M.G. SCIENCE INSTITUTE, AHMEDABAD

(AUTONOMOUS)
AFFILIATED TO GUJARAT UNIVERSITY
MANAGED BY AHMEDABAD EDUCATION SOCIETY
NAAC "A" Grade 3rd Cycle | GSIRF 4 Star Ranking

ABOUT MG

Established in 1946, M.G. Science Institute is one of the premier science institutions in Gujarat. Affiliated to Gujarat University and supported by the Government of Gujarat as a grant-in-aid institution, the Institute has earned a distinguished reputation for excellence in science education and research.

The Institute has been conferred Autonomous Status by UGC and has been accredited with an "A" Grade. It offers a vibrant academic ecosystem with modern infrastructure, well-equipped laboratories, and highly qualified faculty.

Located in the heart of Ahmedabad, the campus provides a conducive environment for academic growth, innovation, and holistic development.

VISION

We, at M. G. Science Institute envisage building a progressive learning community with scientific aptitude. We would set global standards to make our students scientifically and ethically stronger, and they, in turn, will serve the nation and human society to improve the quality of life.

MISSION

The mission of M. G. Science Institute is to be a center of excellence in science education and research. We aim to impart quality science education with an emphasis on the all-round development of the students. It is our constant endeavor to promote creativity and learning for the benefit of the community. The institute emphasizes discipline, quality, and social responsibility.

PRINCIPAL'S MESSAGE

M.G. Science Institute continues to uphold its legacy of academic excellence as we enter the academic year 2026–2027. With the implementation of NEP 2020, the Institute has adopted a flexible and multidisciplinary curriculum that integrates knowledge, skills, and values.

We are committed to nurturing students who are not only academically strong but also socially responsible and industry-ready. Through continuous curriculum updates, industry collaborations, and research initiatives, we aim to prepare students for future challenges.

FOLLOW US FOR REGULAR UPDATES

079-26302872 info@mgscience.ac.in mgscience.ac.in /m.g.science_official/

PROGRAMMES OFFERED

B.Sc. (Hons.) Programmes (Grant-in-Aid)

- BIOCHEMISTRY
- GEOLOGY
- PHYSICS
- BOTANY
- MATHEMATICS
- STATISTICS
- CHEMISTRY
- MICROBIOLOGY
- ZOOLOGY

B.S. (Hons.) Programmes (Self Finance) (Morning)

- DATA SCIENCE & ANALYTICS
- BIOTECHNOLOGY

M.Sc. Programmes

- CHEMISTRY (GIA/HPP)
- MICROBIOLOGY (SF) (MORNING)
- GEOLOGY (GIA)
- CHEMISTRY (SF) (MORNING)

Post Graduate Integrated M.S. Biosciences

- BIOSCIENCES (SF) (MONRING)

Certificate courses (Offered by College)

- BASICS IN BIRD WATCHING AND BIRD CONSERVATION
- MICROBIOLOGY BOOTCAMP: FROM ISOLATION TO IDENTIFICATION
- AI & MACHINE LEARNING
- AI & MACHINE LEARNING FOR LIFE SCIENCES
- FROM CLASS TO CORPORATE

MORE INFORMATION

079-26302872, 8000826318, 9099927844

info@mgscience.ac.in

mgscience.ac.in

/m.g.science_official/

Dada Saheb Mavlankar Campus, Opp.Gujarat University,
Navrangpura, Ahmedabad-09

SEAT MATRIX & FEES

B.Sc. Grant-in-Aid

M. G. SCIENCE INSTITUTE									
Group	Sem-I & II	Sem - III	Sem - IV	Sem-III & IV	Group Sem - V & VI	Sem-V & VI	Group	Sem-VII & VIII	
"A" GROUP								OJT	RP
CGP	15	CP	CG	15	CG	15	CG	45	15
CPM	60	CM	CP	60	CP	60	CP		
GCP	25	GP	GC	25	GC	25	GC	15	
MPC	20	MC	MP	20	MP	20	MP	20	5
MSP	10	MP	MS	10	MS	10	MS		
PCG	10	PG	PC	10	PC	10	PC	20	5
PCM	10	PM	PC	10	PC	10	PC		
PMC	30	PC	PM	30	PM	30	PM		
PMS	10	PS	PM	10	PM	10	PM		
SMP	30	SP	SM	30	SM	30	SM	15	5
"B" GROUP									
BIBC	25	BIC	BIB	25	BIB	25	BIB	15	
BICB	25	BIB	BIC	25	BIC	25	BIC		
BZC	35	BC	BZ	35	BZ	35	BZ	35	
CBZ	20	CZ	CB	20	CB	20	CB	Total intake as above	
CPB	55	CB	CP	55	CP	55	CP		
CZB	20	CB	CZ	20	CZ	20	CZ		
MICZ	40	MIZ	MIC	40	MIC	80	MIC	30	5
MIZC	40	MIC	MIZ	40	MIZ		MIZ		
PCB	10	PB	PC	10	PC	10	PC	Total intake as above	
ZBC	30	ZC	ZB	30	ZB	30	ZB	30	
Total	520			520		520			

