



**Gauhati University**  
**Placement Brochure for the Faculty of Science**  
**Session 2007-08**

Placement Cell  
Gauhati University,  
Gopinath Bordoloi Nagar,  
Guwahati-14. Assam.



Established in 1948 under the Gauhati University Act, 1947 (Assam Act, XVI of 1947), Gauhati University is the first University in North East India. Over the years, it has evolved into an institute of repute offering under-graduate and post-graduate courses in Humanities and Social Science, Science, Engineering, Management, Commerce and Medicine in its campus and in the affiliated colleges spread all over the state. The university is also engaged in path breaking research in nearly all emerging areas despite its infrastructure constrains.

Placement Services for the students of the university in a collective and organized way have started recently but have earned success. In case of certain departments, Placement Services have always existed resulting in over cent percent employments. As part of the efforts of the University to extend Placement Services to all the students and departments in the campus and affiliated colleges, this brochure provides a glimpse of the course structure especially of the PG courses being offered by the departments covered under the Faculty of Science of the university.

The Placement Cell extends warm invitation to everyone concerned to carry out Recruitment Drive in the Campus for the PG students of the University. If required special arrangements can be made to make available under-graduate students from affiliated colleges as well.

## Facilities for recruiters

1. Hall with seating capacity of 350, audio-visual support and generator back up. The hall can be used for Pre-placement talks and conducting written tests.
2. Additional rooms for holding GD and interview.
3. University Guest house for boarding and lodging of the recruiter teams.



Phanidhar Datta Memorial Hall



Phanidhar Datta Memorial Hall



Gauhati University Guest House

## **Location of the University**

The University is located at Jalukbari within the Guwahati city area. The campus has got some hillock on the southern side and the mighty river Brahmaputra is flowing on the northern side of it.

The campus area has been developed to a small township, known as 'Gopinath Bardoloi Nagar' constituted by students in the hostels, residential quarters of teachers, officers and employees of the University., There are 22 halls of residence for University students.

