



**Gyanmanjari**<sup>®</sup>  
Innovative University



# Science Scope-2026

# Our Motto

## Vision

## Mission



### Vision of University

- To produce world class professionals for converting global challenges into opportunities through “Value Embedded Education”
- To provide academic programs, services, facilities and technologies within the realm of the curricula of the university, that offers diverse opportunities for learning.
- To prepare professionals who are either employable or employer.
- To develop critical thinking, effective communication and learning skills in students and to promote the value of ethical behavior, responsibility and commitment

### Mission of University

- We at Gyanmanjari Innovative University shall strive continuously to achieve academic excellence and research in science, engineering and technology through dedication to duty, innovation in teaching and faith in human values.
- To enable our students to develop into outstanding professionals with high ethical standards to face the challenges of the next millennium
- To fulfill the expectations of our society by equipping our students to stride forth as resourceful citizens who are aware of their immense responsibilities to make the world a better place.



## USP of GMIU

- Provides specialization courses
- Executes NEP based syllabus
- Best infrastructure
- Active learning activities
- MOU with Industries
- Runs student chapter
- Opportunity Classes.
- Skill development program
- Master mind activity
- Students Placement
- 100% Result

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## Future scopes after completing 12th Science

### List of B.Sc. Courses:

1. B.Sc. Chemistry
2. B.Sc. Chemistry Hon. In Industrial Chemistry
3. B.Sc. Forensic Science
4. B.Sc. Microbiology
5. B.Sc. Microbiology Hon. In Bioinformatics
6. B.Sc. Microbiology Hon. In Food Technology
7. B.Sc. Microbiology Hon. In Genetics
8. B.Sc. Microbiology Hon. In Clinical Embryology
9. B.Sc. Botany
10. B.Sc. Mathematics
11. B.Sc. Physics
12. B.Sc. Physics Hon. In Radiology
13. B.Sc. IT
14. B.Sc. Zoology

### List of M.Sc. Courses:

1. M.Sc. Chemistry (Organic/Analytical)
2. M.Sc. Industrial Chemistry
3. M.Sc. Forensic Science
4. M.Sc. Microbiology
5. M.Sc. Biochemistry
6. M.Sc. Food Technology
7. M.Sc. Mathematics
8. M.Sc. Radiology
9. M.Sc. Clinical Embryology
10. M.Sc. Zoology



If you are deeply interested in pursuing a career in academics or research, B.Sc. and M.Sc. in subjects like Microbiology, Chemistry, Maths, Physics or Zoology will help you do just that.

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## B.Sc. Programme Outcomes:

- **Foundational Knowledge:** Demonstrate a strong understanding of fundamental concepts in the chosen field of study.
- **Critical Thinking:** Develop analytical and critical thinking skills to solve problems within the discipline.
- **Communication Skills:** Effectively communicate scientific ideas both orally and in writing.
- **Laboratory Skills:** Proficiency in conducting experiments, collecting data, and analyzing results.
- **Interdisciplinary Understanding:** Recognize connections between their major and other fields of science or across disciplines.
- **Ethical Awareness:** Understand and adhere to ethical standards in scientific research and practice.



## M.Sc. Programme Outcomes:

- **Advanced Expertise:** Attain specialized knowledge and expertise in a particular area of the chosen field.
- **Research Skills:** Develop advanced research skills, including experimental design, data analysis, and interpretation.
- **Independent Research:** Successfully plan, conduct, and complete an independent research project (thesis/dissertation).
- **Critical Evaluation:** Ability to critically evaluate scientific literature and contribute to the advancement of knowledge.
- **Professional Communication:** Effectively communicate research findings through presentations, publications, and discussions.
- **Leadership and Collaboration:** Demonstrate leadership skills and the ability to

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## Introduction to Science

Bachelor of Science (B.Sc.) and Master of Science (M.Sc.) are undergraduate and postgraduate degree courses respectively. It is one of the most popular course choices among Science students after Class 12th & B.Sc.

