**COURSE OUTCOMES**

**B.Sc - Biotechnology Ist year**

**Semester- I**

**Subject- Introduction to Biotechnology (Theory+Practical)**

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| Co1. | Elucidate Basic concepts of Biotechnology, definition, history and plant and animal tissue culture. |
| Co2. | Explain proteome, proteomics, DNA fingerprinting and their use in forensic analysis |
| Co3. | Describe Bioremediation and waste water treatment technology applications in pharmaceutical industry. |
| Co4. | Explain ethics in biotechnology, risk assessment and safety guidelines used in biotechnology |

**Subject Biochemistry I (Theory+Practical)**

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| **Co1** | What are biomolecules and differentiate types of bonding involved in it. |
| **Co2.** | What are Carbohydrates and their significance |
| **Co3.** | Describe different classes of carbohydrates |
| **Co4** | Explain the Structure of polysaccharides and their biological significance. |
| **Co5** | What are amino acids and their role in protein formation. |
| **Co6** | Explain different classes of protein on the basis of structure and function. |
| **Co7** | What are lipids, give their classification and biological significance. |
| **Co8** | Describe nucleic acids, their formation, structure, types and function. |

**CREDITS**- 3 **THEORY PERIODS OF 45 MINUTES EACH OF EACH PAPER PER WEEK OVER A SEMESTER**

**6 PRACTICAL PERIODS OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**

**B.Sc - Biotechnology Ist year**

**Semester- II**

**Subject- Introduction to Microbiology (Theory+Practical)**

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| **Co1.** | Explain contributions of Scientists in the field of Microbiology. |
| **Co2.** | Describe working and principles of different techniques used in microbiology laboratory. |
| **Co3.** | What are different sterilization and staining techniques used in microbiology laboratory. Critically analyse. |
| **Co4.** | Diagrammatically explain Structure of viruses and their disease causing tendency in humans and animals. |
| **Co5.** | Analyse the Complete structure of Bacteria and their pathogenicity. |
| **Co6.** | Explain metabolism, photosynthesis and growth of microorganisms. |

**Subject- Biochemistry II (Theory+Practical)**

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| **Co1.** | Define Enzymology and Different classes of enzymes |
| **Co2.** | What are vitamins and their significance |
| **Co3** | Define Hormones and their importance in Body functioning. |
| **Co4.** | Explain the Concepts of metabolism of different biomolecules. |
| **Co5.** | Describe Carbohydrate synthesis and their breakdown. |
| **Co6** | Explain Fatty acid metabolism. |
| **Co7.** | Describe Amino acid metabolism |

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**6 PRACTICAL PERIODS OF 45 MINUTES EACH PER WEEK OVER A SEMESTER**