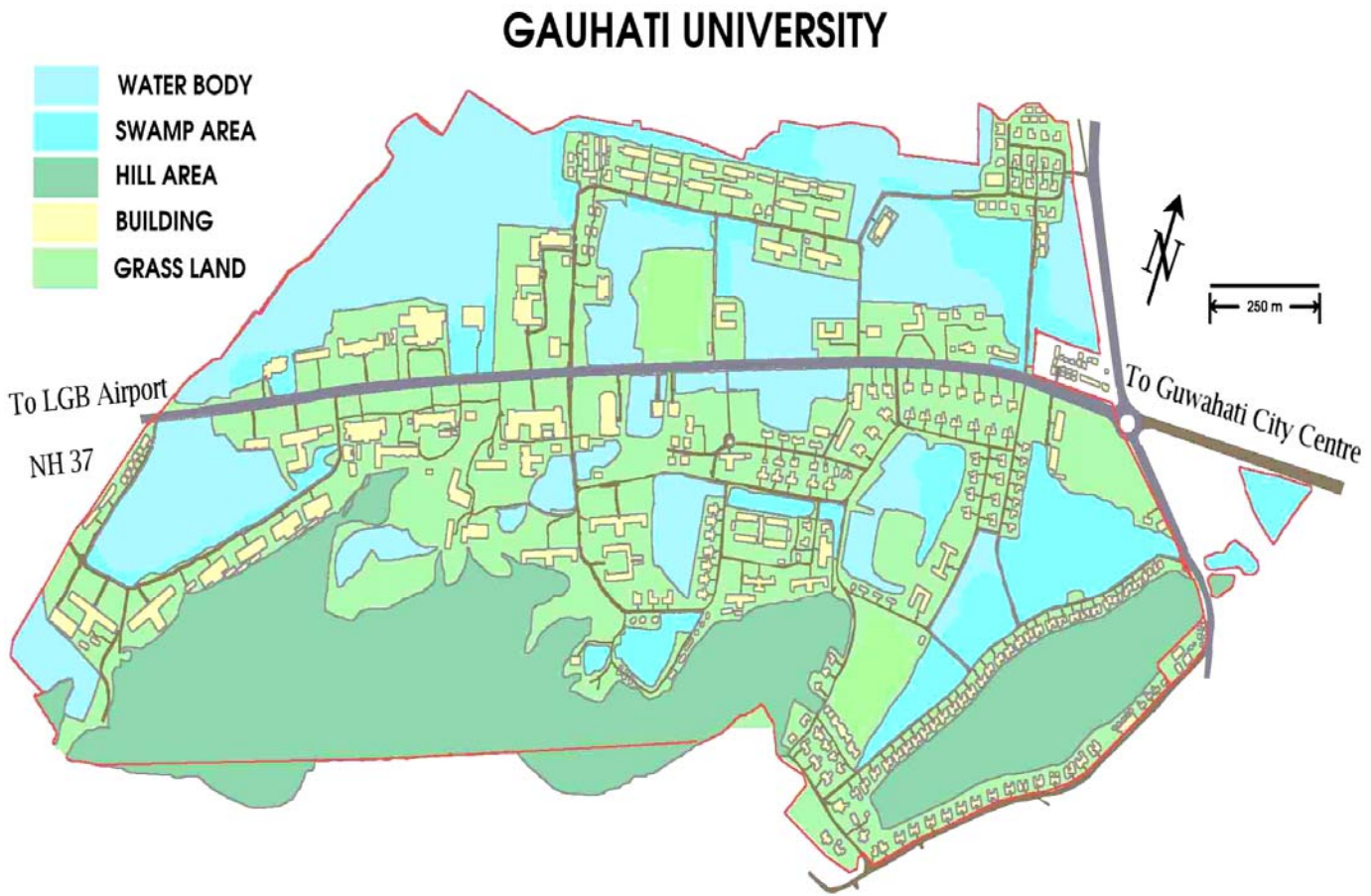
The necessary civic amenities such as health services, water supply, street lighting, internal roads, Guest house, Post and Telegraph office, a branch of State Bank of India, canteens, a market, parks, playgrounds, auditorium, indoor stadium etc. are provided in the campus.

## **Communication:**

The University is 10 kms from the Lokapriya Gopinath Bordoloi International Airport on National Highway No. 37. It is 5 kms from Kamakhya Railway Station and 10 kms from Guwahati Railway Station at the heart of Guwahati City. The capital complex of Assam at Dispur is 22 kms away from the University.

The University is easily accessible from the Guwahati city, and Guwahati has road, rail and air links from all parts of the Country. A large number of bus services from various parts of Assam have their station at Adabari Bus Stand which is 2 kms away from the campus.

A glance at the campus map is as below:



**Contact Person:**

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**Our recruiters during the Sessions 2006-07 and 2007-08**

1. ICICI
2. Infosys
3. Wipro
4. Gensoft
5. TCS
6. Kanbay
7. Cape Gemini
8. IMS Services
9. Cipla

Average package offered: Rs. 1,75,000/- pa

**Academic Session:**

The Academic Session of the University for PG courses starts in the month of August with 1<sup>st</sup> and 3<sup>rd</sup> semesters. The 2<sup>nd</sup> and 4<sup>th</sup> semesters start around December-January and end during the months April-May.

**Best Months for Recruitment Drive:**

The best months for recruitment are March to May and September to November. However, if requested, recruitment camps can be arranged during the remaining months also by taking special care so as not to disrupt the scheduled academic activity of the university.