The course is considered as a foundation course for students who want make their career in the field of Science. It is offered in a variety of Science subjects at a majority of universities in India. Some of the popular Science courses that students usually choose to pursue after Class 12th are Physics, Chemistry, Zoology, Botany, Mathematics, and so on.

Students can choose to pursue plain Science. The course is most apt for students who have a strong interest and background in Science and Mathematics. The course is also beneficial for students who wish to pursue multi and interdisciplinary science careers in future.

After the completion of a B.Sc. degree, candidates can opt to pursue Master of Science (M.Sc.) or even secure admission in a professional job-oriented course.



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## Why Science?

Science is a popular graduate/post graduate program among the candidates who have passed 12th Class in Science. It has many career scopes in various fields. Science offers theoretical and practical knowledge in your field.

### Advantages of pursuing B.Sc/M.Sc Degree course

If you want to become a Scientist, Scientific Assistant, Research analyst, Teachers, Technical Writer/Editor, Lecturers, Chemist, Quality Contrller, Quality Assistant Enumerators, Researcher, Bio statistician, Clinical Research Manager, Consultant etc. then these Degree Courses must be at the top of your list.

Although, Science Graduates/post graduates are not bound to get a job in the science-related field. They can get a job in management, design, engineering, and many other fields.

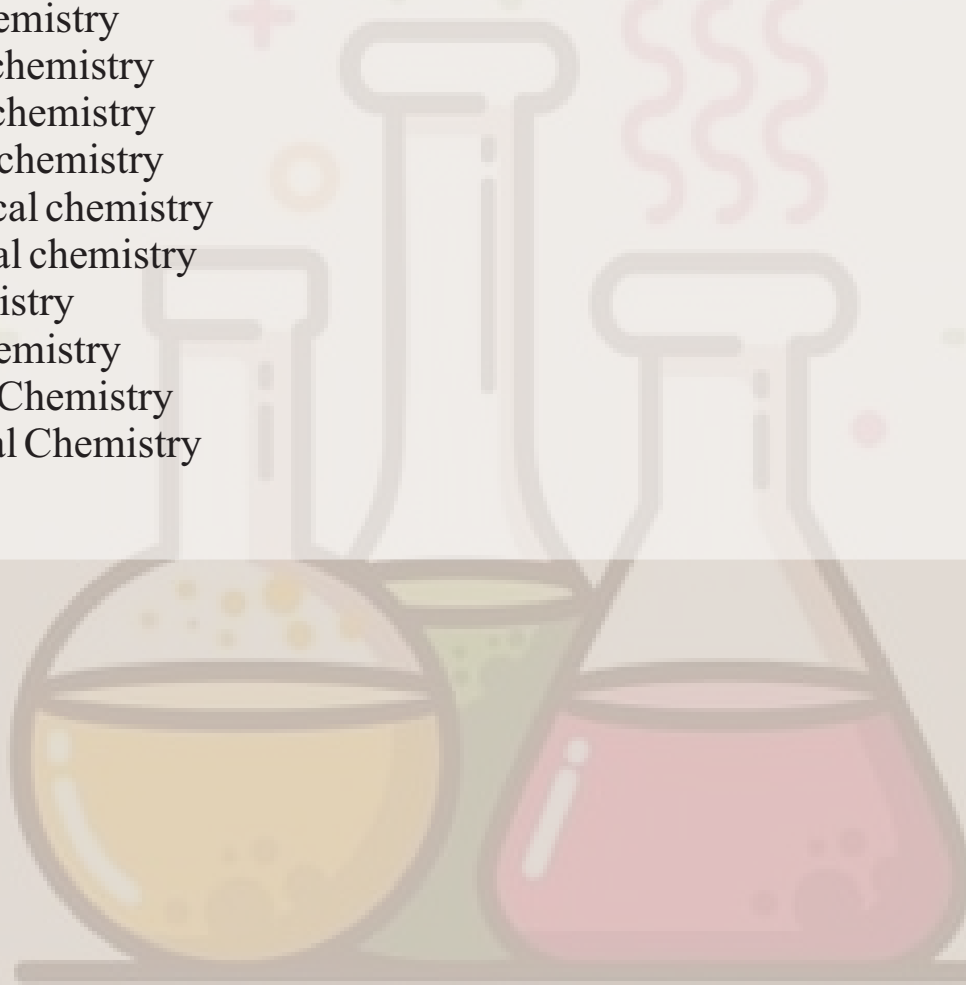
In addition to that, after completing B.Sc./M.Sc. of course, they can appear in JAM IIT for further study (post-graduation) from IITs and IISC. The candidates can opt for JEST, BINC.



