



BSc-MSc (Biomedical)

Course Structure

| Sem# | Core Courses | Id Courses | Skill based courses | Practical Courses | Total Credit |
|----------|-----------------------------|-----------------------------|---------------------|-------------------|--------------|
| I/II | Four /Sem | One/Sem | One /Sem | Two | 22 |
| III/IV | Four /Sem | One/Sem | One /Sem | Three | 24 |
| III/IV | Four /Sem | One/Sem | One/Sem (KHOJ) | Three | 22 |
| VII/VIII | Four /Sem | 2 Elective Courses-Sem VIII | One/Sem | Three | 23 |
| IX | Three | 2 Elective Courses | One | Two | 23 |
| X | Industrial Training/Project | | | | 20 |

Semester - I

| Sr. No. | Course Name | Credits |
|---------|---|---------|
| 1 | Cell Biology I | 3 |
| 2 | General Microbiology & Microbial Physiology | 3 |
| 3 | Concepts of Biology & Basis of Life | 3 |
| 4 | Anatomy and Physiology I | 3 |
| 5 | Chemistry for Biologist | 2 |
| 6 | Effective Communication & Communication Lab | 2 |

Semester - II

| Sr. No. | Course Name | Credits |
|----------------|--------------------------------|----------------|
| 1 | Cell Biology II | 2 |
| 2 | Industrial & Food Microbiology | 3 |
| 3 | Anatomy and Physiology II | 3 |
| 4 | Molecular Biology I | 3 |
| 5 | Biochemistry I | 3 |
| 6 | Mathematics for Biologists | 2 |
| 7 | Basics in Computers | 2 |

Semester - III

| Sr. No. | Course Name | Credits |
|----------------|---------------------------------|----------------|
| 1 | Medical Microbiology | 3 |
| 2 | Overview of Human diseases | 2 |
| 3 | Molecular Biology II | 3 |
| 4 | Biochemistry II | 3 |
| 5 | Ecology & Environmental Biology | 3 |
| 6 | Biophysics | 2 |
| 7 | Good Laboratory Practices | 2 |
| 8 | Animals in Biomedical Research | 2 |

Semester - IV

| Sr. No. | Course Name | Credits |
|----------------|-------------------------------------|----------------|
| 1 | Immunology I | 3 |
| 2 | Biotechnology | 3 |
| 3 | Genetics I | 3 |
| 4 | Parasitology and Histology | 3 |
| 5 | Introduction to Nutritional Science | 2 |
| 6 | Basics of Management | 3 |

Semester - V

| Sr. No. | Course Name | Credits |
|----------------|-------------------------------|----------------|
| 1 | Immunology II | 2 |
| 2 | Toxicology and Pharmacology I | 3 |
| 3 | Genetics II | 3 |
| 4 | Neuroscience | 2 |
| 5 | Clinical Nutrition | 2 |
| 6 | Biostatistics | 2 |
| 7 | IT and Biomedicine | 2 |

Semester - VI

| Sr. No. | Course Name | Credits |
|----------------|--|----------------|
| 1 | Toxicology and Pharmacology II | 3 |
| 2 | Developmental Biology | 3 |
| 3 | Clinical Biochemistry and Clinical Research | 3 |
| 4 | Techniques in Biochemistry and Molecular Biology | 3 |
| 5 | Reproductive Biology and Endocrinology | 3 |
| 6 | Research Methodology | 2 |

Semester - VII

| Sr. No. | Course Name | Credits |
|----------------|---|----------------|
| 1 | Alternative Medicine Systems | 3 |
| 2 | Nanobiology | 2 |
| 3 | Stem Cell Biology and Tissue culture | 3 |
| 4 | Recombinant DNA Technology & Genetic Engineering | 3 |
| 5 | Bioinformatics & Data Management tools in biomedicine | 3 |

Semester - VIII

| Sr. No. | Course Name | Credits |
|----------------|----------------------------------|----------------|
| 1 | Proteomics and Metabolomics | 3 |
| 2 | Oncology and radiation biology | 3 |
| 3 | Genomics | 2 |
| 4 | Biomedical Ethics and Regulation | 2 |
| 5 | Elective Course I | 3 |
| 6 | Elective Course II | 3 |

Semester - IX

| Sr. No. | Course Name | Credits |
|----------------|-----------------------------------|----------------|
| 1 | Public Health | 2 |
| 2 | Regenerative Bio medicine | 3 |
| 3 | Seminar | 3 |
| 4 | IPR and Patenting | 2 |
| 5 | Specialization Elective Course I | 3 |
| 6 | Specialization Elective Course II | 3 |

Semester - X

| Sr. No. | Course Name | Credits |
|----------------|-----------------------------|----------------|
| 1 | Industrial Training/Project | 20 |