



Manipal University Jaipur

Faculty of Science, Technology and Architecture

Department of Biosciences

Bachelor of Science in Biotechnology (Honours/Honours with Research)

(2026 onwards)

Program Outcomes, Program Specific Outcomes & Program Educational Objectives

Program Outcomes (POs)

- [PO 1]. **Critical Thinking:** Take informed actions after identifying the assumptions that frame our thinking and actions, checking out the degree to which these assumptions are accurate and valid, and looking at our ideas and decisions (intellectual, organizational and personal) from different perspectives.
- [PO 2]. **Effective Communication:** Speak, read, write and listen clearly in person and through electronic media in English and in one Indian language, and make meaning of the world by connecting people, ideas, books, media and technology.
- [PO 3]. **Social Interaction:** Elicit views of others, mediate disagreements and help reach conclusions in group settings.
- [PO 4]. **Effective Citizenship:** Demonstrate empathetic social concern and equity centered national development, and the ability to act with an informed awareness of issues and participate in civic life through volunteering.
- [PO 5]. **Ethics:** Recognize different value systems including your own, understand the moral dimensions of your decisions, and accept responsibility for them.
- [PO 6]. **Environment and Sustainability:** Understand the issues of environmental contexts and sustainable development.
- [PO 7]. **Self-directed and Life-long Learning:** Acquire the ability to engage in independent and life-long learning in the broadest context socio-technological changes

Program Specific Outcomes (PSOs)

- [PSO 1]. Apply core concepts of molecular biology, genetics, biochemistry, and microbiology to address biological problems.
- [PSO 2]. Perform and analyze experiments using modern biotechnological tools, techniques, and bioanalytical methods.
- [PSO 3]. Use bioinformatics and computational approaches for biological data analysis and interpretation
- [PSO 4]. Demonstrate research aptitude, scientific communication skills, and adherence to bioethics, biosafety, and regulatory standards.

Program Educational Objectives (PEOs)

- [PEO 1]. Graduates will gain a strong conceptual foundation in core and applied areas of biotechnology.
- [PEO 2]. Graduates will develop practical laboratory skills and analytical abilities using modern biotechnological tools and techniques.
- [PEO 3]. Graduates will be prepared for higher education, research, and innovation through scientific inquiry and problem-solving.
- [PEO 4]. Graduates will contribute effectively to biotechnology-related industries and societal needs in health, agriculture, and the environment
- [PEO 5]. Graduates will demonstrate ethical conduct, professional responsibility, and commitment to lifelong learning and entrepreneurship.