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## Chemistry

- Chemistry is the scientific discipline involved with elements and compounds composed of atoms, molecules and ions: their composition, structure, properties, behavior and the changes they undergo during a reaction with other substances.
- Chemistry occupies an intermediate position between physics and biology.
- For example, chemistry explains aspects of plant chemistry (botany), how atmospheric ozone is formed and how environmental pollutants are degraded (ecology), the properties of the soil on the moon (astrophysics), how medications work (pharmacology), and how to collect DNA evidence at a crime scene (forensics).
- Chemistry addresses topics such as how atoms and molecules interact via chemical bonds to form new chemical compounds.
- Chemistry is typically divided into several major sub-disciplines. There are also several main cross-disciplinary and more specialized fields of chemistry..
- Inorganic chemistry
- Materials chemistry
- Neurochemistry
- Nuclear chemistry
- Organic chemistry
- Physical chemistry
- Theoretical chemistry
- Analytical chemistry
- Biochemistry
- Neno Chemistry
- Polymer Chemistry
- Medicinal Chemistry



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## Job profiles

- Analytical chemist
- Bio-technologist
- Chemical engineer
- Healthcare scientist, clinical biochemistry
- Forensic scientist
- Nano-technologist
- Pharmacologist
- Research scientist (physical sciences)
- Scientific laboratory technician
- Toxicologist
- Quality Controller
- Quality Assistant

## Job opportunities

- Civil service fast streamer
- Environmental consultant
- Higher education lecturer
- Management consultant
- Nuclear engineer
- Patent attorney
- Science writer
- Secondary school teacher
- ONGC, GSFC, GACL
- CPCB and GPCB
- Indian Navy(Specialization)

Department  
of  
Science

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## BSc Chemistry Hon. in Industrial Chemistry

A Bachelor of Science (B.Sc.) honors degree in Industry Chemistry is an undergraduate program that focuses on the application of chemistry to industrial processes. This programme is 4 years in which students get more credit than regular courses. The goal of the program is to provide students with a solid foundation in chemistry as well as the practical skills needed to work in the chemical industry. Graduates of the program are well-equipped to work in a variety of industries, including chemical manufacturing, pharmaceuticals, petrochemicals, and biotechnology.

### Job Profile

- Chemical Analyst/Technician
- Process Chemist/Engineer
- Research and Development Scientist
- Quality Assurance Specialist
- Environmental Analyst
- Production Manager
- Sales and Technical Support

### Job opportunities

- Pharmaceuticals
- Petrochemicals
- Food and beverages
- Materials
- Environmental

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## B.Sc. Chemistry Hon in Forensic Science

A Bachelor of Science in Chemistry Honors with a specialization in Forensic Science integrates principles of chemistry with forensic techniques to analyze evidence in legal contexts. Students explore crime scene investigation, forensic analysis methods, and the application of chemical principles to solve criminal cases. This program equips graduates with the skills to work in forensic laboratories, law enforcement agencies, or pursue further studies in forensic science or related fields.

### Job Profile

- Forensic Chemist/Toxicologist
- Crime Scene Investigator
- Forensic DNA Analyst
- Forensic Ballistics Expert
- Digital Forensic Analyst
- Forensic Pathology Assistant
- Forensic Anthropologist

### Job opportunities

- Law enforcement agencies
- Forensic laboratories
- Government agencies
- Private investigation firms
- Legal institutions

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## Microbiology

B.Sc. /M.Sc. microbiology is an degree that is awarded to a candidate after the completion of the course. This course is not just limited to career but has huge expertise in the field of microbiology. Students who have completed 10+2 in the relevant field of science are eligible to apply for this course. Students of this subject as a major can start a career in government based enterprise and research institutes or biotech-related companies such as food processing and pharmaceutical industry.

