

Core Departments

Department of Biomedical Science



The course has been developed in response to the growing demand for trained and skilled manpower in the field of Biomedical Sciences. The program is not only based on a self-reliant curriculum and meant to be job oriented but also provides meaningful education keeping in view the needs of both the society and the students. The course explores the principles and practice of biomedical science and how they are applied in industry, research and medicine.

The course is designed in such a way that students first acquire an integrated understanding of biomedical science that allows them to shape their subsequent studies towards the topics that interest them the most. As the course progresses, increasing emphasis is placed on relating knowledge to scientific research. The students are trained in various aspects of modern biology like Biotechnology, Microbiology, Genetics, Pharmacology, Immunology, Medicinal Chemistry, toxicology and Biochemistry.

The Biomedical Sciences course equips the students with knowledge and transferable skills necessary for a career in research of pharmaceutical or biotechnology fields. The students graduating from this course get offers from the pharmaceutical industry and research laboratories from various institutes like TIFR, IISc, NII, JNU, Ranbaxy and ACBR. The course provides avenues for self-employment such as setting up one's own clinical laboratory, freelance license inspectors for pollution control in industries, setting up of a biotechnology unit for production of commercially available products etc. besides endless vistas for those interested in research in the field of medicine, biotechnology, microbiology, pharmacology and other allied fields.

Department of Biomedical Science

B.Sc. (Hons.) Biomedical Science

SEMESTER 1	SEMESTER 2
C1 BMS-101 : Bioorganic Chemistry C2 BMS-102 : Cell and Radiation Biology AECC1 : English/MIL Communication or EVS GE1 : Generic Elective	C3 BMS-201 : Principles of Genetics C4 BMS-202 : Human Physiology & Anatomy I AECC2 : EVS or English/MIL Communication GE2 : Generic Elective
SEMESTER 3	SEMESTER 4
C5 BMS-301 : Biochemistry C6 BMS-302 : Human Physiology & Anatomy II C7 BMS-303 : Medical Microbiology SEC1 : Skill Enhancement Course GE3 : Generic Elective	C8 BMS-401 : Immunobiology C9 BMS-402 : Molecular Biology C10 BMS-403 : Medicinal Chemistry SEC2 : Skill Enhancement Course GE4 : Generic Elective
SEMESTER 5	SEMESTER 6
C11 BMS-501 : Biophysics C12 BMS-502 : Pharmacology DSE1 : Discipline Specific Elective DSE2 : Discipline Specific Elective	C13 BMS-601 : Human Pathology C14 BMS-602 : Toxicology DSE3 : Discipline Specific Elective DSE4 : Discipline Specific Elective

C : Core Courses; GE : Generic Elective; AECC : Ability Enhancement Compulsory Course; SEC : Skill Enhancement Courses; DSE : Discipline Specific Elective

GE 1-4 : Generic Electives (any one per semester in semesters 1-4)

BMS-G1 : Basics of Immunology
BMS-G2 : Biological Chemistry
BMS-G3 : Biosafety and Bioethics
BMS-G4 : Biostatistics
BMS-G5 : Bridging Information Technology and Biotechnology
BMS-G6 : Concepts in Biotechnology
BMS-G7 : Concepts in Medicinal Chemistry and Drug Development
BMS-G8 : Intellectual Property Rights (IPR) for Biologists
BMS-G9 : Pathological Basis of Diseases
BMS-G10 : Pharmacology and Toxicology
BMS-G11 : Tools and Model Organisms in Biomedical Research

SEC 1-2 : Skill Enhancement Courses (any one per semester in semesters 3-4)

BMS-S1 : Methods in Epidemiological Data Analysis (EDA)
BMS-S2 : Medical Laboratory Diagnostics (MLD)
BMS-S3 : Techniques for Forensic Science
BMS-S4 : Tools in Modern Biology

DSE 1-4 : Discipline Specific Elective (any two per semester in semesters 5-6)

BMS-A : Computational Biology and Drug Discovery
BMS-B : Genome Organization and Function
BMS-C : Human Genetics
BMS-D : Medical Biochemistry
BMS-E : Medical Biotechnology
BMS-F : Project Work (can be chosen only in semester 6)