**COURSE OUTCOMES**

**B.Sc – Botany Ist year**

**Semester- I**

 **Subject: Diversity of Microbes (Theory & Practical)**

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| **Co1** | Study the Structure, nutrition, reproduction and economic importance of bacteria. |
| **Co2**.  | Understand the general characters, classification and economic importance and life-history of algae |
| **Co3** | Describe the structure and characters of viruses. |
| **Co4** | Explain the classification, general characters, classification and economic importance and life-history of fungi |

 **Subject: Cell Biology (Theory & Practical)**

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| **Co 1**  | Study the structure and functions of cell wall and plasma membrane |
| **Co 2** | Examine the ultra structure of nucleus, Golgi apparatus , ER, chloroplast, Mitochondria , lysosomes , peroxisomes and vacoules |
| **Co3**:  | Describe cell division and explain different stages of mitosis and meiosis |
| **Co4** | Study the basic aspects of chromosome, its morphology , organization and ultrastructure of centromere and telomere. |
| **Co5**  | Describe the chromosomal alteration ans illustrate deletion, duplication , translocation , inversion |
| **Co6**. | Study the variation in chromosome number with description of aneuploidy and polyploidy and explain sex chromosome, sex determination |

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

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

**B.Sc – Botany Ist year**

**Semester- II**

 **Subject: Diversity of Archegoniates (Theory & Practical)**

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| **Co1**.  | Understand the general characters, classification of Bryophyta. |
| **Co2.**  | Study the structure and reproduction of *Marchantia*, *Anthoceros*, *Funaria* |
| **Co3**.  | Explain the general characters, classification of Pteridophyta. |
| **Co4**.  | Describe the structure and reproduction of *Rhynia*, *Selaginella*, *Equisetum* and *Pteris* . |

 **Subject: Genetics (Theory & Practical)**

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| **Co 1** | Study the DNA the genetic material, DNA structure and replication, DNA-Proteininteraction, the Nucleosome Model, Genetic Code, Satellite and Repetitive DNA. |
| **Co 2** | Understand the genetic inheritance, mendelism, laws of segregation and independent assortment. |
| **Co3** | Describe the process of Linkage and its Analysis, Allelic and non-allelic interactions |
| **Co4.** | Illustrate the genetic variations explaining Mutations- spontaneous and induced and transposable genetic elements, DNA damage and repair. |
| **Co5**  | Study the gene expression in Prokaryotes and Eukaryotes |
| **Co6**  | Elucidate the structure and function of proteins  |
| **Co7** | Explain extra Nuclear Inheritance their Presence and function of Mitochondrial and Plastid DNA and Plasmids |

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