

M.Sc Applied Biology**SEMESTER - 1**

| Paper No | Subject | Contents Of Syllabus |
|-----------------|-----------------------------|--|
| Paper - I | Biological Area Studies - I | Introduction to Bioscience Modern Bioscience areas of studies Life and bioscience timeline |
| Paper - II | Bioscience Streams - I | Biophysics History of medicine |
| Paper - III | Bioscience Techniques - I | Evolution Ecology and Evolution biology |
| Paper -IV | Genetics - I | Introduction to Genetics Genetic research and technology Genetic code |
| Paper - V | Genomics - I | What is Genomics? DNA Microarray Medical Genetics |

SEMESTER - 2

| Paper No | Subject | Contents Of Syllabus |
|-----------------|------------------------------|--|
| Paper - I | Biological Area Studies - II | Biology and Life Science Ecology and Environmental science Atmospheric and Earth science |
| Paper - II | Bioscience Streams - II | History of medicine Neuroscience |
| Paper - III | Bioscience Techniques - II | Bioscience and Technology Bioscience and technology with select case studies |
| Paper -IV | Genetics - II | DNA technology Advanced Genetic Research |
| Paper - V | Genomics - II | Human Genome project Bioinformatics Prediction of protein structure |

SEMESTER - 3

| Paper No | Subject | Contents Of Syllabus |
|-----------------|----------------------------------|---|
| Paper - I | Bio and Neuro Informatics - I | Introduction to Bioinformatics and Neuroinformatics Bioinformatics Sequence |
| Paper - II | Biomechanics and Biomedicine - I | Biomechanics: An introductory overview Introduction to Biotechnology and its historical timeline |
| Paper - III | Biotechnology - I | Introduction to Gene Science and science of Genetics Gene related processes, genetic changes and cloning |
| Paper -IV | Green Biology - I | Energy development and renewable energy Green building, green computing and other technologies |

SEMESTER - 4

| Paper No | Subject | Contents Of Syllabus |
|-----------------|-----------------------------------|---|
| Paper - I | Bio and Neuro Informatics - II | Biostatistics and Mathematical Biology |
| Paper - II | Biomechanics and Biomedicine - II | Biotechnology and Genetics resources: uses, research, areas and regulations Final policy statement for research and regulation of biotechnology processes and products |
| Paper - III | Biotechnology - II | Overview of genetic engineering and bioengineering GMOs with special focus on genetically modified food |
| Paper -IV | Green Biology - II | Recycling waste and wastewater treatment and management |
| Paper - V | Dissertation | |