**Placement Procedure**

The recruitment procedure followed by Gauhati University is straight forward:

- Companies and others related willing to hold campus recruitment should contact the Placement Officer and convey the following with email/ fax/surface mail:
  - Name of the Company
  - Website
  - Nature/Field of Activity/Work/Business
  - Job Description
  - Job Designation
  - Place of Posting
  - Degree/Discipline of students required
  - Expected number of Vacancies
  - Pay package details
  - Accommodation Provided
  - Bond details
  - Selection Procedure

- Dates will be allocated by the Placement Cell for campus recruitment with due consideration of convenience to the University and the Recruiters.
- Pre-Placement talks and the subsequent selection process should ideally be scheduled towards the second half (after 1PM) during week days and from 10AM on holidays.
- Placement Cell and the University will always be generous in preparing the schedules and dates for organizing Campus Recruitment.

### **Departments under Faculty of Science**

1. Anthropology
2. Biotechnology
3. Botany
4. Chemistry
5. Computer Science and IT
6. Electronics Science
7. Environmental Science
8. Geography
9. Geological Science
10. Instrumentation and USIC
11. Mathematics
12. Physics
13. Statistics
14. Zoology

The following pages provide a brief look at the course structure of the PG courses offered by the Faculty of Science of Gauhati University.

## M.Sc. in Anthropology

- Duration: 4 Semester spread over two academic years
- Intake: 24 per semester. Students are selected on merit basis (written test for other University students.)
- Distribution of papers

Semester	Paper	Marks	Remarks	
1	Physical Anthropology: Human Evolution	100	Theory	
	Archaeological Anthropology: Methods and Principles	100		
	Social-Cultural Anthropology: Society and culture (I)	100		
	Field Methodology, field work, Material Culture and Museum method	120	Practical	
	Serology, Physiology, Dermatoglyphics and Sense Perception	30		
2	Physical Anthropology: Human Variation	100	Theory	
	Archaeological Anthropology: Prehistoric Man and Culture	100		
	Social-Cultural Anthropology: Society and culture (II)	100		
	Advanced Craniometry,	100	Practical	
	General Practical-II	100		
3	Statistical Mechanics	100	Theory	
	(A) Numerical Analysis and Computer Programming (B) General theory of Relativity	50+50		
	Electives: Part-I <ul style="list-style-type: none"> <li>• Astrophysics</li> <li>• Adv. Spectroscopy &amp; Laser</li> <li>• Adv. Electronics</li> <li>• High Energy Physics</li> <li>• Nuclear Physics</li> <li>• Crystallography &amp; Molecular Biophysics</li> <li>• Adv. Condensed Mater Physics</li> </ul>	100		
	Electives: Part-II: Any from the Part-I	100		
	General Practical-III	100		Practical
4	Adv. Quantum Mechanics	100	Theory	
	Elective: Part-I: Any from the Part-I (Third semester)	100	Seminar	
	Electives: Part-II: Any from the Part-I (Third semester)	100	Theory	
	Elective Practical I/Dissertation Any from the Part-I (Third semester)	100	Practical	
	Elective Practical II/Dissertation <ul style="list-style-type: none"> <li>• Any from the Part-I (Third semester)</li> </ul>	100		

### Faculty:

- **Professor-5**
- **Reader-4**
- **Lecturer-3**

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/anthropology/anthropology\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/anthropology/anthropology_index.htm)

### M.Sc. in Biotechnology

- Duration: 4 Semester spread over two academic years
- Intake: 10 per semester. Students are selected on the basis of written test.
- Distribution of papers