Microbiology is a broad discipline that involves a study of the classification of microorganisms, ecology, cell biology, applications in agriculture, food and medicine, biology of bacteria, viruses, protozoa and fungi. The main focus of the course is the pathogenic potential of the organisms that cause disease in man. The course also covers aspects of the biochemistry, physiology and genetics of microorganisms.

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**Job Profiles:**

1. Research assistant
2. Food industrials or Food technologist
3. Environmental microbiologist
4. Quality assurance technologist
5. Sales or technical representatives
6. Clinical or veterinary technologist
7. Medical technologist
8. Biomedical scientist
9. Clinical research associates
10. Microbiologist
11. Scientific laboratory technician
12. Research scientist (Life Sciences)
15. Biomedical scientist

**Job Opportunity**

1. Pharmaceutical industries
2. Universities (as teaching assistant)
3. Laboratories (lab. Technician)
4. Private hospitals
5. Research organization
6. Environmental agencies
7. Food industry (Food Inspector)
8. Beverage industry
9. Chemical industry
10. Agriculture department
11. Junior research fellow
12. Senior research fellow

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MicroBiology Lab



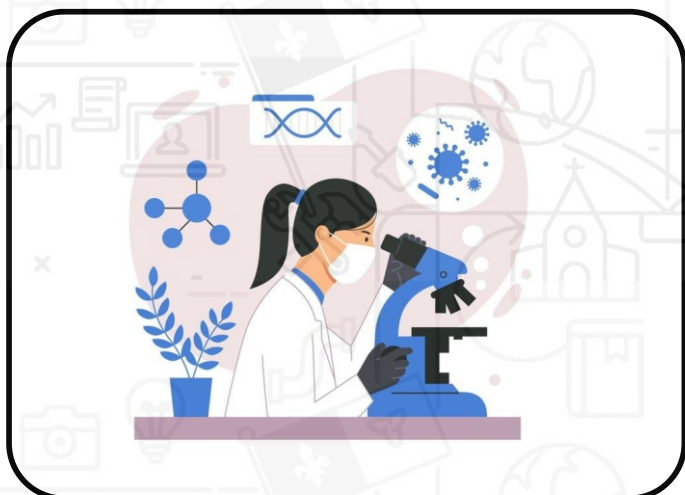
Chemistry Lab



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## Course- B.Sc. Micro Hon. In Bioinformatics

An Honor in Biochemistry is an undergraduate degree program that focuses on the study of the chemical processes and molecular interactions that occur within living organisms. This program is typically designed to provide students with a comprehensive understanding of the biochemical and molecular basis of life. Honors in Biochemistry degree can lead to a wide range of career opportunities in the fields of healthcare, biotechnology, pharmaceuticals, and research. Graduates may work as biochemists, research scientists, laboratory technicians, healthcare professionals or educators.



### Job Profile:

- Clinical Biochemist
- Microbiologist
- Research Scientist
- Bio-technologist
- Quality Control Analyst
- Medical Laboratory Scientist
- Pharmaceutical Researcher
- Environmental Microbiologist

### Job opportunities in:

- Research institutions
- Pharmaceutical companies
- Biotechnology firms
- Hospitals
- Government agencies



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## Course- B.Sc. Micro Hon. In Food Technology

A Bachelor of Science (B.Sc) in Microbiology with honors in Food Technology is an undergraduate degree program that combines the study of microbiology with the principles of food science and technology. This program is designed to provide students with a comprehensive understanding of the role of microorganisms in food production, preservation, and safety. The curriculum for a B.Sc in Microbiology with honors in Food Technology typically includes courses in microbiology, food microbiology, food chemistry, food processing and preservation, food safety and quality control. Students may also have the opportunity to participate in laboratory work and research projects related to food microbiology and technology.



