



योग: कर्मसु कौशलम्

Darshan
UNIVERSITY

B.Sc.

BACHELOR OF SCIENCE IN MICROBIOLOGY



A
Science
Undergraduate
Program that Provides
Fundamental & Applied
Interdisciplinary Education in
Life-science Subjects



B.Sc. Microbiology

Are you interested in the study of small things with a big impact?

Microbiology is one of the emerging and applied branches of life science that directly impacts essential areas of human life & welfare. The program is a broad disciplinary field of biological science that involves the study of the function, structure, pathogenicity, and useful applications of existing microscopic organisms. This field of study overlaps other various degree areas of biological sciences such as biochemistry, molecular biology, genetics, immunology, etc. Microbiology can offer one of the most promising career opportunities in this 21st century.

The program is best suited for the students who want to pursue a career in scientific experimental studies and analytical processes inside the laboratory of the Pharmaceutical Industry, Clinical Research, Agriculture, Dairy and Food Industry, Water Industry, Nanotechnology, Bioprocess Industry, etc. Microbiologists are always in high demand in countries like India, U.K., U.S., France, Australia, and Germany, which creates local to global opportunities in this sector.



B.Sc. Microbiology @ Darshan University



Highly qualified, well experienced, industry linked, dedicated faculties.



Curriculum designed for outcome-based learning.



A strong theoretical foundation for crystal clear fundamentals.



Exposure to cutting-edge technologies through field visits, seminars, and workshops.



Inter-disciplinary, management, and soft skill courses for holistic learning.



Industrial and research standard laboratories.



Hands-on experiments aligned with modern scientific principles.



Career Oppotunities

Government Sectors



Health Services



Biodiversity Board



Scientific Adviser



R & D Laboratories



Forensic Scientist



Oil & Natural Gas Industry



Academic Institutes



Agriculture Departments



Space Microbiologist

Private Sectors



Food & Cosmetics Industries



Biotechnology Firms



Bio-Pharmaceuticals



Agriculture Industries



Diagnostics & Healthcare



Fermentation Industries



Pharmaceutical Industries



Fisheries Industries



Startup



Syllabus

Semester-1

- Fundamentals of Microbiology
- Basics of Biochemistry
- Discipline Specific Elective - 1
- Environment Science
- Human Value & Personality Development
- Core Course Practical - 1
- Elective Course Practical - 1

Semester-2

- Microbial Diversity & Systematic
- Microbial Growth and Control
- Discipline Specific Elective - 2
- Scientific and Technical Communication Skill
- Seminar / Poster Presentation
- Core Course Practical - 2
- Elective Course Practical - 2

Semester-3

- Microbial Ecology & Environmental Microbiology
- Microbial Physiology and Metabolism
- Discipline Specific Elective - 3
- General Elective - 1
- Massive Open Online Course
- Core Course Practical - 3
- Elective Course Practical - 3

Semester-4

- Bio- Analytical Techniques
- Microbial Genetics and Molecular Biology
- Discipline Specific Elective - 4
- General Elective - 2
- Microbiology Professional Preparedness
- Core Course Practical - 4
- Elective Course Practical - 4

Semester-5

- Food and Dairy Microbiology
- Genetic Engineering & Microbial Biotechnology
- Immunology
- Skill Enhancement Course - 1
- Project Part - 1
- Core Course Practical - 5

Semester-6

- Advances in Microbiology and Bioinformatics
- Industrial Microbiology
- Virology and Medical Microbiology
- Skill Enhancement Course - 2
- Project Part - 2
- Core Course Practical - 6

Elective Courses

- Biophysics and Instrumentation
- Microbial Techniques and Instrumentation
- Bio-computing and Biostatics
- Cell Biology
- Agriculture Microbiology
- Mycology & Phycology
- Biosafety and Pharmaceutical Microbiology
- Microbial Enzyme Technology

ADD - ON Courses

- Food Fermentation Techniques
- Microbial Products
- Microbial Analysis of Air, Water and Soil
- Microbial Quality Control in Food and Pharmaceutical Industries
- Interactions with Entrepreneurs in Microbial Biotechnology and Start-ups



Skill Enhancement Activities @ DU



Microbial Analysis for Food Spoilage



Advance Instrumentation Training



Scientific Seminar Presentation



Industry Visit @ UFresh



Motivational Talk



Biochemical Analysis of Enzymes



Research and Development Laboratory Visit



Waste Management



Central Instrumentation Facility @ DU



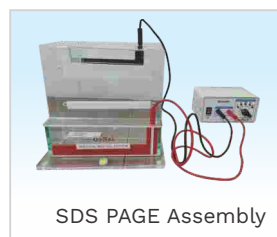
Orbital Shaking Incubator



Laboratory Oven



Trans-Illuminator



SDS PAGE Assembly



pH Meter



Bacteriological Incubator



Universal Refrigerated Centrifuge



UV-Visible Spectrophotometer



Laminar Air Flow Cabinet



Autoclave



Darshan
UNIVERSITY

योग: कर्मसु कोशलम्

University Campus

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Rajkot – 363650.
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Counseling Centre

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