Abbreviations:

- Bi: Biochemistry
- B: Botany
- C: Chemistry
- G: Geology
- M: Mathematics
- Mi: Microbiology
- P: Physics
- S: Statistics
- Z: Zoology

Fees

Boys	Girls
INR 3100/-	INR 2500/-

B.S. Self-finance (Morning)

Programme	Duration	Seats	Fees per Semester
B.S. (Data Science & Analytics)	4 Years	60	INR 40000/-
B.S. (Biotechnology)	4 Years	65	INR 35000/-

M.Sc. Grant-in-Aid

Programme	Duration	Seats	Fees per Semester	
			Boys	Girls
M.Sc. (Chemistry)	2 Years	45	INR 6275/-	INR 4775/-
M.Sc. (Chemistry) (HPP)	2 Years	45	INR 17500/-	INR 17500/-
M.Sc. (Geology)	2 Years	15	INR 6275/-	INR 4775/-

M.Sc. Self-finance (Morning)

Programme	Duration	Seats	Fees per Semester
M.Sc. (Chemistry)	2 Years	50	INR 20000/-
M.Sc. (Microbiology)	2 Years	35	INR 35000/-

Post Graduate Integrated M.S. Biosciences (Morning)

Biosciences

Duration: 5 Year (10 Semester) | Number of Seats: 45|

Fees Sem 1 to 6: INR 40000/-
Fees Sem 7 to 10: INR 50000/-

B.Sc. (Hons.) Biochemistry

Biochemistry today, is considered as an application-oriented integrated basic science that has emerged by the confluence of principles of Chemistry, Physics, and Mathematics to Biology. The program endeavors to provide students a broad-based training in Biochemistry with a strong background of basic concept as well as exposing them to the exciting advancement in the field. Apart from theoretical knowledge an emphasis has been given to provide hands on experience to the students in the forefront areas of Biochemistry.

SUBJECT COMBINATIONS

- **Biochemistry-Botany-Chemistry (BiBC)**
- **Biochemistry-Chemistry-Botany (BiCB)**

PROGRAMME SPECIFIC OUTCOMES

FOUNDATIONAL KNOWLEDGE

Understand the fundamental principles of Biochemistry, including biomolecule structure and function, enzyme kinetics, metabolic pathways, and molecular genetics.

LABORATORY SKILLS

Proficient in laboratory techniques commonly used in biochemistry research and analysis, including protein purification, chromatography, electrophoresis, spectrophotometry, PCR.

ENTREPRENEURIAL DEVELOPMENT AND SKILLS

Explore entrepreneurial abilities & establish companies or laboratories based on Instrumentation, Biologics, Molecular Biology, Genetic Engineering, Biotechnology and Immunology.

CRITICAL THINKING AND PROBLEM SOLVING

Think critically, analyze experimental data, and apply biochemical principles to solve complex problems in areas such as drug development, medical diagnostics, and Biotechnology.

COMMUNICATION SKILLS

Communicate scientific ideas, experimental procedures, and research findings effectively through written reports, oral presentations, and graphical representations.

CAREER PROSPECTS

INDUSTRY

- **Chemical**
- **Pharmacuetical**
- **CRO**
- **Climate Change**
- **Forensic**
- **Food & Beverages**
- **Dairy**
- **Agriculture**
- **Health Care & Hospital**
- **Public Health**
- **Ecology & Environment**
- **Cosmetics**

RESEARCH ASSISTANCE

LAB TECHNICIAN

HIGHER EDUCATION & RESEARCH

- **Master of Biochemistry**
- **Master of Environmental Science**
- **Master of Forensic Science**
- **Master of Biotechnology**
- **Medical Laboratory Technician (MLT)**
- **Public Health**
- **Regulatory Affairs**
- **MBA**
- **B.Ed.**

B.S. (Hons.) Biotechnology

Welcome to the Bachelor of Science (B.S) in Biotechnology program, an interdisciplinary field at the forefront of scientific innovation and technological advancement. This program is designed to provide students with a comprehensive understanding of the principles, applications, and ethical considerations of biotechnology, preparing them for dynamic careers in research, industry, healthcare, and beyond.

SUBJECT COMBINATIONS

BIOTECHNOLOGY/MICROBIOLOGY/CHEMISTRY (BTMC)

PROGRAMME SPECIFIC OUTCOMES

BUILD STRING FOUNDATION IN THE FIELD OF BIOTECHNOLOGY

Our programme ensures students develop a solid foundation of biotechnology, focusing on research and innovation enableing them to contribute significantly to these areas.

DEVELOP PROFESSIONAL WITH HIGH COMPETENCY IN RECENT TECHNIQUES

Possess a solid understanding of ecological principles and processes, including population dynamics, community ecology, ecosystem dynamics, and conservation Biology.