### Job Profile:

- Food Microbiologist
- Quality Control Technician
- Food Safety Officer
- Research and Development Scientist
- Food Inspector
- Product Development Manager
- Microbial Fermentation Specialist

### Job opportunities in:

- Food processing companies
- Research institutions,
- Government agencies
- Quality assurance
- Production management,
- Consulting within the broader food and beverage industry.



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## Course- B.Sc. Micro Hon. In Genetics

A Bachelor of Science in Microbiology Honors with a focus on Genetics combines fundamental microbiology principles with an in-depth exploration of genetic processes. This specialized program typically covers topics such as microbial genetics, molecular biology, and genetic engineering. Students gain insights into the role of microorganisms in genetic research, biotechnology, and related fields. Practical laboratory work is often a significant component, allowing students to apply genetic techniques and methodologies. Graduates are equipped to pursue careers in genetic research, biotechnology, pharmaceuticals, and other fields at the intersection of microbiology and genetics.



### Job Profile:

- Microbiologist
- Genetic Counselor
- Bio-technologist
- Research Scientist (Genetics/Microbiology)
- Clinical Laboratory Scientist
- Pharmaceutical Researcher
- Quality Control Specialist.

### Job opportunities in:

- Research institutions
- Pharmaceutical companies
- Healthcare settings
- Biotechnology firms
- Government agencies.



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## Course- B.Sc. Micro Hon. In Embryology

A Bachelor of Science (BSc) in Microbiology with Honors in Embryology typically focuses on the study of microorganisms and their interactions, with a specialized emphasis on embryonic development. This program often includes courses covering microbiological principles, genetics, cell biology, and specialized topics related to embryology, such as developmental biology and reproductive biology. Students may engage in laboratory work, gaining practical skills in microbiological techniques and embryological research. The honors component may involve in-depth research projects or additional coursework, providing a more comprehensive understanding of both microbiology and embryology.



### Job Profile:

- Microbiologist,
- Embryologist
- Career in academia or research institutions.
- Specialized fields like assisted reproductive technologies (ART)

### Job opportunities in:

- Research
- Clinical laboratories
- Reproductive health clinics

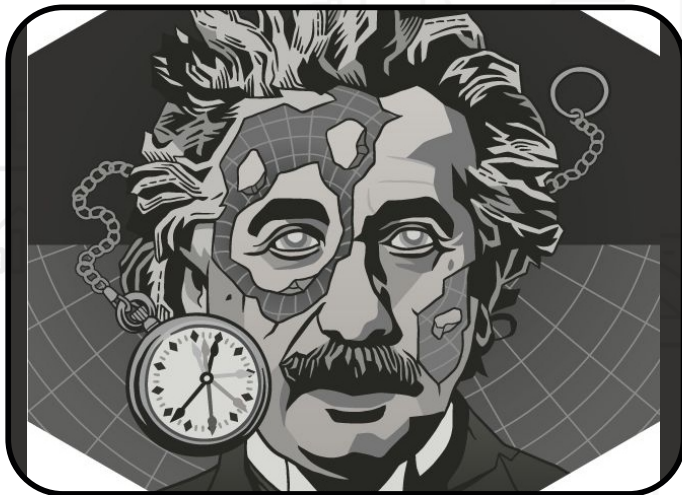
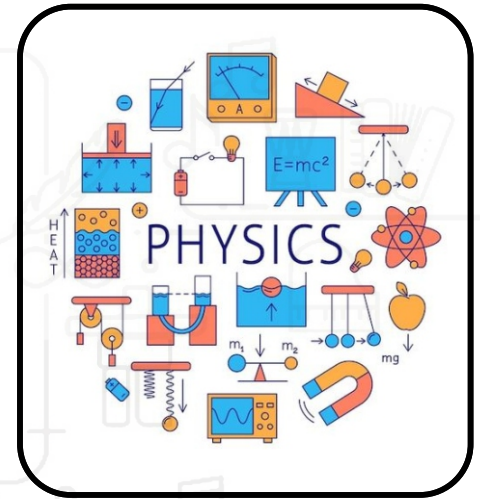


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## Physics

Physics is the branch of science concerned with the nature and properties of matter and energy. The subject matter of physics includes mechanics, heat, light and other radiation, sound, electricity, magnetism, and the structure of atoms. Physics is one of the most fundamental scientific disciplines, and its main goal is to understand how the universe behaves.