Semester	paper	Marks	Remarks
1	Biochemistry-I	100	Theory
	Microbiology	100	
	Biostatics, Bioinformatics & Instrumentation	100	
	Biochemistry-I, Bioinformatics	40	Practical
	Microbiology	40	
	Biostatics, Bioinformatics & Instrumentation	40	
2	Cell & Molecular Biology	100	Theory
	Biochemistry-II	100	
	Immunology	100	
	Cell & Molecular Biology	40	Practical
	Biochemistry-II	40	
	Immunology	40	
3	Genetic Engineering	100	Theory
	Special Paper <ul style="list-style-type: none"><li>• Bio resource and Environmental Biotechnology (BEB)</li><li>• Food Biotechnology &amp; Bioprocess Engineering (FBBE)</li><li>• Plant &amp; Animal Biotechnology</li></ul>	100	
	Dissertation		
	Genetic Engineering	40	Practical
	Plant & Animal Biotechnology	40	
	Special Paper Practical	60	
4	Special Paper <ul style="list-style-type: none"><li>• Bio resource and Environmental Biotechnology (BEB)</li><li>• Food Biotechnology &amp; Bioprocess Engineering (FBBE)</li></ul>	100	Theory
	Special Paper Practical	60	practical
	Training in Advanced Lab (1 months)	60	Summer Training
	Dissertation	100	

### Faculty:

- Professor-3
- Reader-4
- Lecturer-1

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/biotechnology/biotechnology\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/biotechnology/biotechnology_index.htm)

## M.Sc. in Botany

Duration: 4 Semester spread over two academic years

Intake: 40per semester. Students are selected on merit basis  
(written test for other University students.)

Distribution of papers

Semester	Paper	Marks	Remarks
1	Algae, Fungi, Bacteria, Virus, Hichen	80	Theory
	Bryophytes, Pteridophytes	80	
	Phanerogams-Angiosperms & Gymnosperms.	80	
	Algae, Fungi, Bacteria, Virus, Hichen & Bryophytes	80	Practical
	Pterido, Gymno, Angio, Field Studies	100	
2	Cryptology, Genetics, Plant Breeding	80	Theory
	Plant Anatomy, Plant Micro technique Evolution	80	
	Plant Physiology, Plant Biochemistry	80	
	Cryptology, Genetics, Plant Breeding, Plant Anatomy, Plant Micro technique.	100	Practical
	Plant Physiology, Plant Biochemistry	100	
3	Ecology & Environment, Plant Geography	80	Theory
	Advanced morphology, Palynology , Embryology	80	
	Plant Pathology, Microbiology	80	
	Ecology & Environment, Palynology, Advanced morphology & Plant Geography	80	Practical
	Plant Pathology, Microbiology, Embryology	80	
4	Biostatistics, Computer Application, Applied Botany	80	Theory
	Elective-1	100	
	Elective-2 Electives: <ul style="list-style-type: none"> <li>• Mycrology &amp; Plant Pathology</li> <li>• Advanced Plant Physiology</li> <li>• Microbiology</li> <li>• Cytology, Genetics and Plant Breeding</li> <li>• Angiosperm Taxonomy</li> <li>• Plant Ecology</li> </ul>	80	
	Biostatistics, Computer Application, Applied Botany	60	
	Special papers practical: Anyone of the paper from the Electives-2	100	Practical

### Faculty:

- Professor-3
- Reader-1
- Lecturer-2

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/botany/botany\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/botany/botany_index.htm)

## M.Sc. in Chemistry

- Duration: 4 Semester spread over two academic years
- Intake: 35 per semester. Students are selected on merit basis (written test for other University students.)
- Distribution of papers

Semester	Paper	Marks	Remarks
1	Physical Chemistry	100	Theory
	Organic Chemistry	100	
	Inorganic Chemistry	100	
	Biochemistry	50	
	Laboratory (Organic)	150	Practical
2	Physical Chemistry	100	Theory
	Organic Chemistry	100	
	Inorganic Chemistry	100	
	Molecular Spectroscopy	50	
	Laboratory (Inorganic)	150	Practical
3	Quantum Chemistry	100	Theory
	Physical Method of Chemistry	100	
	Environmental and Analytical Chemistry	100	
	Computer in Chemistry	50	
	Laboratory (Physical)	150	Practical
4	Special Paper-I	100	Theory
	Special Paper-II	100	
	Special Paper-III	100	
	Advanced Practical or project work	150	Practical
	Literature review on assign project	50	

**Notes: In Semester-4, Students will have the option to offer special papers in any one of the three branches, Physical, Organic and Inorganic Chemistry as follows:**

