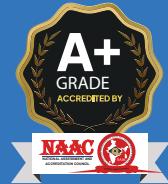




DAYANANDA SAGAR  
UNIVERSITY



Powering Scientific Minds for  
Breakthrough Innovation!

A close-up photograph of a female scientist with dark hair, wearing a white lab coat, looking down at a piece of equipment or a sample in a laboratory setting. The background is blurred, showing laboratory glassware and equipment.

**M.Sc.**  
Basic Sciences

**School of Basic and Applied Sciences**

# Index

<b>About DSU.....</b>	<b>01</b>
<b>About School of Basic &amp; Applied Sciences.....</b>	<b>02</b>
<b>Message from the Dean.....</b>	<b>03</b>
<b>Why Choose Dayananda Sagar University?.....</b>	<b>04</b>
<b>Specializations.....</b>	<b>05</b>
<b>Salient / Unique Features of Curriculum.....</b>	<b>21</b>
<b>Project / Thesis Components.....</b>	<b>21</b>
<b>Industry Tie-Ups &amp; Industry Projects.....</b>	<b>22</b>
<b>Companies Offering Internships.....</b>	<b>22</b>
<b>Placements.....</b>	<b>22</b>
<b>Facilities &amp; Resources.....</b>	<b>23</b>
<b>Alumni Connect &amp; Success Stories.....</b>	<b>25</b>
<b>Labs.....</b>	<b>26</b>
<b>Campus Features.....</b>	<b>27</b>
<b>Library.....</b>	<b>27</b>

# About DSU

## DSU & its Rich Legacy of Excellence & Innovation

Dayananda Sagar Institutions, founded in the 60s by the visionary Late Sri R. Dayananda Sagar (Barrister-at-Law), is committed to taking knowledge to the people and transforming today's students into responsible citizens and professional leaders of tomorrow.

Dayananda Sagar University (DSU), established by an Act of the Karnataka State in 2014, is built on this proud legacy and inspired by its significant milestones. It continues to meet the growing demand for quality higher education in this part of the world.

DSU is one of the most dynamic centers for transformative education, technological innovation, and multidisciplinary research across engineering, law, management, and media. As a young, proactive, and leading university, DSU is breaking new ground by introducing advanced and innovative teaching technologies aimed at fostering the enduring skills and mindsets students need for the modern world.



## University Accreditation and Rankings



Promising Private University for Academic Excellence & Learning



Teaching Excellence  
Research Excellence  
Placement 2022  
Emerging Engineering Institute  
Research Capabilities

Emerging engineering institute  
Emerging engineering Institute  
Placement 2022  
Emerging Engineering Institute  
Research Capabilities

DSU has 1  
Rank No. 1  
By TIMES OF INDIA  
2022

2023  
ET THE ECONOMIC TIMES  
Excellence in Academic Facilities &  
Learning Resources



TOP PRIVATE UNIVERSITIES IN INDIA (OVERALL)