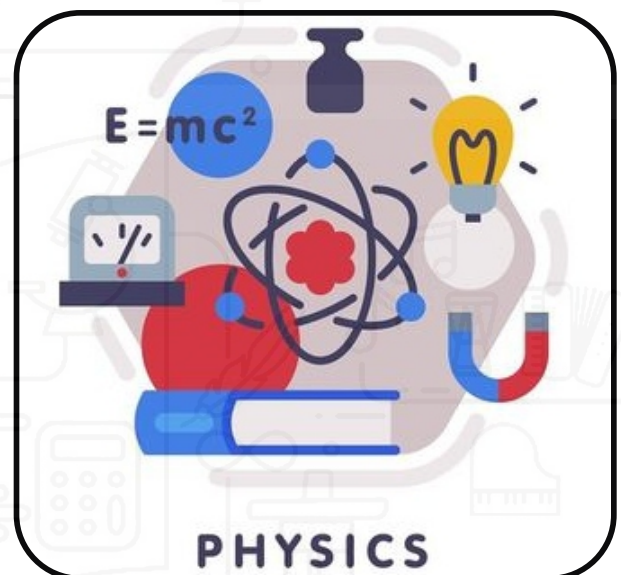


### Job Profile:

- Research Scientist
- Professor/Academic Researcher
- Engineer
- Data Scientist
- Medical Physicist
- Quantum Physicist
- Meteorologist
- Science Writer/Communicator
- Patent Examiner
- Consultant

### Job opportunities in:

- Research and Academia
- Industry
- Healthcare and Medical Physics
- Data Science and Analytics
- Engineering
- Government and Policy
- Consulting
- Entrepreneurship



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## Zoology

Zoology is one of the most popular branches in Science that involves the study of animals and their biological processes. Zoology courses are offered at the graduate and postgraduate levels both full-time and part time. Candidates can also opt for Ph.D. in Zoology after completing their post-graduation. Candidates in this discipline are basically taught regarding animal anatomy, physiology, biochemistry, genetics, evolution, ecology, behavior, and conservation. Options after pursuing a B.Sc., M.Sc. and Ph.D. in Zoology are varied.



### Job Profile:

- Research Scientist
- Wildlife Biologist
- Zookeeper
- Conservation Biologist
- Marine Biologist
- Veterinarian
- Ecologist
- Educator
- Animal Behaviorist
- Aquarist



### Job opportunities in:

- Zoologist
- Wildlife Biologist
- Marine Biologist
- Animal Behaviorist
- Conservation Biologist
- Zookeeper/Curator
- Veterinarian
- Ecologist
- Environmental Consultant
- Science Communicator



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## B.Sc. Physics Hon. In Radiology

Radiotherapy, also known as radiation therapy, is a medical treatment that uses high-energy radiation to target and destroy cancer cells. It can be used as a primary treatment to eradicate cancer, or it can be used alongside other treatments like surgery and chemotherapy."



### Job Profile:

- Radiation Oncologist
- Medical Physicist
- Radiation Therapist
- Radiation Oncology Nurse
- Radiation Oncology Technician
- Medical Dosimetrist Planner
- Radiation Oncology Administrator



### Job opportunities in:

- Hospitals
- Cancer Centers
- Radiation Oncology Clinics
- Research Institutions
- Government Agencies
- Industry
- Education and Training



