes involved in the development of multicellular and understand the role of genetics and epigenetics in developmental processes, including the regulation of cell differentiation and tissue patterning organisms. This course will also teach the importance of studying Developmental Biology in Reproductive Engineering.

**Multi/Inter disciplinary Course (BIOT2031) - Biotechniques**

**Course outcome**

This course will equip students with the fundamental knowledge of biotechniques, which will prepare them to use these techniques in their future careers.

**Skill Enhancement Course (BIOT2051)  
Fermentation Technology**

**Course outcome**

This course aims to provide students with comprehensive information on various industrial techniques associated with food technology and microbial biotechnology. The knowledge gained will equip students for future employment in diverse industries.