STATE RANK 3 SOUTH ZONE RANK 3

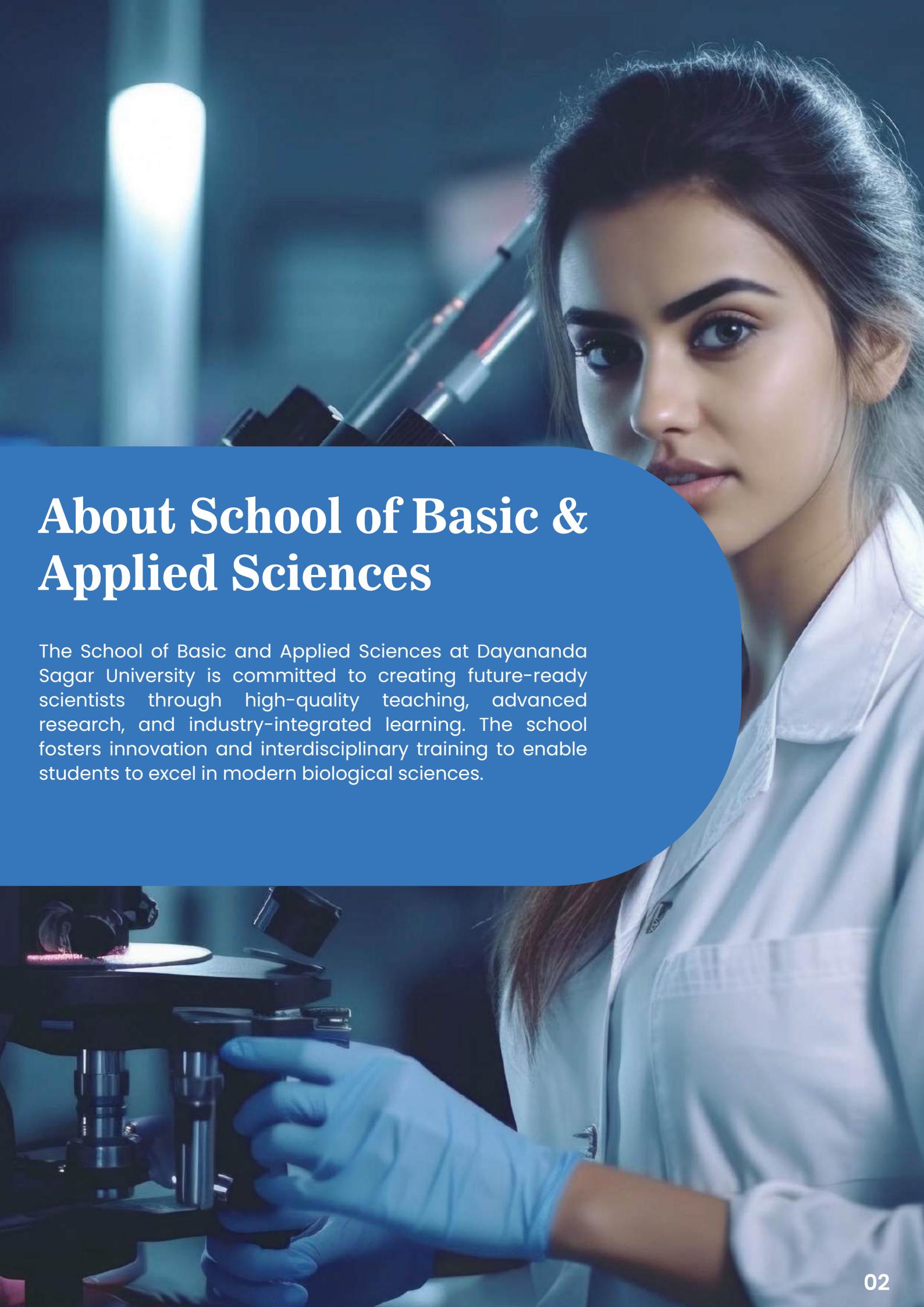


Excellence in Employability & Placement Performance

— TIMES —  
BUSINESS AWARDS

34<sup>th</sup> etls  
WORLD  
EDUCATION  
SUMMIT  
CHENNAI  
2023  
01- November 2023

OUTSTANDING  
UNIVERSITY WITH  
BEST PLACEMENTS



# About School of Basic & Applied Sciences

The School of Basic and Applied Sciences at Dayananda Sagar University is committed to creating future-ready scientists through high-quality teaching, advanced research, and industry-integrated learning. The school fosters innovation and interdisciplinary training to enable students to excel in modern biological sciences.

# Message from the Dean

Welcome to School of Basic & Applied Sciences (SBAS), Dayananda Sagar University (DSU)!

Dayananda Sagar University (DSU) run under the aegis of Mahatma Gandhi Vidya Peetha Trust (MGVPT) is a dynamic and modern University, which aims to provide quality education to aspiring student community. DSU offers programs from Under-graduate section to Ph.D program, with affordable and flexible learning options with generous credit transfer. It works closely with the student community and ensures that they get globally relevant education to realize their cherished goals in life.

The School of Basic and Applied Sciences is a force to reckon with in the campus. It has well qualified, experienced and dedicated faculty with exceptional research profiles and vision. Its areas of research interest and expertise cover a broad range from basic to modern sciences. Academic pursuit at DSU will be an inspiring, challenging and enjoyable experience which the students will cherish forever.

The School with all its facilities and fine ambience promises the aspiring young minds, an all-round development in terms of intellectual and personality development.

I am sure the journey of students at DSU will be enlightening, encouraging and rewarding.



**Dr. Sunil S. More**

Professor & Dean  
SBAS, DSU

# Why Choose Dayananda Sagar University?

The School of Basic and Applied Sciences at Dayananda Sagar University is committed to producing globally competent graduates through:

## World-Class Infrastructure

Fully equipped laboratories with cutting-edge instruments for molecular biology, chemistry, and biotechnology.

## Research Excellence

Opportunities to engage in high-impact research through collaborations with leading industries and academic institutions.

## Holistic Development

Workshops, internships, and hands-on projects to ensure students are industry-ready.

## Global Exposure

International partnerships and participation in global scientific forums enhance learning and innovation.

Our mission is to cultivate scientific curiosity, innovation, and excellence. The M.Sc. Molecular Biology and Genetics program embodies our commitment to shaping skilled researchers who can contribute meaningfully to healthcare, biotechnology, and molecular science.

# Specializations

- ◆ **M.Sc. in Biotechnology**
- ◆ **M.Sc. in Biochemistry**
- ◆ **M.Sc. in Microbiology**
- ◆ **M.Sc. in Molecular Biology & Genetics**

## M. Sc. in Biotechnology

The M.Sc. in Biotechnology is an interdisciplinary postgraduate program designed to train students in the application of biological systems and organisms for technological and industrial advancement. Unlike traditional Life Sciences programs that focus primarily on theoretical biology, this program integrates molecular biology, genetics, biochemistry, microbiology, and engineering principles to address challenges in healthcare, agriculture, industry, and environmental sustainability. The curriculum emphasizes both fundamental biological concepts and cutting-edge biotechnological applications, enabling students to translate laboratory discoveries into scalable technologies and products.

## Core Technical Competencies Include

**Recombinant DNA technology and molecular cloning**

**Microbial plant and animal cell culture techniques**

**Bioprocess engineering and fermentation technology**

**Downstream processing and product purification**

**Industrial enzymes and biopharmaceutical production**

**Bioinformatics, systems biology, and omics-based analysis**

The program combines hands-on laboratory training, industry-oriented coursework, and research-driven projects to prepare graduates for careers in biotechnology industries, research institutions, and regulatory sectors.

