

SOP for Reference by Department of Biotechnology:

(PO): Programme Outcomes:

1. Explain and apply the scientific method correctly by creating logical theories, planning experiments, collecting relevant data using current technology and analyzing both quantitative and qualitative data.
2. Prepare written and oral research correspondence using tables and graphs to report results, identify detailed experimental procedures and clarify the findings clearly.
3. Critically analyze contributions to science published in all forms of media, and find relevant approaches to solving and reporting scientific problems.
4. Demonstrate growth in academic, personal and professional success.
5. Demonstrate a potential for autonomous and collaborative work.
6. Demonstrate expertise in basic laboratory skills common to clinical and non-clinical research laboratories, including aseptic techniques, conduct precise and accurate measurements using balances and macro-and micro pipetting, microscope, solution preparation, operation of current instruments, preparation of samples for various analyzes, and maintenance of the correct scientific laboratory notebook
7. Design, conduct, and interpret outcomes of experiments using basic molecular biology methodologies and recombinant DNA techniques, including agarose and polyacrylamide gel electrophoresis, restriction enzyme digestion, bacterial transformations, plasmid DNA protein expression, PCR, and tissue culture.
8. Apply the principles of theories, methodologies and techniques of molecular biology by systematically reviewing, interpreting and presenting a recent and relevant scientific research paper published in the scientific journal in question
9. Understand the basic principles of molecular biology and how these affect the research and development of biotechnology in the various fields of health care and agriculture

(CO) Course Outcomes:

1. **Cognitive Knowledge:** To provide education that leads to comprehensive understanding of the principles and practices of biotechnology.
2. **Information and Computer Literacy:** To educate and make them up to date with the current scientific literature, computer programs and web information.
3. **Experimental Skills:** To provide broad based training in technical skills in methods of biotechnology.
4. **Critical Thinking:** To empower students with the ability to think and solve problems in the field of biotechnology.
5. **Scientific Communication:** To ensure students are able to effectively communicate with biotechnology and other interdisciplinary professionals.

6. **Professional Attitude:** To produce responsible biotechnologists that can work within the interdisciplinary framework of biotechnology and related fields.

Program Specific Outcomes (PSOs):

1. Acquire knowledge on the basics of sound and solid base biotechnology which enables them to understand the emerging and advanced concepts of engineering in life sciences.
2. Acquire knowledge in the biotechnology domain that enables their applications in industry and research.
3. Enabling the students to acquire technical know-how by linking biotechnology, disciplinary and interdisciplinary aspects.
4. Recognize the importance of bioethics, IPR, entrepreneurship, communication to bring India industrialists to the next generation