RESEARCH & ANALYTICAL SKILLS

Equipped with the skills necessary to conduct scientific research in Zoology, including formulating research questions, designing experiments, collecting and analyzing data, and drawing conclusions based on evidence.

EXPLORATION OF DIVERSE APPLICATIONS OF BIOTECHNOLOGY

Students explore various applications the diverse applications of biotechnology, including genetic engineering, medical biotechnology, agricultural biotechnology, environmental biotechnology, and industrial biotechnology

DEVELOPMENT OF PRACTICAL SKILLS AND CRITICAL THINKING ABILITIES

Through hands-on laboratory experiences, research projects, and industry internships, students will develop practical skills and critical thinking abilities essential for success in the field.

CAREER PROSPECTS

INDUSTRY

- **Biotechnology Industry**
- **Pharmaceutical Industry**
- **Bioinformatics**
- **Clinical Research Organizations (CROs)**
- **Agriculture & Agri-biotech**
- **Food & Fermentation Industry**
- **Healthcare & Diagnostics**
- **Environmental Biotechnology**
- **Vaccine & Drug Development**

RESEARCH ASSISTANCE

HIGHER EDUCATION & RESEARCH

- **Master of Biotechnology**
- **Master of Life Sciences**
- **MBA**
- **B.Ed.**

+91-90999 27844
+91-92270 13755

B.Sc. (Hons.) Botany

Botany is one of the most important subjects of life sciences. Plants have a unique position as a source of food, fuel, medicines, and almost all over daily necessities. Their role in the environment is unquestionable. This makes plant science a very interesting study with innumerable scopes. The department has facilities of smart class, two laboratories, seed bank, herbaria, a botanical garden and Biodiversity Park with rare medicinal and economically important plants and a well equipped Plant Tissue Culture laboratory.

SUBJECT COMBINATIONS

- **Botany-Zoology-Chemistry (BZC)**

PROGRAMME SPECIFIC OUTCOMES

KNOWLEDGE OF PLANT BIOLOGY

Recall classical biological concepts, especially with focus on plant science, state principles and outline processes underlying the field of Botany and its related interdisciplinary subjects. Carry out group projects and individual experiments for personal development and leadership qualities.

LABORATORY SKILLS

Proficient in laboratory techniques commonly used in Biochemistry research and analysis, including protein purification, chromatography, electrophoresis, spectrophotometry, PCR.

FIELD WORK AND OBSERVATION

Undertake botanical excursions for studying plant diversity, taxonomic identification, landscaping concepts and preparation of physical as well as digital herbarium.

AWARENESS FOR CONSERVATION AND SUSTAINABILITY

Associate the impact of anthropogenic pressure on nature and spread the awareness of sustainable development in the society. Learn about rules and laws regarding plant wealth, develop and design innovative projects.

INTERDISCIPLINARY KNOWLEDGE AND CAREER READINESS

Use the principles of Botany to apply appropriate techniques for undertaking higher studies and research. Apply the knowledge of other disciplines like Biochemistry, Biostatistics, Biophysics, Geography, etc. in botanical research.

CAREER PROSPECTS

INDUSTRY

- Horticulturist
- Herbal pharmacist
- Plant tissue culture
- Agriculturist
- Forestry Officer
- Energy and Green Auditer
- Ethnology
- Environment lawyer
- Landscape designer
- RS & GIS analyst
- Marine Biologist
- Taxonomist
- Mycologist

ENTERPRENEURSHIP

- Herbal drug production
- Organic farming
- Essential oil and Perfumery
- Natural Dyes Production
- Spice Cultivation,
- Seed production and preservation
- Floriculture
- Food and Nutrition
- Hydroponics
- Green House management
- Ecotourism
- Plant Library

RESEARCH ASSISTANCE
HIGHER EDUCATION & RESEARCH

- Master of Botany
- Master of Life Science
- Master of Environmental Science
- Master of Climate Change
- Master of Marine Biology
- Master of Biotechnology
- Master of Forensic Science
- Master of Bioinformatics
- Master of Horticulture
- MBA
- B.Ed.

B.Sc. (Hons.) Chemistry

Chemistry, the oldest science, is an exciting scientific endeavor with broad horizons and a great diversity of practices. Chemical Sciences is an integral part of basic sciences serves as the basis of critical developments for value-added chemicals, pharmaceuticals, novel materials, understanding biological processes, and establishing the theoretical basis of natural phenomena.

SUBJECT COMBINATIONS

- **Chemistry-Physics-Mathematics (CPM)**
- **Chemistry-Physics-Botany (CPB)**
- **Chemistry-Botany-Zoology (CBZ)**
- **Chemistry-Zoology-Botany (CZB)**
- **Chemistry-Geology-Physics (CGP)**

PROGRAMME SPECIFIC OUTCOMES

UNDERSTANDING CHEMICAL PRINCIPLES

Demonstrate a solid understanding of fundamental principles and theories of all branches of chemistry, including periodic table, atomic structure, quantum and wave mechanics, reaction mechanisms, stereochemistry, chemical bonding, kinetics, etc.