## Program Vision & Mission

The program aims to develop highly competent biotechnologists capable of innovating across medical, industrial, agricultural, and environmental domains. By providing rigorous training in molecular and cellular biotechnology, bioprocess development, and data-driven biological analysis, the program cultivates critical thinking, technical expertise, and entrepreneurial mindset. The mission is to bridge the gap between biological research and commercial application, empowering graduates to contribute meaningfully to biotechnology-driven solutions that address global health, sustainability, and industrial challenges.

# Program Duration

2 years (4 semesters)

## Eligibility

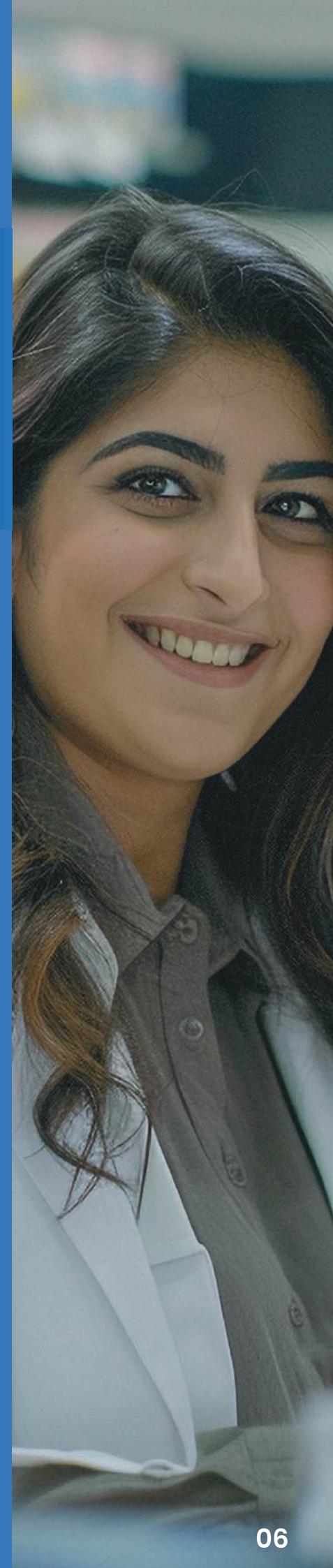
Applicants must hold a B.Sc. degree in Life Sciences or a related discipline (such as Biotechnology, Genetics, Microbiology, Biochemistry, etc.), with a minimum aggregate score as specified by university regulations.

## Program Unique Features

- ◆ Extensive hands-on training in core and advanced biotechnological laboratory techniques
- ◆ A dedicated full-semester dissertation and independent research project
- ◆ Training in recombinant DNA technology, microbial and cell culture systems, and bioprocess development
- ◆ Exposure to industrial biotechnology, biopharmaceuticals, and enzyme technology
- ◆ Integrated learning in bioinformatics, systems biology, and omics-based data analysis
- ◆ Practical exposure through internships, industrial visits, and collaborations with research laboratories and biotech industries

## Core Courses & Electives

The program is designed to provide a strong interdisciplinary foundation in biotechnology, integrating biological sciences with technological and industrial applications. Students acquire both theoretical knowledge and hands-on practical skills through the following courses:



# Core Courses

- ◆ Principles of Biotechnology
- ◆ Molecular Biology and Recombinant DNA Technology
- ◆ Microbiology and Microbial Biotechnology
- ◆ Biochemistry and Enzyme Technology
- ◆ Cell Culture and Bioprocess Technology
- ◆ Bioinformatics and Omics Data Analysis

# Elective Courses

- ◆ Industrial Biotechnology and Fermentation Technology
- ◆ Medical and Pharmaceutical Biotechnology
- ◆ Agricultural and Plant Biotechnology
- ◆ Environmental and Waste Management Biotechnology
- ◆ Nanobiotechnology
- ◆ Systems Biology and Computational Biotechnology



# Program Industry Insights (Market Demand)

The global biotechnology industry is experiencing sustained and accelerated growth, with an estimated CAGR of 12-14%, driven by advances in biopharmaceuticals, industrial biotechnology, diagnostics, and sustainable technologies. This growth has led to a strong demand for skilled biotechnologists across diverse application domains, including:

- ◆ Biopharmaceutical and biosimilar development
- ◆ Industrial enzymes and fermentation-based products
- ◆ Molecular diagnostics and biomedical technologies
- ◆ Agricultural and plant biotechnology innovations
- ◆ Bioinformatics, omics technologies, and data-driven biology
- ◆ Key industries actively recruiting biotechnology graduates include:
  - ◆ Biotechnology and biopharmaceutical companies
  - ◆ Diagnostic, healthcare, and clinical testing laboratories
  - ◆ Contract Research Organizations (CROs) and Contract Development & Manufacturing Organizations (CDMOs)
  - ◆ Vaccine, enzyme, and biologics manufacturing units
  - ◆ Agri-biotech, food biotech, and environmental biotech firms
  - ◆ Biotech startups and technology-driven life science enterprises



