

JAIN UNIVERSITY

Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956



Master of Science - Biochemistry

Course Guide

Course Overview

Biochemistry is the study of the chemical properties of biologically important molecules and processes in cells and tissues. It deals with the structure and function of cellular components, such as proteins, carbohydrates, lipids, nucleic acids, and other biomolecules. Biochemical understanding is fundamental to all biological disciplines. While much of modern biochemistry aims to provide an understanding of fundamental biological processes at a molecular level, it also contributes to the solving of medical problems and the discovery of safe and effective drugs. This programme aims to provide a thorough knowledge of contemporary Biochemistry at the cellular and molecular level. This programme allows students to gain research experience and professional skills, sometimes in a different area to their first degree, before deciding on a future career in industry or academic research.

Programme Name

Master of Science

Programme Code

044

Course Code & Name

4403 – M.Sc in Biochemistry

Degree Awarded

Master of Science

Duration of the Programme

2 years, 4 semesters

Total Credits

100

Eligibility

The minimum qualification required to apply is a bachelor's degree in biotechnology / microbiology / botany / biochemistry / chemistry

Medium of Instruction / Examination

English

Study Campus

**Center for Post Graduate Studies
Jayanagar 3rd Block, Bangalore**

Programme Timings

8.30 am – 4.30 pm (Mon – Fri) & 8.30 am – 1.00 pm (Sat)

Course Advisor

Dr. Sunil S More

+91 94817 87729

Examinations & Assessments

1. Internal tests
2. Assignments
3. Seminar presentation
4. Preparatory theory and Practical examination
5. End term theory and Practical examination

Course Curriculum

Semester 1

- Bioenergetics and Bioorganic Chemistry
- Microbiology
- Biomolecules
- Clinical and Physiological Biochemistry

Learning Labs

- Biochemical Assays
- Techniques In Microbiology

Semester 2

- Enzymology
- Metabolism-I
- Biophysical And Analytical Biochemistry
- Bioinformatics And Biostatistics

Learning Labs

- Techniques in Biochemistry
- Enzyme Kinetics

Semester 3

- Metabolism-II
- Molecular Biology – I
- Immunology

Elective (Any One)

- Biotechnology
- Biochemical Genetics
- Plant Biochemistry
- Developmental Biology And Endocrinology

Learning Labs

- Molecular Biology And Immunology
Elective (any one)
- Biotechnology
- Biochemical Genetics
- Plant Biochemistry
- Developmental Biology And Endocrinology

Semester 4

- Molecular Biology-II
- Neurochemistry and Signal Transduction

Elective (any one)

- Medical Biotechnology
- Phytochemistry And Pharmacognosy
- Pharmaceutical Microbiology
- Microbial Biopolymers

Learning Labs

Elective (Any One)

- Nutritional Biochemistry
- Protein Chemistry
- Project
- Presentation & Defence
- Comprehensive -Viva-Voce

Career Opportunities

Graduates acquire a wide range of subject specific and transferable skills and gain extensive laboratory research experience. Graduates typically enter professional careers in research, the health service or industrial environments.