

Course Code	Course Title	C	H	I	E	T
17U6ZMP4	Major Practical 4	6	3	25	75	100

Major Practical 4 (Developmental Biology & Evolution, Microbiology and Immunology, Biophysics, Biostatistics and Bioinformatics And Biotechnology)

Developmental Biology and Evolution

1. Observation of embryonic stages of Chick
2. Observation of vestigial organs of man from pictures
3. Study on types of fossils.

Spotters: Human sperm, Ovum, Darwin finches

Biotechnology

1. Isolation of DNA/RNA - Demonstration
2. Electrophoretic separation of DNA - Demonstration
3. Visit to Biotechnology industries.

Spotters: Human sperm, Ovum, Darwin finches

Microbiology and Immunology

1. Simple staining of bacteria.
2. Gram staining of bacteria.
3. Hanging drop method.
4. Blood grouping - Man.
5. Lymphoid organs in chick - Demonstration

Spotters: Whittaker's Five Kingdom, Bacterial growth curve, Tuberculosis, HIV, Antibody structure, Immunodiffusion.

Biophysics, Biostatistics & Bioinformatics

1. Tabulation for a given biological data
2. Calculation of Arithmetic Mean, Median, Mode, Range and Standard Deviation for any biological data.
3. Correlation analysis for a biological data.
4. Components of Computer.
5. Download and study at least two samples of Genome sequences from NCBI.

Spotters: Osmosis, Ramachandran plot, Input devices, output devices, BLAST, FASTA.