LABORATORY SKILLS & EXPERIMENTAL SKILLS

Proficient in laboratory techniques, safety procedures, and instrumentation commonly used in chemistry and gain with hands-on experience of techniques such as titration, chromatography, spectroscopy, and chemical synthesis

RESEARCH SKILLS

Equipped with the skills necessary to engage in independent research in chemistry or related fields. Apply chemical principles to solve research problems in diverse fields.

CRITICAL THINKING AND PROBLEM SOLVING

Think critically, analyze experimental data, and apply chemistry principles to solve complex problems in industrial chemistry, metallurgy, organic synthesis, complex formation, and medicinal chemistry.

COMMUNICATION SKILLS

Communicate scientific ideas, experimental procedures, and research findings effectively through written reports, oral presentations, and graphical representations

CAREER PROSPECTS

INDUSTRY

- **Chemical**
- **Pharmacuetical**
- **CRO**
- **Climate Change**
- **Forensic**
- **Food & Beverages**
- **Dairy**
- **Agriculture**
- **Health Care & Hospital**
- **Public Health**
- **Ecology & Environment**

RESEARCH ASSISTANCE

LAB TECHNICIAN

HIGHER EDUCATION & RESEARCH

- **Master of Chemistry**
- **Master of Environmental Science**
- **Master of Forensic Science**
- **Medical Laboratory Technician**
- **Public Health**
- **Regulatory Affairs**
- **MBA**
- **MCA**
- **B.Ed.**

B.S. (Hons.) Data Science & Analytics

B.S. (Hons.) with DSA is a 4-year undergraduate programme spread over eight semesters. The course comes under the domain of computer science, Business Analytics, and Artificial Intelligence. Data Science, and Analytics is an interdisciplinary subject that includes Statistics, Big-Data Analytic, and Machine Learning in order to understand the problem with respect to a set of real-world data. B.S. (Hons.) with DSA is intended to provide data analytics, machine learning techniques, and their applications for effect decision-makingking in improving business processes.

PROGRAMME SPECIFIC OUTCOMES

- Built strong foundations in core areas of data science with a focus on Data Science and Analytics so that learners can contribute significantly in the area of data analytics, research and innovation.
- Develop professionals with high competency in recent tools and techniques related to Data Science and Analytics.
- Inculcate strong human values and social, interpersonal and leadership skills required for professional success in evolving global professional environments.
- Apply the knowledge of data sciences and analytics to the solution of complex societal problems.
- Acquire a rich basket of skill enhancement courses and soft skill courses instilling self-confidence and moral values.
- Competence in programming languages commonly used in data science, such as Python or R.
- Understanding of fundamental machine learning concepts and algorithms. Application of machine learning techniques to solve real-world problems and make predictions.
- Experience working in collaborative environments, particularly on interdisciplinary teams. Ability to contribute to group projects and share knowledge with team members.
- Build young minds with a research attitude concerning the needs of society. Application of data science techniques to solve real-world problems through capstone projects or internships.

CAREER PROSPECTS

INDUSTRY

- **Data Analysts**
- **Data Scientists**
- **Machine Learning Engineer**
- **Business Analysts**
- **Data Engineer**
- **Quantitative Analysts**
- **Market Research Analysts**
- **Consultant**
- **Startup Founder**

RESEARCH ASSISTANCE

HIGHER EDUCATION & RESEARCH

- **Master of Data Science**
- **Master of Computer Application**
- **Master of AI and ML**
- **MBA**

+91-90999 27844
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B.Sc. (Hons.) Geology

Geology means the study of the earth. It also includes the study of other planets that contain rocks. The study of Geology is most important for various minerals, rocks, fossils, crystals etc. It includes the study of Mineralogy, Crystallography, Petrology, Palaeontology, Structural Geology, Economic Geology, Stratigraphy, Hydrogeology, Engineering Geology and Applied Geology with many other branches of Geology.

SUBJECT COMBINATIONS

- **Geology-Chemistry-Physics (GCP)**

PROGRAMME SPECIFIC OUTCOMES

ACADECMIC SKILLS

Understand the Geology as a subject, its branches, scope, origin of the earth, characteristics of minerals, earth's internal structure and principles of Physical Geology. Demonstrate the fundamental knowledge of the optical mineralogy, crystallography, petrology and dynamics of the earth.

LABORATORY SKILLS

Identification of minerals at megascopic and microscopic level and of rock specimen; Classification of crystals. Skills developed in Structural Geology, Palaeontology, surveying, exploration, Geochemistry, remote sensing & GIS.

FIELD WORK

Proficient in conducting fieldwork and geological mapping, including the identification and interpretation of geological features, rock types, and stratigraphic sequences. Able to collect geological samples and document field observations.

