

Biotechnology

Introduction

Biotechnology is the use of biological processes, organisms, or systems to manufacture products intended to improve the quality of human life. We have used the biological processes of microorganisms for more than 6,000 years to make useful food products, such as bread and cheese, and to preserve dairy products.

Example: Modern biotechnologies involve making useful products from whole organisms or parts of organisms, such as molecules, cells, tissues and organs. Recent developments in biotechnology include genetically modified plants and animals, cell therapies and nanotechnology

Eligibility

10+2 with science stream

Branches

- Microbiology
- Cell Biology
- Molecular Genetics
- Bioprocess Engineering
- Bio Informatics
- Biochemistry
- Bio Robotics

Top Institutes

IITs

- IIT Kharagpur
- IIT Chennai

Admission Mode : JEE Advance

- IIT Guwahati
- IIT Roorkee

NITs

- NIT Jalandhar
- MNIT Allahabad
- NIT Agartala
- NIT Warangal
- NIT Calicut
- NIT Durgapur
- NIT Raipur
- NIT Rourkela

Admission Mode: JEE Mains

SRM University, Chennai

Course: B.Tech. Biotechnology

Eligibility: For Kattankulathur campus: Minimum 60% aggregate in PCM / PCB

For NCR, Delhi campus:

Minimum 50% aggregate in PCM / PCB Passed in (10+2 pattern) with Physics, Chemistry and Mathematics or Biology or Biotechnology as major subjects in regular stream from any state board within India, CBSE, ISCE, Matriculation, or NIOS

Admission Mode: (SRMJEEE)

Guru Gobind Singh Indraprastha University, Delhi

Course:B.Tech/ M.Tech (Dual Degree) (Bio-Technology)

Eligibility: 10+2 with 55% marks in PCB/ Biotechnology. Candidate must additionally have passed in English.

Admission Mode: JEE Mains

Vellore Institute Of Technology, Tamil Nadu

Course:B.Tech. Biotechnology

Eligibility: 10+2 with 60% marks with PCB/M

Admission Mode: VITEEE

Panjab University, Chandigarh

Course: Bachelor of Science (Honours) Biotechnology

Eligibility: Should have passed 10+2 examination with at least 50% marks with English, PCM/B

Admission Mode: PU-CET

Panjab University (Affiliated Colleges), Chandigarh

Course: B.Sc. (Biotechnology Honours),B.Sc. Medical (Biotechnology Elective)

Eligibility: Should have passed 10+2 examination with at least 40% marks with English, PCB/M

Admission Mode: Marks BasesColleges under Panjab University

DAV College Sector-10

Sri Guru Gobind Singh College Sector-26

Goswami Ganesh Dutta S.D. College, Sector-32

Post Graduate Govt. College Sector- 11 (PGGC-11)

Post Graduate Govt. College for Girls Sector-42(PGGCG-42)

Mumbai University, Mumbai

Course B.Sc. Biotechnology

Eligibility 12th pass out with Science stream with English as a Subject

Admission Mode MH-CET

Fergusson College, Pune

Course: B.Sc. Biotechnology

Eligibility: Should have passed 10+2 examination with at least 50% marks with English, PCM/B

Admission Mode: Marks Based

Indian Council of Agricultural Research (ICAR)- AIEEA

All India Entrance Examination for Admission (AIEEA)-UG shall be conducted for admission to Bachelor Degree programmes in Agriculture and allied sciences (other than veterinary sciences), at Agricultural Universities on 15% of the University seats (100% seats in RLB CAU Jhansi, NDRI Karnal and Dr. RP CAU Pusa, Bihar)

Course: B.Sc. Biotechnology

Eligibility: 10+2 examination or equivalent/Inter (Agriculture) with PCM/ PCB/ PCMB/ PCA/ PCH subject combinations with 50% marks in aggregate

Admission Mode: ICAR CUET

D.Y. Patil University, Pune

Course: B. Tech. (Medical Biotechnology)

Eligibility: 10+2 with 50% marks with PCB

Admission Mode: MH-CET , JEE MAINS Score

University Institute of Engineering & Technology (PU, Chandigarh)

Course: B. E. Biotechnology

Eligibility: 10+2 50 % marks in PCB/PCM

Admission Mode: Entrance Test conducted by CBSE (JEE) Mains

Thapar University, Patiala

Course: B.Tech. Biotechnology

Eligibility: 10+2 with 60% marks with PCB

Admission Mode 1: Based on JEE Mains or NEET score for 70% of seats

Admission Mode 2: Based on 10+2 marks in PCB for 30% of the available seats

Osmania University, Hyderabad

Course: B.Sc. Biotechnology

Eligibility: 10+2 with PCM/PCB

Admission Mode: Marks based admission and TSEAMCT

Types of Biotechnology include:

Environmental - detecting and controlling pollution and contamination in the environment, industrial waste, and agricultural chemicals, creating renewable energy and designing biodegradable materials to reduce humanity's ecological footprint

Medical and Health - using live organisms or biomolecular processes to develop and improve treatments, identify inherited diseases, cure certain disorders, and even lead to organ regeneration

Industrial - using cloning and enzyme production to preserve and enhance the taste in food and drink, and developing enzymes to remove stains from clothing at lower washing temperatures

Agricultural Biotechnology - improving animal feed and genetically modifying crops to increase pest resistance and productivity

Biofuels- using organic compounds to reduce the cost of bio-refining reagents and put biofuels on an equal footing with fossil fuels, and creating chemicals from renewable biomass to reduce greenhouse gas emissions

Marine and Aquatic Biotechnology- Increasing the yields of farmed fish and designing disease-resistant strains of oysters and vaccines against certain viruses that can infect fish.

Job prospects

- Biotechnology and genetic engineering firms
- Food and drink manufacturers
- Environmental and conservation (sewage and waste treatment, fuel, pollutant degradation) companies
- Government and charity research institutes
- Horticulture and Agriculture organisations (food and drink science)
- NHS and private Hospitals
- Pharmaceutical and chemical companies
- Private clinical research companies (genetics, disease detection, therapy, etc.)
- Universities.

Disclaimer: The information provided here is to the best of our knowledge. It is highly recommended that you cross check the source of information through the specific Colleges and Universities. Career Prabhu is in no way responsible for the decisions made solely on the basis of this document