# Emerging Job Opportunities

Graduates of the M.Sc. in Biotechnology program are well-prepared for diverse and evolving career paths in research, industry, healthcare, and academia, supported by strong experimental and analytical training. Emerging and high-demand roles include:

- ◆ Biotechnology Research Associate / Scientist
- ◆ Bioprocess Development Scientist
- ◆ Quality Control (QC) / Quality Assurance (QA) Analyst
- ◆ Clinical Research Associate (CRA)
- ◆ Regulatory Affairs Executive
- ◆ Bioinformatics or Omics Data Analyst
- ◆ Molecular Diagnostics and Assay Development Specialist
- ◆ Industrial Microbiologist
- ◆ Academic and Research Laboratory Manager
- ◆ Biotechnology Entrepreneur / Startup Associate

## Experiential Learning

Experiential learning is a core component of the M.Sc. in Biotechnology program, designed to bridge classroom knowledge with real-world applications through immersive and practice-oriented experiences. Key components include:

- ◆ Extensive hands-on training through wet-lab practical sessions in molecular, microbial, and bioprocess laboratories
- ◆ Practical workshops in bioinformatics, data analysis, and omics-based tools
- ◆ Expert lectures, seminars, and interactions with professionals from academia, industry, and research organizations
- ◆ Educational visits to biotechnology industries, research institutes, and life science organizations



# **M. Sc. in Microbiology**

The M.Sc. in Microbiology is an advanced postgraduate program aimed at imparting comprehensive theoretical understanding and rigorous practical training in the study of microorganisms and their applications in health, industry, agriculture, and environmental systems. The program extends beyond descriptive and taxonomic microbiology, emphasis is given to microbial physiology, metabolism, pathogenic mechanisms, industrial utilization, and contemporary diagnostic methodologies, thereby equipping students with the competencies required for professional and research-oriented practice.

## **Core Technical Competencies Include**

**Isolation, cultivation and preservation of microorganisms**

**Microscopy (bright field, phase contrast)**

**Differential and special staining techniques for microbial visualization and identification**

**Biochemical characterization of microorganisms using enzyme and substrate-based assays**

**Antimicrobial Susceptibility Testing (AST)**

**Microbial growth kinetics**

**Biosafety practices, biohazard handling, and implementation of laboratory safety protocols**

**Industrial microbiology techniques including fermentation and bioremediation**

**Microbial load assessment of environmental samples**

**Immunological assays**

**Microbial quality control testing and sterility assurance procedures**

The program integrates a strong theoretical foundation with extensive laboratory training and research-oriented learning, preparing graduates for advanced study, research, and professional roles in microbiology and allied disciplines.

# Program Vision & Mission

The program aims to develop skilled microbiologists with strong analytical, experimental, and problem-solving abilities. Through comprehensive training in classical and applied microbiology, the program prepares students to address real-world challenges in healthcare, biotechnology, food safety, and environmental management while promoting ethical scientific practices and research excellence.

## Program Duration

**2 years (4 semesters)**

## Eligibility

Applicants must hold a B.Sc. degree in Life Sciences or a related discipline (Biotechnology, Genetics, Microbiology, Biochemistry, Molecular biology) with a minimum aggregate score as specified by university regulations.

## Program Unique Features (Highlights)

- ◆ Extensive hands-on training in core and applied microbiology laboratory techniques
- ◆ Dedicated research project and dissertation
- ◆ Structured exposure to clinical, industrial, and environmental microbiology
- ◆ Training in microbial diagnostics, quality control procedures, and laboratory best practices
- ◆ Industry-oriented curriculum aligned with current scientific, regulatory, and workforce requirements



# Core Courses & Electives

The curriculum is structured to provide strong conceptual understanding and applied skills through a balanced mix of theory and practical courses.

## Core Courses

- ◆ General Microbiology
- ◆ Microbial Physiology and Metabolism
- ◆ Medical Microbiology
- ◆ Immunology
- ◆ Industrial Microbiology
- ◆ Environmental Microbiology
- ◆ Microbial Genetics

## Elective Courses

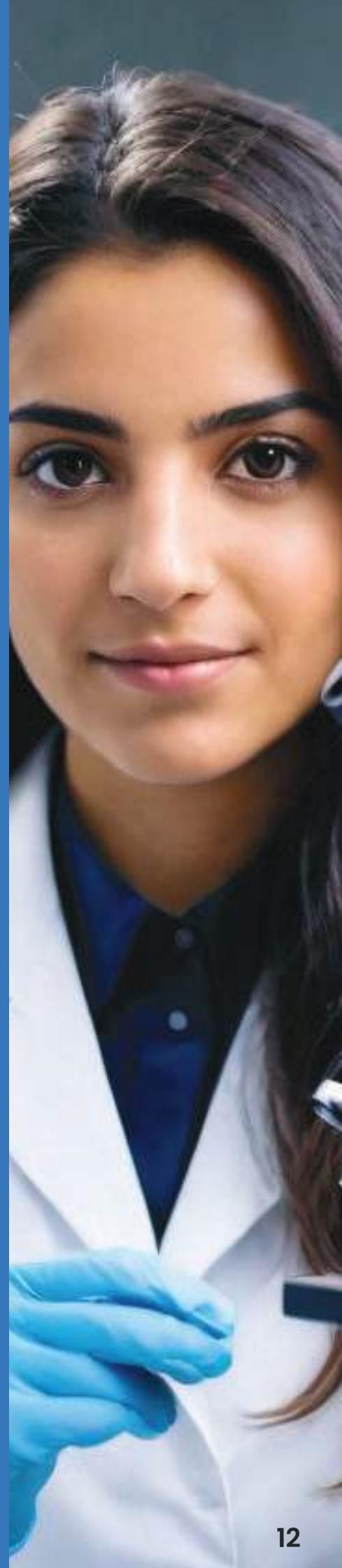
- ◆ Food and Dairy Microbiology
- ◆ Virology
- ◆ Molecular Microbiology
- ◆ Biosafety and Bioethics