PERSONAL SKILLS

Express the basic concepts of the subject, communication skills and collection of laboratory and field data. Presentation and participation in seminar/workshop/ symposium etc.

SOCIAL SKILLS

Social relevance of earth systems and processes related to other subjects.

CAREER PROSPECTS

INDUSTRY

- **Environmental Geologists**
- **Geological Surveyor**
- **Geoscience Data Analysts**
- **Remote Sensing Specialists**
- **Geological Consultant**
- **Hydrogeologists**
- **Exploration Geologists**
- **ONGC**
- **ISRO**
- **Geological Survey of India**
- **GMDC**

RESEARCH ASSISTANCE

HIGHER EDUCATION & RESEARCH

- **Master of Geology**
- **Master of Applied Geology**
- **Master of Petroleum Geology**
- **M.Tech. (IITs)**
- **Ph.D.**
- **Postdoctoral Research**

B.Sc. (Hons.) Mathematics

A mathematician has been always respected in society for its supposed qualities of problem-solving, quick grasping, perfection, creativity, innovation, etc. as the qualities he is supposed to be possessing. Mathematics is one of the most studied subjects in India as well as abroad. The subject opens up doors to a plethora of career options in a variety of industries. The study and knowledge of Mathematics are required in almost every field, be it Science, technology, or manufacturing.

SUBJECT COMBINATIONS

- **Mathematics-Physics-Chemistry (MPC)**
- **Mathematics-Statistics-Physics (MSP)**

PROGRAMME SPECIFIC OUTCOMES

MATHEMATICAL KNOWLEDGE

Demonstrate a solid understanding of fundamental mathematical concepts, theories, and techniques across various branches of Mathematics, including calculus, algebra, geometry, discrete Mathematics, and differential equations.

PROBLEM SOLVING SKILLS

Proficient in analyzing and solving mathematical problems using appropriate methods and techniques. Able to apply mathematical reasoning to model and solve problems in diverse areas, including science, engineering, finance, and economics.

MATHEMATICAL MODELLING

Capable of formulating mathematical models to represent real-world phenomena and systems. They should understand the limitations and assumptions inherent in mathematical models and analyze the results obtained from them.

CRITICAL THINKING AND LOGICAL REASONING

Able to think critically, logically, and abstractly when approaching mathematical problems and proofs.

COMMUNICATION SKILLS

Proficient in using mathematical software and programming languages to perform numerical computations, simulations, and data analysis.

CAREER PROSPECTS

INDUSTRY

- **Banking**
- **Actuary**
- **Data Analysts**
- **Mathematical Modeller**
- **Education**
- **Operations Research Analysts**
- **Quantitative Analysts**

RESEARCH ASSISTANCE

HIGHER EDUCATION & RESEARCH

- **Master of Mathematics**
- **Master of Statistics**
- **Master of Data Science**
- **MBA**
- **MCA**
- **B.Ed.**

B.Sc. (Hons.) Microbiology

A comprehensive BSc program in Microbiology prepares students with a deep and insightful understanding of microbial life and its applications. Through a blend of theoretical knowledge and hands-on experiments, this program nurtures skills in research, analysis, and critical thinking. Students explore the vast realms of Microbiology, including Virology, Bacteriology, and Mycology, preparing them for diverse careers in healthcare, research, and industry.

SUBJECT COMBINATIONS

- **Microbiology-Chemistry-Zoology (MiCZ)**
- **Microbiology-Zoology-Chemistry (MiZC)**

PROGRAMME SPECIFIC OUTCOMES

UNDERSTANDING MICROBIAL DIVERSITY

Understand the basic principles of Microbiology, microbial taxonomy, microbial morphology and physiology. Understand and apply the basic and advanced concepts of Molecular Biology & genetics, Biomolecules & microbial metabolism, Immunology, and Bio-process technology.

LABORATORY SKILLS & EXPERIMENTAL SKILLS

Develop skills in various microbiological practicals, the study of microorganisms in their natural environments, staining techniques, microbiological analysis of soil, water, and food, blood analysis, serological testing, urine analysis, fermentation product analysis.

CRITICAL THINKING AND PROBLEM SOLVING

Think critically, analyze problems, and apply logical reasoning to solve microbial and health related problems.

COMMUNICATION SKILLS

Communicate scientific ideas, concepts, and findings effectively through written reports, oral presentations, and scientific writing.

ETHICAL & PROFESSIONAL CONDUCT

Adhere to ethical standards in the practice of Microbiology and scientific research. Become aware of the societal implications of microbiological research.

