

COURSE AT A GLANCE

SUBJECT: LIFE SCIENCE

ACADEMIC SESSION: 2025-27

First Semester-December, 2025

Course Number	Course Title	Credit Hour	Mark Distribution	Maximum Marks
411	Fundamentals of Physical Sciences and Biophysics	4 CH	20	80
412	Fundamentals of Biochemistry and Biophysical Chemistry	4 CH	20	80
413	Bio-instrumentation and Techniques	4 CH	20	80
414	Fundamentals of Microbiology and Molecular Biology	4 CH	20	80
415	Practical based on Biophysics, Bio-instrumentation and Biochemistry	2 CH	00	100
416	Practical based on Microbiology and Molecular Biology	2 CH	00	100
417	Environmental Science and Disaster Management	2	60+40	100

Second Semester-April, 2026

Course Number	Course Title	Credit Hour	Mark Distribution	Maximum Marks
421	Ecology, Biodiversity and Biostatistics	4 CH	20	80
422	Cell Biology	4 CH	20	80
423	Genetics	4 CH	20	80
424	Immunology	4 CH	20	80
425	Practical based on LS-421 (Ecology, Biodiversity and Biostatistics)	2 CH	00	100
426	Practical based on LS-422, LS-423 & LS-424 (Genetics, Cell biology and Immunology)	2 CH	00	100
427	Inter-Disciplinary Course	3 CH	60+40	100

Third Semester-December, 2026

Course Number	Course Title	Credit Hour	Mark Distribution	Maximum Marks
511	Bioinformatics and Computer Application	4 CH	20	80
512	Botany stream (A): Plant Taxonomy and Morphology Zoology stream (B): Animal Taxonomy and Morphology	4 CH	20	80
513	Botany stream (A): Plant Physiology and Development Zoology stream (B): Animal Physiology and Development	4 CH	20	80
514	Special Paper-I (A) Biochemistry: Bioenergetics and Enzymology (B) Ecology: System Ecology and Energetics (C) Microbiology: Microbial Physiology and Microbiology Genetics (D) Physiology: Cell and Radiation Physiology	4 CH	20	80
515	Botany stream (A): Practical on LS-512(A) and LS-513(A) (Plant Morphology, Taxonomy, Development, Physiology) Zoology stream (B): Practical on LS-512(B) and LS-513(B) (Animal Morphology, Taxonomy, Development, Physiology)	2 CH	00	100
516	Practical on Special Paper-I (A) Biochemistry: Bioenergetics and Enzymology (B) Ecology: System Ecology and Energetics (C) Microbiology: Microbial Physiology and Microbiology Genetics (D) Physiology: Cell and Radiation Physiology	2 CH	00	100
517	Entrepreneurship Development	2 CH	40+60	100

Fourth Semester-April, 2027

Course Number	Course Title	Credit Hour	Mark Distribution	Maximum Marks
521	Genetic Engineering	4 CH	20	80
522	Elective Papers-I (A) Cell culture Technique (D) Plant Metabolism (B) Genomics and Proteomics (E) Vermi technology (C) Medical Microbiology (F) Hormonal Plant Physiology	4 CH	20	80
523	Special paper-II (A) Biochemistry: Structure, Metabolism and Metabolic regulation (B) Ecology: Environmental Microbiology and Sustainable Environmental Management (C) Microbiology: Industrial Microbiology and Virology (D) Physiology: Stress and Crop Physiology	4 CH	20	80
524	Project & Viva Voce	4 CH	20	80
525	Practical on Special Paper-II (A) Biochemistry: Structure, Metabolism and Metabolic regulation (B) Ecology: Environmental Microbiology and Sustainable Environmental Management (C) Microbiology: Industrial Microbiology and Virology (D) Physiology: Stress and Crop Physiology	2 CH	00	100
526	Seminar	2 CH	00	100
527	MOOCs/Alternative to MOOCs	3 CH	100	100