

JAIN UNIVERSITY

Declared as Deemed-to-be University u/s 3 of the UGC Act, 1956



Master of Science Microbiology

www.jainuniversity.ac.in

Course Overview

Microbiology is an integral part of many different scientific studies, such as immunology, genetics, molecular biology, biochemistry, medicine, agriculture, ecology, industrial processes and many more. Course deals with general concepts, methods, and applications in microbiology. Laboratory portion of the course provides first hand experiences that inform, illustrate, expand and reinforce major concepts discussed in lecture.

Programme Name

Master of Science

Programme Code

044

Course Code & Name

4402 – M.Sc in Microbiology

Degree Awarded

Master of Science

Duration of the Programme

2 years, 4 semesters

Total Credits

128

Eligibility

The minimum qualification required to apply is a bachelor's degree in biotechnology / microbiology / botany / biochemistry

Medium of Instruction / Examination

English

Study Campus

Center for Post Graduate Studies
Jayanagar 3rd Block, Bangalore

Programme Timings

8.30 am – 4.30 pm (Mon – Fri) & 8.30 am – 1.00 pm (Sat)

Course Advisor

Dr. T Padmavathi

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Examinations & Assessments

1. Internal tests
2. Assignments
3. Seminar presentation
4. Preparatory theory and Practical examination
5. End term theory and Practical examination

Curriculum

Semester I

- Microbial Systematics and Bacteriology
- Mycology and Phycology
- Immunology
- Biochemistry & Microbial physiology

Learning Labs

- Microbial Systematics / Bacteriology / Mycology and Phycology
- Biochemistry /Physiology / Immunology

Semester II

- Molecular Biology
- Microbial and Molecular Genetics
- Medical microbiology
- Agricultural microbiology

Learning Labs

- Molecular Biology / Genetics
- Medical / Agricultural microbiology

Semester III

- Recombinant DNA Technology
- Environmental microbiology
- Industrial microbiology

Elective (any one)

- Pharmaceutical microbiology
- Hospital Infection Control
- Microbial genomics
- Biopolymers

Learning Labs

- Recombinant DNA Technology / Environmental & Food / Industrial / Techniques
- Elective (Practical)

Semester IV

- Biostatistics
- Microbiological, Biophysical and Biochemical Techniques

Elective (any one)

- Microbial Inoculants
- Extremophiles
- Biological Waste Management
- Dairy Microbiology

Learning Labs

- Elective (Practicals)
- Project presentation + defense
- Comprehensive Viva-voce

Career Opportunities

Microbiologists have wide scope in various pharmaceutical, biochemical, biotechnology industries (marketing, technical support and regulatory affairs), education (teaching, museums and science centres), business (patent attorney or accountant) and communications (public relations, journalism and publishing).