

Rayat Shikshan Sanstha's

Annasaheb Awate Arts, Commerce And Hutatma Babu Genu Science  
College, Manchar

**DEPARTMENT OF BIOTECHNOLOGY**

**PROGRAMME OUTCOMES (POs)**

The Graduates of B.Sc Biotechnology will be able to:

**PO-1: Science knowledge:** Apply the knowledge of Biotechnology, Microbiology, Biochemistry fundamentals, and Bioinformatics to the solution of complex biological problems.

**PO-2: Problem analysis:** Identify, formulate, review research literature, and analyze complex biological problems reaching substantiated conclusions using various principles of biotechnology, bioinformatics, microbiology, biochemistry, cell and molecular biology sciences.

**PO-3: Design/development of solutions:** Design solutions for complex biological problems and design protocols or processes that meet the specified needs with appropriate consideration for the public health and safety, conservation of biodiversity, better understanding of the microorganisms, and using bioinformatics tools for finding solutions of various crippling human/plant diseases with ethical, societal, and environmental considerations.

**PO-4: Conduct investigations of complex problems:** Use the various protocols developed through extensive research-based knowledge and methods including design of experiments, analysis and interpretation of data, and provide valid and reproducible conclusions.

**PO-5: Modern Molecular Biology and Bioinformatics tools usage:**

Develop new technologies, protocols, resources, using modern molecular biology, biotechnology and bioinformatics tools and apply it to solve complex human health

problems, plant stress tolerance and conserve floral biodiversity of medicinally important plants with an understanding of the limitations of this region.

**PO-6: Graduate Student and society:** Apply the classic and modern biological theoretical and practical knowledge gained to address societal, health, microbial and plant biodiversity studies, safety, ethical and cultural issues and the consequent responsibilities relevant to the professional up gradation of the student and society as a whole.

**PO-7: Environment and sustainability:** Understand the impact of hot spot of biodiversity. The professional UG students will have a better understanding of societal and environmental concerns, and demonstrate their knowledge, and need for sustainable development.

**PO-8: Ethics:** Apply ethical principles established by different government agencies and commit to research ethics, responsibilities and norms to undertake their current and future research and development.

**PO-9: Individual and team work:** Be an independent thinker and researcher effectively as an individual, and as a member or leader of different teams, and in multidisciplinary research Institutions and Universities.

**PO-10: Communication:** Communicate effectively on complex research activities with the scientific community and with society at large, as a scientist or a teacher, be well versed with scientific writing and write effective reports and design research projects, make effective presentations, and be able to defend it efficiently.

**PO-11: Project management and finance:** Write good research and development projects relevant to the needs of society and environment and attract extra mural funds for himself and his team in the Institute or University from various funding agencies and manage R&D projects effectively.

**PO-12: Life-long learning:** Apply the discipline, ethics and knowledge obtained to engage in independent and life-long learning in their respective fields of interest wherever they go for further higher studies or jobs

### **PROGRAM SPECIFIC OBJECTIVES**

- ❖ **PSO1:** To introduce the concepts in various allied subjects
- ❖ **PSO2:** To enrich students' knowledge
- ❖ **PSO3:** To help the students to build interdisciplinary approach
- ❖ **PSO4:** To inculcate sense of scientific responsibilities and social and environment awareness
- ❖ **PSO5:** To help students build-up a progressive and successful
- ❖ **PSO1:** To help the students to build interdisciplinary approach
- ❖ **PSO2:** To empower students to excel in various research fields of Life Sciences
- ❖ **PSO3:** To inculcate sense of scientific responsibilities and social and environment awareness
- ❖ **PSO4:** To understand role of biotechnology various fields for betterment of life
- ❖ **PSO5:** To help student build-up a progressive and successful career