## Program Industry Insights (Market Demand)

Microbiology continues to be a high-demand discipline due to its critical role in healthcare, pharmaceuticals, food safety, biotechnology, and environmental management. Advances in infectious disease diagnostics, antimicrobial resistance monitoring, vaccine development, and industrial bioprocessing have significantly increased the need for trained microbiology professionals.

Graduates with strong laboratory skills are increasingly sought in:

- ◆ Clinical and diagnostic laboratories
- ◆ Pharmaceutical and biotechnology industries
- ◆ Food, dairy, and water quality testing sectors
- ◆ Environmental monitoring and waste management organizations
- ◆ Research and development laboratories



# Emerging Job Opportunities

Graduates of the M.Sc. Microbiology programs are prepared for a range of professional roles across healthcare, industry, research, and academia. Career pathways include:

- ◆ Microbiologist
- ◆ Clinical Laboratory Scientist
- ◆ Quality Control and Quality Assurance Analyst
- ◆ Industrial Microbiology Executive
- ◆ Infection Control Officer
- ◆ Research Assistant / Junior Scientist
- ◆ Teaching and Academic Support Roles
- ◆ Technical Officer in Diagnostic or Testing Laboratories

Graduates may also pursue doctoral studies, competitive examinations, or specialized certifications in microbiology and allied disciplines.

## Experiential Learning

Experiential learning is a core component of the M.Sc. Microbiology curriculum and is embedded throughout the program to bridge theoretical concepts with practical application. Students engage in structured laboratory sessions that emphasize skill development, accuracy, and analytical thinking.

## Key experiential learning components include

- ◆ Hands-on training in routine and advanced microbiology laboratory techniques
- ◆ Culture handling, media preparation, sterilization, and aseptic practices
- ◆ Diagnostic microbiology workflows and interpretation of laboratory results
- ◆ Application-based practicals in industrial and environmental microbiology
- ◆ Research-oriented laboratory assignments and mini-projects

# M.Sc. in Biochemistry

The M.Sc. in Biochemistry is an advanced postgraduate program designed to provide a comprehensive understanding of the chemical and molecular basis of life. The program emphasizes the structure, function, and regulation of biomolecules, including proteins, nucleic acids, lipids, and carbohydrates, and their roles in cellular metabolism and signaling. Unlike conventional Genetics programs that focus primarily on inheritance patterns or broad Biotechnology courses, this program offers in-depth training in enzymology, metabolic pathways, biomolecular interactions, gene regulation at the molecular level, and biochemical alterations associated with disease. Students gain hands-on experience with state-of-the-art biochemical and molecular techniques such as chromatography, spectroscopy, electrophoresis, enzyme kinetics, immunoassays, and molecular biology tools. The curriculum is designed to develop strong analytical, experimental, and research skills, preparing graduates for careers in biomedical research, diagnostics, pharmaceuticals, biotechnology, and higher academic pursuits.

## Core Technical Competencies Include

**Enzyme kinetics and metabolic pathway analysis**

**Protein purification, characterization, and structural analysis**

**Quantitative PCR and gene expression analysis**

**DNA and RNA isolation, molecular cloning, and sequencing techniques**

**Bioinformatics tools for protein, pathway, and omics data analysis**

The program integrates rigorous hands-on laboratory training, research-driven learning, and industry-oriented exposure to equip graduates with strong analytical and experimental skills required for careers in biochemistry, biomedical research, pharmaceuticals, diagnostics, and allied life-science industries.

## Program Vision & Mission

The program aims to develop highly skilled biochemists with a strong foundation in the chemical and molecular principles governing biological systems. Through rigorous training in biochemistry, enzymology, metabolic regulation, biomolecular interactions, and analytical techniques, the program cultivates scientific reasoning, problem-solving abilities, and research competence. Emphasis is placed on understanding biochemical alterations underlying health and disease, thereby bridging fundamental laboratory discoveries with real-world applications in biomedical research, pharmaceuticals, diagnostics, and biotechnology.

## Program Duration **2 years (4 semesters)**

## Eligibility

Applicants must hold a B.Sc. degree in Life Sciences or a related discipline (such as Biotechnology, Genetics, Microbiology, Biochemistry, etc.), with a minimum aggregate score as specified by university regulations.