CAREER PROSPECTS

INDUSTRY

- **Pharmacuetical**
- **Food & Beverages**
- **Dairy**
- **Agricultural**
- **Ecology & Environment**
- **CRO**
- **Health Care & Hospital**
- **Public Health**
- **Biotech**
- **Forensic**
- **Veternary**

RESEARCH ASSISTANCE

LAB TECHNICIAN

HIGHER EDUCATION & RESEARCH

- **Master of Microbiology**
- **Master of Biotechnology**
- **Master of Forensic**
- **MBA**
- **Public Health**
- **Regulatory Affairs**
- **Marketing & Sales**
- **Biodefense & Biosecurity**

B.Sc. (Hons.) Physics

The B.Sc. Program in Physics at Undergraduate level is designed to impart a thorough knowledge of the fundamental principles of the several branches of Physics, as mathematically and experimentally demonstrated; and also to execute with hands-on experience with the tools and methods of physics apart from conceptual aspects.

SUBJECT COMBINATIONS

- **Physics-Chemistry-Mathematics (PCM)**
- **Physics-Mathematics-Chemistry-(PMC)**
- **Physics-Chemistry-Botany-(PCB)**
- **Physics-Chemistry-Geology (PCG)**
- **Physics-Mathematics-Statistics (PMS)**

PROGRAMME SPECIFIC OUTCOMES

UNDERSTANDING PHYSICS PRINCIPLES

Demonstrate a deep understanding of the fundamental principles and theories of classical and modern Physics, including mechanics, electromagnetism, thermodynamics, quantum mechanics, and relativity.

LABORATORY SKILLS & EXPERIMENTAL SKILLS

Proficient in designing, conducting, and analyzing experiments in Physics. They should have hands-on experience with a variety of laboratory techniques, instruments, and measurement tools used in experimental physics.

MATHEMATICAL PROFICIENCY

Possess strong mathematical skills, including calculus, differential equations, linear algebra, and mathematical methods of physics. Able to apply mathematical techniques to solve complex problems in Physics.

CRITICAL THINKING AND PROBLEM SOLVING

Ability to understand scientific problems at a fundamental level. Think critically, analyze problems, and apply logical reasoning to solve Physics-related problems.

COMMUNICATION SKILLS

Communicate scientific ideas, concepts, and findings effectively through written reports, oral presentations, and graphical representations.

CAREER PROSPECTS

INDUSTRY

- **Electronics**
- **Telecommunications**
- **Space & Astronomy**
- **Environmental Science**
- **Renewable Energy**
- **Nanotechnology**
- **Material Science**
- **Quantum Computing**
- **Defense & Aerospace**
- **Semiconductor**

RESEARCH ASSISTANT

LAB TECHNICIAN IN RADIOLOGY

HIGHER EDUCATION & RESEARCH

- **Master of Physics**
- **Master of Applied Physics**
- **Master of Astrophysics**
- **Master of Quantum Physics**
- **MBA**
- **MCA**
- **B.Ed.**

B.Sc. (Hons.) Statistics

Statistics, as both Art and Science, plays a very pivotal role in shaping our understanding of the world. Our B.Sc. (Hons.) in Statistics is designed to equip students with the theoretical foundations, practical skills, and critical thinking abilities necessary to navigate the ever-expanding landscape of data-driven inquiry.

SUBJECT COMBINATIONS

- **Statistics-Mathematics-Physics (SMP)**

PROGRAMME SPECIFIC OUTCOMES

STATISTICAL KNOWLEDGE:

Demonstrate a comprehensive understanding of foundational statistical concepts, theories, and methods, including Probability Theory, Statistical Inference, Regression Analysis, Statistical Quality Control, Sampling Techniques, Experimental Design, and Operations Research.

DATA ANALYSIS SKILLS

Skilled in using statistical software and methods to solve real-world problems across various disciplines.

MATHEMATICAL PROFICIENCY

Possess strong mathematical skills, including calculus, linear algebra, and discrete mathematics, which are fundamental to statistical theory and methodology.

CRITICAL THINKING AND PROBLEM SOLVING

Critically evaluate data, assumptions, and results, and apply statistical reasoning to solve complex problems in diverse contexts.

COMMUNICATION SKILLS

Effectively communicate statistical concepts to both technical and non-technical audiences and be proficient in using statistical software to create graphical representations of data.

CAREER PROSPECTS

INDUSTRY

- **Data Analysts**
- **Data Scientists**
- **Statistician**
- **Biostatistician**
- **Actuarial Science**
- **Research Assistant**
- **Market Research Analysts**
- **Quantitative Analysts**
- **Statistical Programmer**
- **Health Care Analysts**
- **Sports Statistician**

GOVERNMENT SERVICES

DISTRICT STATISTICAL OFFICER

HIGHER EDUCATION & RESEARCH

- **Master of Statistics**
- **Master of Applied Statistics**
- **Master of Biostatistics**
- **Master of Data Science**
- **Master of Big Data**
- **MBA**
- **MCA**
- **PG Diploma in Business Analytics**

B.Sc. (Hons.) Zoology

Zoology makes a huge impact on our world through the scientific study of the evolution, anatomy, physiology, behavior, habitats, and health of animals and humans. It includes diverse approaches such as Molecular Genetics, Human Genetics, Biochemistry, Wild-life and field Ecology. By studying animals we develop a better understanding of how we, ourselves, function and interact with the world around us.

