**P R A C T I C A L**

**COURSES BSP456 MOLECULAR BIOLOGYLAB**

*After successful completion of the course, students will be able to :*

CO 1. Perform agarose gel electrophoresis and realize its applications in biological research.

CO 2. Isolate plasmid DNA, genomic DNA and total RNA from bacteria and other sources and determine their purity

CO 3. Execute restriction digestion and mapping of DNA.

CO 4. Design primers and run the PCR reaction.

CO 5. Become skilled in gel documentation instrument (Geldoc) and image development.

1. Agarose gel electrophoresis
2. Isolation of plasmid DNA from bacteria and its identification by electrophoresis
3. Isolation of genomic DNA from various sources and its identification
4. Restriction digestion and mapping of DNA
5. Isolation of total RNA from various sources and gel electrophoresis
6. Design of primers and PCR
7. Determination of DNA/RNA purity by UV-Visible spectrophotometry
8. Demonstration of gel documentation and imaging