# Program Unique Features (Highlights)

- ◆ Comprehensive hands-on training in core and advanced biochemical techniques
- ◆ A dedicated full-semester dissertation with experimental research emphasis
- ◆ Training in enzymology, protein purification, proteomics, and metabolomics
- ◆ Integrated instruction in biochemical data analysis, bioinformatics, and systems biology
- ◆ Exposure to clinical biochemistry laboratories, pharmaceutical industries, and research institutions

## Core Courses & Electives

The program is designed to provide a strong foundation in biochemistry, integrating fundamental biochemical principles with advanced analytical and applied approaches. Students acquire both theoretical knowledge and practical expertise through the following courses

### Core Courses

- ◆ Advanced Biochemistry
- ◆ Cellular and Molecular Biochemistry
- ◆ Enzymology and Metabolic Regulation
- ◆ Proteomics and Structural Biochemistry
- ◆ Clinical and Diagnostic Biochemistry
- ◆ Biochemical Data Analysis and Bioinformatics

### Elective Courses

- ◆ Medical Biochemistry
- ◆ Cancer Biochemistry
- ◆ Biochemistry of Stem Cells and Regenerative Medicine
- ◆ Computational and Systems Biochemistry

## Program Industry Insights (Market Demand)

The global biotechnology and biopharmaceutical sector is experiencing rapid growth, with an estimated compound annual growth rate (CAGR) of 13–15%, resulting in increased demand for biochemistry professionals across multiple domains, including:



- ◆ Clinical and diagnostic biochemistry
- ◆ Personalized and precision medicine
- ◆ Drug discovery and therapeutic development
- ◆ Biochemical data analysis and systems biology

**Key industries and organizations actively recruiting biochemistry graduates include:**

- ◆ Clinical diagnostics and healthcare laboratories
- ◆ Pharmaceutical and biopharmaceutical companies
- ◆ Vaccine research and development organizations
- ◆ Cancer research institutes and biomedical research centers
- ◆ Precision medicine, health-tech, and biotechnology startups

## Emerging Job Opportunities

Graduates are well-prepared for diverse careers in research, healthcare, and industry, leveraging strong expertise in biochemistry, molecular analysis, and bioinformatics. Emerging and established career opportunities include:

- ◆ Biochemist / Molecular Biochemist
- ◆ Clinical Biochemist
- ◆ Clinical Research Associate (CRA)
- ◆ Bioinformatics Analyst (Biochemical and Omics Data)
- ◆ Proteomics or Metabolomics Analyst
- ◆ Research Scientist (Pharmaceuticals/Biotechnology)
- ◆ Diagnostic Biochemistry Specialist
- ◆ Academic Researcher or Laboratory Manager

## Experiential Learning

Experiential learning forms the cornerstone of the program, bridging theory with real-world application through immersive activities. Key components include:



- ◆ Extensive hands-on training through wet-lab practical sessions
- ◆ Practical bioinformatics workshops and tool-based learning
- ◆ Expert talks and seminars by academic and industry professionals
- ◆ Educational visits to biotechnology and life science organisations



# M.Sc. in Molecular Biology and Genetics

The M.Sc. in Molecular Biology and Genetics is an advanced postgraduate program designed for students eager to explore the molecular foundations of life. Unlike conventional Genetics programs that emphasize classical inheritance or broad Biotechnology courses, this program offers in-depth training in gene regulation, expression, disease-associated genetics, and state-of-the-art molecular techniques.

## Core Technical Competencies Include

**CRISPR–Cas9 genome editing**

**Quantitative PCR and transcriptome analysis**

**DNA and RNA sequencing technologies**

**Molecular cloning techniques**

**Bioinformatics and computational genomics**

The program combines rigorous laboratory training, research-driven learning, and industry-oriented exposure to equip graduates for successful careers in modern molecular and genomic sciences.

## Program Vision & Mission

The program aims to develop highly skilled molecular biologists and geneticists capable of driving innovation in healthcare, biotechnology, and research. Through rigorous training in molecular biology, genomics, and bioinformatics, the program fosters scientific thinking, problem-solving abilities, and research excellence, while bridging the gap between laboratory discoveries and real-world biomedical applications.

## Program Duration

**2 years (4 semesters)**

## Eligibility

Applicants must hold a B.Sc. degree in Life Sciences or a related discipline (such as Biotechnology, Genetics, Microbiology, Biochemistry, etc.), with a minimum aggregate score as specified by university regulations.

# Program Unique Features (Highlights)

- ◆ Practical, hands-on training in advanced molecular biology techniques
- ◆ A dedicated full-semester dissertation and research project
- ◆ Training in CRISPR technology, next-generation sequencing, and omics platforms
- ◆ Integrated learning in bioinformatics and data analysis
- ◆ Exposure to real-world research laboratories and diagnostic centres

## Core Courses & Electives

The program is designed to provide a strong foundation in molecular biology and genetics, combining fundamental concepts with advanced analytical and applied approaches. Students gain both theoretical understanding and practical skills through the following courses:

### Core Courses

- ◆ Molecular Genetics
- ◆ Advanced Cell Biology
- ◆ Regulation of Gene Expression
- ◆ Genomics and Proteomics
- ◆ Molecular Diagnostics
- ◆ Bioinformatics and Data Analysis

### Elective Courses

- ◆ Medical Genetics
- ◆ Cancer Genomics
- ◆ Stem Cell Biology
- ◆ Computational Biology