SUBJECT COMBINATIONS

- **Zoology-Botany-Chemistry (ZBC)**

PROGRAMME SPECIFIC OUTCOMES

UNDERSTANDING ANIMAL BIOLOGY

Demonstrate a comprehensive understanding of the diversity of animal life, including their Anatomy, Physiology, Behavioral Science, Genetics, and Evolution.

ECOLOGICAL KNOWLEDGE

Possess a solid understanding of ecological principles and processes, including population dynamics, community ecology, ecosystem dynamics, and conservation Biology.

RESEARCH & ANALYTICAL SKILLS

Equipped with the skills necessary to conduct scientific research in Zoology, including formulating research questions, designing experiments, collecting and analyzing data, and drawing conclusions based on evidence.

CRITICAL THINKING AND PROBLEM SOLVING

Able to think critically and analytically when addressing scientific questions and problems in Zoology.

COMMUNICATION SKILLS

Communicate scientific ideas, concepts, and findings effectively through written reports, oral presentations, and graphical representations.

CAREER PROSPECTS

INDUSTRY

- **Pharmacuetical**
- **Biotechnology (Animal Tissue Culture)**
- **Food & Nutrition**
- **Toxicologists**
- **Marine Biologists**
- **Apiculture/Sericulture**
- **Aquarium Curator**
- **Environment Consultant**
- **Animal Husbandry**
- **Forest Officer**
- **Fishery**
- **Forensic**
- **Poultry**

RESEARCH ASSISTANCE

LAB TECHNICIAN

HIGHER EDUCATION & RESEARCH

- **Masters of Zoology**
- **Masters of Biotechnology**
- **Masters of Climate Change**
- **Masters of Clinical Science**
- **Masters of Environmental Science**
- **Masters of Clinical Embryology**
- **Masters of Forensic Sciences**
- **Masters of Lifesciences**
- **B.Ed.**
- **MBA**

Certificate Courses @ Computer Lab

M G Science Institute offers certificate courses at Computer Lab with hands-on training. M G Science has a state-of-the-art computer laboratory with 80 computers. The certificate courses are designed to equip students with the theoretical foundations, practical skills, and critical thinking abilities necessary to navigate the ever-expanding landscape of data-driven inquiry.

BASIC CERTIFICATE COURSES

1. Basics Of R Programming
2. Basics Of Python Programming
3. Statistical Analysis Using Jamovi
4. Data Analysis Using R Programming
5. Data Analysis Using Python Programming
6. Basic Data Analysis Using IBM SPSS
7. Statistical Analysis Using Microsoft Excel

ADVANCED CERTIFICARE COURSES

8. Advanced Data Analysis Using IBM SPSS
9. Machine Learning Using R Programming
10. Machine Learning Using Python Programming
11. R Programming for Biologists
12. Biopython for Lifesciences
13. Data Visualization Using Tableau
14. Business Analytics Using PowerBI

DURATION AND FEES

Duration: 30 Hours per course
Fees per course: 3000 + 18% GST

CAREER PROSPECTS

- **Data Scientists**
- **Data Analysts**
- **Business Analysts**
- **Quantitative Analysts**
- **Market Research Analysts**
- **Machine Learning Expert**
- **Research Assistant**

FOLLOW US FOR REGULAR UPDATES

079-26302872 info@mgscience.ac.in mgscience.ac.in /m.g.science_official/

M.S. INTEGRATED BIOSCIENCES (5 YEARS)

The Integrated M.S. in Biosciences is a five-year interdisciplinary programme designed to provide strong foundational knowledge in life sciences along with advanced specialization and research exposure.
This programme is aligned with NEP 2020 and emphasizes flexibility, multiple exit options, and industry integration.

KEY FEATURES

- BIOSCIENCES - STATESTICS/CHEMISTRY

KEY FEATURES

- Duration: 5 Years (10 Semesters)
- Intake: 45 Students
- Exit Options:
  - After 3 Years: B.Sc. Degree
  - After 4 Years: B.Sc. (Hons./Research)
  - After 5 Years: M.S. Degree

FEE STRUCTURE

- Semester 1 to 6: INR 40,000 per semester
- Semester 7 to 10: INR 50,000 per semester

CURRICULUM HIGHLIGHTS

- Core Biosciences (Biochemistry, Microbiology, Genetics, Molecular Biology)
- Interdisciplinary Subjects (Data Science, Bioinformatics, AI applications in Biology)
- Research Projects and Dissertation
- Industry Internship and Training
- Skill Development Courses

CAREER PROSPECTS

- Research Scientist
- Biotech Industry
- Pharmaceutical Industry
- Healthcare & Diagnostics
- Higher Education (Ph.D.)

