

# Microbiology

**The aim of the graduate degree in Microbiology is to make students knowledgeable about the various basic concepts in a wide ranging contexts which involve the use of knowledge and skills of Microbiology.**

1) In the flourishing field of microbiology graduate can investigate and understand the behavior of miscellaneous microbes and their impact on human lives. Microbiologist can work as researcher in the field of:

- Bacteriologists.
- Clinical microbiologist.
- Environmental microbiologist.
- Mycologists.
- Industrial microbiologist.

**2) The Knowledge gained by include:** Apply the knowledge to understand the microbial physiology and to identify the microorganisms.

3) Student understand the regulation of biochemical pathway and possible process modifications for improved control over microorganisms for microbial product synthesis.

4) They get capability to explain principles/concept of Prokaryotic and Eukaryotic genetics, Viral genetics and application in research, Mutagenesis, Mutation and mutants and their significance in microbial evolution, Application of bacterial and eukaryotic plasmids in research.

5) Develop the ability to use techniques and instruments involved in the study of microorganisms and their products.

6) Explain the concept of marine environments and the factors governing them. As well as the principles of marine microbiology to understand the biological phenomena occurring in marine environments, so that it can use in Marine research.

**7) Graduate mastered a set of fundamental skills,** the skills include: Laboratory skills, data analysis skills, Nature of Science and Scientific Inquiry, problem solving, enable to work in critical environment.

**8) Significant employers of microbiologists graduate include:**

- The state government, excluding education and hospitals—18%
- Universities, colleges, and professional schools; state, local and private—14%
- Medicine manufacturing and pharmaceutical—32%
- Research and development in life sciences—36%

9) **The graduate can work in the field of :** – Academics, Industry (water and biotechnology companies, food and drink) pharmaceuticals, Environmental organizations, Public health organizations, laboratories, healthcare and Publicly funded research organizations.

**10) The graduate get eligibility in the govt institute/ Organization include:** FSSAI, National Health Mission, DRDO, NCDC, IRCTC, HPCL Biofuels, Tea Board, National Tuberculosis Institute (NTI), KIIDC, CSIR – CSMCRI and so many govt jobs.