The global biotechnology sector is witnessing rapid growth, with an estimated CAGR of 13–15%, leading to rising demand for molecular biology professionals in areas such as:

- ◆ Genomics-driven diagnostics
- ◆ Personalized and precision medicine
- ◆ Pharmaceutical and therapeutic research
- ◆ Bioinformatics and data analytics



Key industries actively recruiting molecular biology graduates include:

- ◆ Diagnostic and healthcare testing companies
- ◆ Vaccine research and development organisations
- ◆ Cancer genomics and oncology research centres
- ◆ Precision medicine and health-tech startups

## Emerging Job Opportunities

Graduates are well-positioned for dynamic roles in research, healthcare, and industry, leveraging expertise in molecular genetics and bioinformatics. Emerging opportunities include:

- ◆ Molecular Biology Specialist
- ◆ Genetic Counsellor
- ◆ Clinical Research Associate (CRA)
- ◆ Bioinformatics Analyst
- ◆ Genomic Data Scientist
- ◆ Research Scientist(Pharma/Biotech)
- ◆ Molecular Diagnostics Expert
- ◆ Academic and Research Laboratory Manager

## Experiential Learning

Experiential learning forms the cornerstone of the program, bridging theory with real-world application through immersive activities. Key components include:

- ◆ Extensive hands-on training through wet-lab practical sessions
- ◆ Practical bioinformatics workshops and tool-based learning
- ◆ Expert talks and seminars by academic and industry professionals
- ◆ Educational visits to biotechnology and life science organisations



# Unique Features of Curriculum

The curriculum is structured to foster innovation, critical thinking, and applied research skills. It combines a strong theoretical foundation with extensive laboratory experience.

## Key Highlights of the Curriculum

- ◆ Research-oriented academic framework
- ◆ Comprehensive hands-on training in wet and dry laboratory techniques
- ◆ Interdisciplinary learning integrating biological and computational sciences
- ◆ Skill development aligned with industry and research requirements
- ◆ Emphasis on molecular diagnostics and therapeutic R&D

## Foreign Languages

### Foreign Languages (Optional Modules)

French

German

## Project / Thesis Components

The final semester culminates in a comprehensive research dissertation that emphasizes independent inquiry and scientific rigor. It includes:

- ◆ Hands-on experimental research
- ◆ Data collection and advanced analysis
- ◆ Publication-focused scientific investigations
- ◆ Faculty-guided scientific writing and presentations

## Industry Tie-Ups & Industry Projects

Collaborations with leading organizations including:



Genetic testing startups, Leading academic research institutions

Students participate in real-world industry projects in areas such as:

- ◆ Molecular diagnostics ◆ Cancer biology
- ◆ Transcriptomics ◆ Microbial genetics

## Companies Offering Internships

- ◆ Biocon
- ◆ Strand Life Sciences
- ◆ Thermo Fisher Scientific
- ◆ Syngene
- ◆ IISc and NCBS research laboratories
- ◆ Genomics and diagnostic companies
  - >> Eurofins
  - >> NIMHANS
  - >> Merck



## Internships

Students undertake structured internships in research laboratories, biotech firms, and diagnostic centres to gain practical industry exposure. Duration- 8–12 weeks Students complete structured internships in research laboratories, biotech firms, and diagnostic centres

\*Note: The internship opportunity is open to students in any semester, as per their academic schedule and convenience.

## Placements

The university provides strong career support through industry partnerships and personalised placement assistance.

## Pre-Placement Training

Pre-placement training equips students with essential professional skills for successful career transitions in research and industry. Key components include:

- ◆ Scientific writing and communication training
- ◆ Research presentation and public speaking skills
- ◆ Mock interviews and aptitude preparation
- ◆ Resume and professional portfolio development
- ◆ Laboratory competency assessments

## Top Recruiters

Leading Recruiters (India & Overseas)



**Biocon**

**Syngene**

**ThermoFisher**  
SCIENTIFIC



**eurofins**

**novozyomes**

**Highest Package**

**₹ 8 LPA**

**Average Package**

**₹4.5 LPA**

## Facilities & Resources

### M. Sc. in Biotechnology

Advanced Molecular Biology Laboratory

### M. Sc. in Microbiology

The Department of Microbiology is supported by adequate laboratory infrastructure and academic resources to facilitate teaching, practical training, and research. Facilities include well-equipped microbiology laboratories, media preparation and sterilization units, microscopy facilities, and biosafety-compliant workspaces. Students also have access to centralized institutional facilities, library resources, and digital learning platforms to support academic and research activities.