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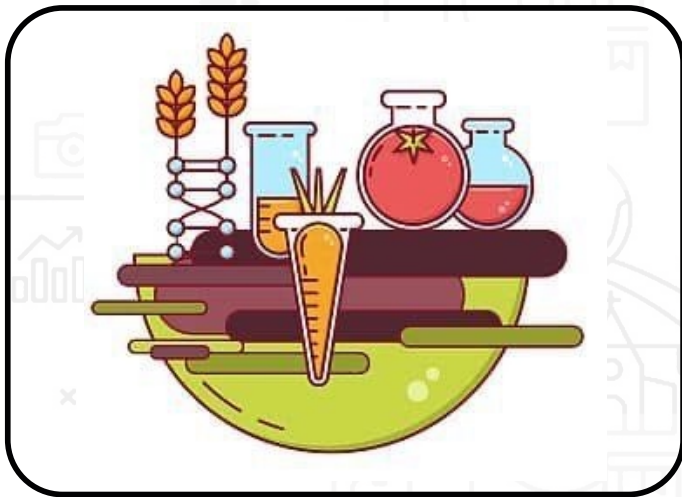
## Botany

Botany, a branch of biology that deals with the study of plants, including their structure, properties, and biochemical processes. Also included are plant classification and the study of plant diseases and of interactions with the environment. The principles and findings of botany have provided the base for such applied sciences as agriculture, horticulture, and forestry.



### Job Profile:

- Botanist
- Ecologist
- Plant Taxonomist
- Plant Geneticist
- Horticulturist
- Botanical Illustrator
- Plant Pathologist
- Environmental Consultant
- Plant Biotechnologist
- Ethno botanist



### Job opportunities in:

- Research and Academia
- Conservation and Environmental Organizations
- Government Agencies
- Horticulture and Agriculture
- Pharmaceutical and Biotechnology Companies
- Botanical Gardens and Arboreta
- Ecological Consulting
- Science Communication and Outreach



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## Recent Placed Student Details



**Kikani Bhargav**  
Chemistry  
(PI Industry-2021)



**Ratola Bhavesh**  
Chemistry  
PI Industry-2021



**Jadeja Karansinh**  
Chemistry  
(PI Industry-2021)



**Pandya Parth**  
Chemistry  
Cargo Quality-  
Control Services-2021



**Makwana Nitesh**  
Chemistry  
(PI Industry-2021)



**Meghnathi Jayendragiri**  
Chemistry  
Archit Chemicals-2022



**Bhalodiya Charmi**  
Microbiology  
Gyanmanjari Vidhyapith  
2022



**Vakani Janki**  
Microbiology  
Gyanmanjari Vidhyapith  
2022



**Bhojani Bhargav**  
Microbiology  
Gyanmanjari Vidhyapith  
2022

## Faculty Profile

### ◆ Microbiology Department

**Dr. Nishra Raval**  
(HOD of Microbiology Department)  
Qualification: (M.Sc. & Ph.D. In Microbiology )



**Dr. Ishita Raninga**  
Qualification: (B.Sc M.Sc(Microbiology), Ph.D. Microbiology )

**Prof. Urvi G. Parajiya**  
Qualification: B.Sc. M.sc(Microbiology)



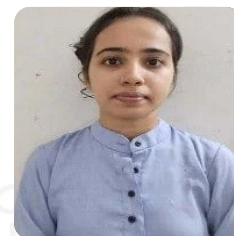
**Prof. Maulik G. Baraiya**  
Qualification: B.Sc. M.sc(Microbiology)

**Prof. Mitali S. Bhatt**  
Qualification: B.Sc. M.sc(Microbiology)



**Prof. Jyoti A. Nishad**  
Qualification: B.Sc. M.sc(Microbiology)

**Prof. Vaishali G. Ramaiya**  
Qualification: B.Sc. M.sc(Microbiology)



**Prof. Nandani B. Kanzariya**  
Qualification: B.Sc. M.sc(Microbiology) DMLT

**Prof. Bhavya Vadhel**  
Qualification: B.Sc. M.sc(Microbiology) DMLT



## ➔ Chemistry Department



**Dr. Nikunj N. Dave**  
Qualification: (M.Sc Pharmaceutical Chemistry ) Ph.D.

**Dr. Batuk M. Bhill**  
Qualification: (B.Sc M.Sc Ph.d)



**Dr. Bindi S. Sanghavi**  
Qualification: (B.Sc., M.Sc. Ph.d)

**Karshan N. Gohil**  
Qualification: (B.Sc. Chemistry)



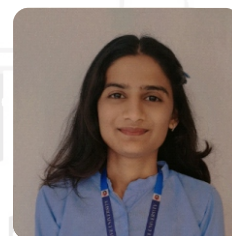


**Mitali Jetani**

Qualification: : M.Sc(Organic Chemistry)