Highlights of M.G. Science Institute

- Grant-in-aid institute managed by the Ahmedabad Education Society, established by the inspiration of Shri Sardar Vallabhbhai Patel.
- The legendary scientist Dr. Vikram Sarabhai set up PRL (Physical Research Laboratory) and it is the birthplace of ATIRA too.
- The Institute has a dynamic relationship with prominent research institutes like IPR, SAC, PRL, ISR, EDI, GBRC, GMDC, and ISRO.
- Hailed as the largest science college in Gujarat, it has set high standards of education in science for almost eight decades.
- Played a pivotal role in the development of pharmaceutical and chemical industries in Gujarat by providing much-needed technical manpower in a predominantly trading community.
- Recognised as an AUTONOMOUS Institute by the UGC.
- Offers the highest number of degree courses- 13 at the graduate level and 3 at the postgraduate level.
- Imparts education based on CBCS and National Education Policy (NEP).
- NAAC Accredited at 'A' grade thrice; 2007, 2014, and 2021.
- Well-equipped Computer Science and Data Science Lab.
- Recognized with UGC-CPE status and DBT Star Colleges Scheme.
- 80% of faculties are Ph.D. and 10 are Ph.D. Guides.
- Auditorium for Seminars and Workshops.
- Workshops, seminars, research projects, and hands-on training have dominated the academic scene at the institute.
- ICT-enabled classrooms, and well-equipped laboratories.
- Active NSS, NCC, Cultural & Sports forum.
- Botanical Garden, Geological Museum, Zoology Museum.
- Computerized library with more than 17000 books.
- Our students do equally well in sports, youth festival and co-curricular platforms like Science Manthan and GBion.
- Recognised centre for B.Sc. IGNOU.

How to apply

Register on Gujarat Common Admission Service (GCAS) Portal

Visit https://gcas.gujgov.edu.in

Required for Registration

- Name as per HSE / 12th Marksheet
- Date of Birth as per HSE
- Mobile Number
- Email Address

Admission Process B.Sc. (Hons.)

M G Science Institute is governed by the Governing Body, constituted under the UGC Autonomous structure established on 13th November 2023, for granting admission to students.

Eligibility Criteria

Bachelor of Science (B.Sc. (Hons.))

For A Group: 12th with Physics, Chemistry and Mathematics.

For B Group: 12th with Physics, Chemistry and Biology.

Admissions will be merit based.

Bachelor of Science (B.S.)

For BS in AI and ML, Data Science and Analytics, and Computer science: 12th with Physics, Chemistry and Mathematics; 12th Commerce with Mathematics.

For BS Biotechnology: 12th with Physics, Chemistry and Biology.

Admissions will be merit based.

Required Documents

- SSC Marksheet
- HSC Marksheet
- School Leaving Certificate
- Caste Certificate (For SC, ST, SEBC, EWS)
- Non-Creamy Layer Certificate (For SEBC)
- 2 Passport Size Photographs
- PEC for other than Gujarat state

Reservation of Seats

For admission, the seats shall be reserved for the candidates who are of Gujarat origin and falling under the following categories and in the following proportion, namely.

- Scheduled Castes: 7%
- Scheduled Tribes: 15%
- Socially and Educationally Backward Classes: 27%
- Physically Disabled Candidate: 5% (or as applicable sub-category)
- Economically Weaker Section:
  - Supernumerary Seats 10% (33% of 10% for Girls) as per 10%.
- Sports / NSS / NCC / Cultural Quota: 2% Supernumerary Seats
- Ex. Serviceman and Defense: 1%

1. A candidate seeking admission on a reserved seat shall be required to produce a Certificate of Caste.
2. Provided that the candidate belonging to socially and Educationally Backward Classes shall be required to produce a certificate to the effect of none/inclusion in Creamy Layer in addition to the caste certificate.
3. No caste certificate shall be valid unless it is duly stamped, signed, and issued by the authority empowered by the Government of Gujarat.
4. No certificate to the effect of non / inclusion in Creamy Layer shall be valid unless it is duly stamped, signed, and issued by the authority empowered by the Government of Gujarat.
5. If a candidate fails to submit the certificates as required within the stipulated time, his/her candidature shall be considered for admission under the unreserved category.
6. If a candidate of the reserved category gets admission on an unreserved seat in order of merits, he/she may be given admission on the unreserved seat according to his/her preference.
7. The admission of a candidate of a reserved category on a reserved seat shall be valid subject to the verification of the caste certificate by the authority empowered by the State Government on this behalf. In case the caste certificate is found invalid on verification, he/she shall not have the right to claim his/her admission on a reserved seat and if he/she has already been granted admission, such admission shall be canceled.
8. Admission of such candidate may be continued in case of availability of vacant unreserved seats, subject to the condition of eligibility of merit.
9. After granting admission to all the students of reserved categories on respective reserved seats, the remaining vacant reserved category seats of Scheduled Cast (SC) shall be transferred to Scheduled Tribe (ST) and similarly the vacant seats of Scheduled Tribe (ST) shall be transferred to Scheduled Cast (SC) by the admission committee after having obtained sanction from the competent authority of the Gujarat University.