## M.Sc. in Biochemistry

- ◆ Proteomics and Analytical Instrumentation Facility
- ◆ Bioinformatics and Biochemical Data Analysis Laboratory with High-Performance Computing
- ◆ Cell Culture and Biochemical Assays Laboratory
- ◆ Advanced Microscopy and Imaging Suites
- ◆ Model Organism Research Facility (e.g., Zebrafish/Drosophila) for Biochemical Studies

## M.Sc. in Molecular Biology and Genetics

- ◆ Advanced Molecular Biology Laboratory
- ◆ Genomics and Sequencing Facility
- ◆ Bioinformatics laboratory with high-performance computing
- ◆ Cell culture laboratory
- ◆ Modern microscopy suites
- ◆ Fly Fish Facility (FFF)

## Innovation Labs & Studios

### M. Sc. in Biotechnology

- ◆ Advanced Molecular Biology Laboratory

### M. Sc. in Microbiology

- ◆ Plant Tissue Culture laboratory
- ◆ Animal Cell Culture Laboratory
- ◆ Molecular Diagnostics Centre
- ◆ Cell Biology Research Studio

### M.Sc. in Biochemistry

- ◆ Genomics Innovation Laboratory
- ◆ Molecular Diagnostics Centre
- ◆ Cell Biology Research Studio

## M.Sc. in Molecular Biology and Genetics

- ◆ Genomics Innovation Laboratory
- ◆ Molecular Diagnostics Centre
- ◆ Cell Biology Research Studio

## Alumni Connect & Success Stories

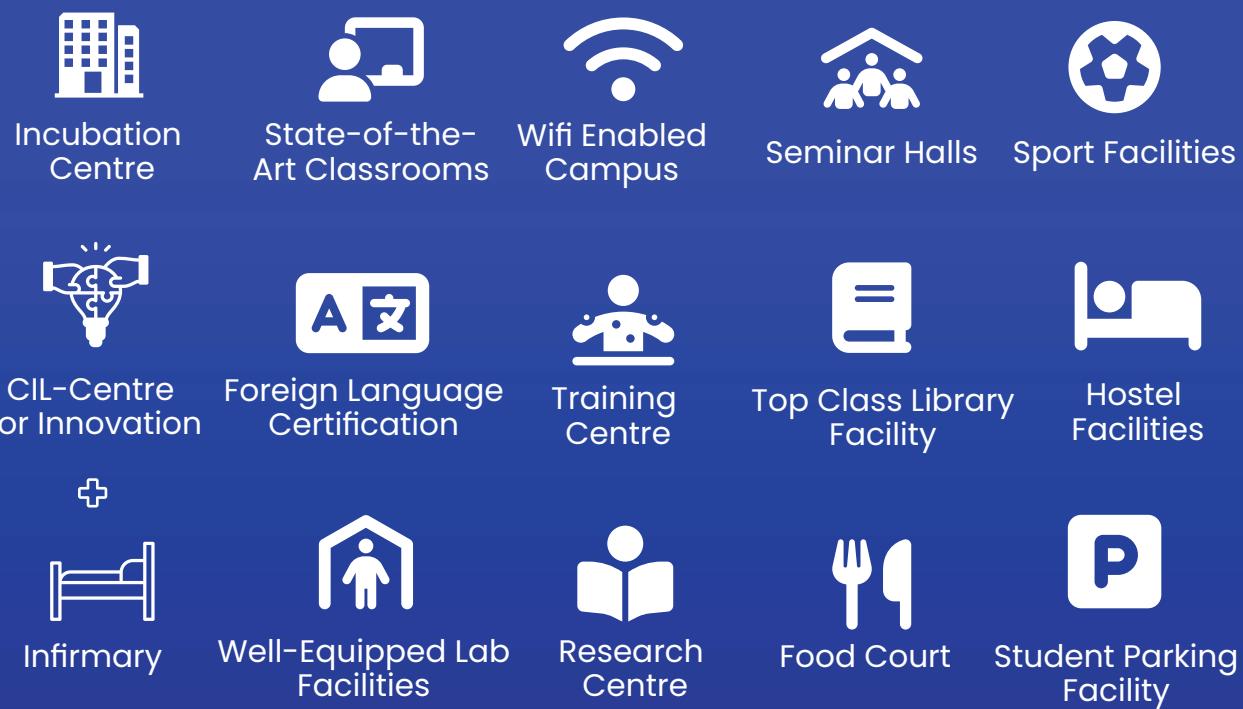
Graduates have successfully progressed to:

- ◆ CSIR laboratories
- ◆ PhD programmes in India and abroad
- ◆ Genomics and biotech startups
- ◆ Research and development teams in pharmaceutical and
- ◆ biotech companies

# Labs



# Campus Features



## Library



### About Library

The Library, established alongside DSI and expanded with Dayananda Sagar Institutions (1969), Dayananda Sagar College of Engineering (1979), and Dayananda Sagar University (2014), was envisioned by the founder, Late Sri R. Dayananda Sagar, as a world-class knowledge hub. Built systematically, it accommodates 560 users and houses an extensive collection of books, CDs, DVDs, periodicals, and digital resources. Serving undergraduates, postgraduates, research scholars, and faculty, the Library reflects the University's academic excellence and is managed by a team of skilled and dedicated professionals.

### School of Basic & Applied Sciences

Titles

1272

Volumes

2715

National & International  
Print Journals

6

E-Books

300



**Admissions Helpline Nos: 080 4646 1800 +91 636 688 5507**

[www.dsu.edu.in](http://www.dsu.edu.in) [admissions@dsu.edu.in](mailto:admissions@dsu.edu.in)

**DSU City Innovation Campus :** Kudlu Gate, Srinivasa Nagar, Hal Layout, Singasandra, Hosur Road, Bengaluru, Karnataka - 560068