**Muskan Dhruv**

Qualification: M.Sc(Organic Chemistry)

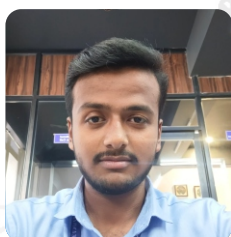


**Meghana Trivedi**

Qualification: (Msc Chemistry)



## ◆ Forensic Science Department



**Prof. Veer B. Ladva**

Qualification: (B.sc Forensic Science)

**Darshni Vishwakarma**

Qualification: Msc in forensic science



**Prof. Yashraj D. Parmar**

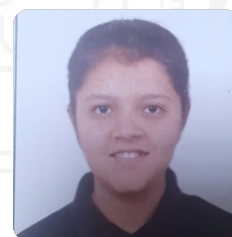
Qualification: (M.Sc. B.Ed.)

Teaching Assistant



**Gohel Hirva P**

Qualification: B.sc Science (Admin)



◆ Zoology Department



**Dharmendra K. Babariya**  
(HOD of Zoology and Botany)

**Upadhyay Jatin**  
( M.Sc. Zoology)



◆ Maths Department



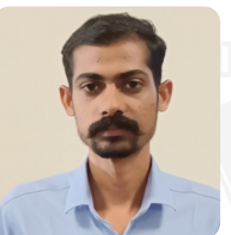
**Dr. Hardik Pandya**  
Qualification: (B.Sc M.Sc. PhD. Maths)

**Gaytri Solanki**  
Qualification: (M.Sc. Maths)



**Lavina H. Uttani**  
Qualification: (B.Sc, M.Sc, B.Ed Maths)

**Riddhi H. Malvaniya**  
Qualification: B.Sc , M.sc in Pure Mathematics



**Yuvrajsinh J. Gohil**  
Qualification: (B.Sc M.Sc. Maths)

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◆ Physics Department

**Tehseen H. kadaree**

Qualification: (B.Sc M.Sc. B.Ed. Physics)



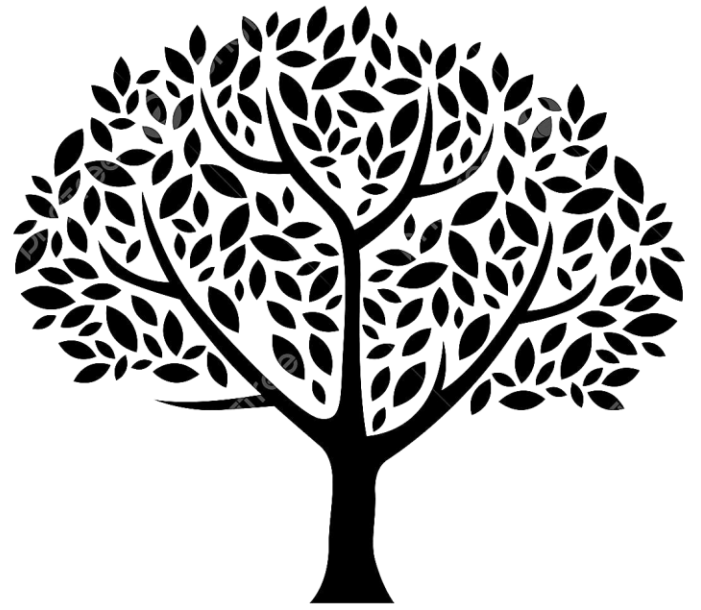
**Prof. Pratap Dihora**

Qualification: (B.Sc M.Sc. in Physics)

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