**Physical Chemistry:**

- **Paper-I:** Chemical Kinetics and Electrochemistry
- **Paper-II:** Polymer Chemistry
- **Paper-III:** Heterogeneous Catalysis

**Organic Chemistry:**

- **Paper-I:** Natural Products Chemistry
- **Paper-II:** Organic Synthesis
- **Paper-III:** Bioorganic and Medicinal Chemistry

**Inorganic Chemistry:**

- **Paper-I:** Transition Metals Inorganic Material
- **Paper-II:** Organometallics and Photo inorganic Chemistry
- **Paper-III:** Bioinorganic Chemistry

**Faculty: Professor-8, Reader-4, Lecturer-3**

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/chemistry/chemistry\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/chemistry/chemistry_index.htm)

## M.Sc. in Computer Science and Information Technology

Duration: 4 Semester spread over two academic years

Intake: 30 per semester per course. Students are selected on the basis of written test.

Distribution of papers

Semester	Paper	Marks	Remarks
1	Advanced Programming Techniques	100	Theory
	Theoretical Computer Science	100	
	Operating System	100	
	Advanced Data Structure and Algorithms	100	
	Advanced Programming Laboratory	100	
2	Computer Networks	100	Theory
	Software Engineering and Principles of Programming	100	
	Theory of Computations	100	
	<i>Electives-I:</i> Theory and Operations Research and its applications Advanced DBMS Intelligence Fuzzy and Neural Networks Robotics System Design Evaluation and Computational Techniques Advanced Computer Architecture Microprocessor Queuing Evolutionary algorithms Artificial Computer Graphics VLSI Performance Knowledge Based System	100	
3	Distributed Systems	100	Theory
	Compiler Design	100	
	<i>Elective – II:</i> Any one from the Electives-I	100	
	<i>Elective – III</i> Graph Theory and Algorithms Analysis Randomized Algorithms Simulation Programming High Performance Computation Advanced Operating System Computational Geometry System Applied Complexity Parallel and Modeling and Functional and Logic Symbolic Computation Embedded	100	
4	Project Work (The work should be done in the specialized stream chosen by the students)	300	Practical

### Faculty:

- Professor-0
- Reader-2
- Lecturer-2

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/computer\\_science/computer\\_science\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/computer_science/computer_science_index.htm)

## M.Sc. in Electronics Science

Duration: 4 Semester spread over two academic years

Intake: 20 per semester. Students are selected on the basis of written test.

Distribution of papers

Semester	Paper	Marks	Remarks
1	Mathematical Methods and Computer Programming	100	Theory
	Network Analysis & Synthesis	100	
	Electronic Material Science Semiconductor Science and Technology	100	
	Quantum Mechanics Electronic Devices and Circuits	100	
	Digital Logic Design	100	
	Lab 1: (Analog and Digital Design & Programming)	100	Practical
2	Electromagnetic Microwave Electronics	100	Theory
	Thin Film & IC Process Technology	100	
	Microprocessor-I (including Lab on trainer kits and simulators)	100	
	Power Electronics Instrumentation and Control	100	
	Optoelectronics and Optical Communication	100	
	Lab-II	100	Practical
3	Analog and Digital Communication (Matlab Programming)	100	Theory
	Mechatronics Electronic System Design	100	
	VLSI Technology and Devices	100	
	Advances in Electronics- Web Technology	100	
	Electives: <ul style="list-style-type: none"><li>• Microprocessor-II</li><li>• Computer Communication Networks-I</li><li>• Microwave Communication- I</li><li>• Digital Signal Processing- I (Matlab Programming)</li><li>• Optical Communication-I (Opto-Electronics Lab)</li><li>• Bio- Instrumentation- I</li><li>• Agri- Electronics &amp; Green House Instrumentation-I</li></ul>	100	
	Lab-III	100	
	Industrial Training (2 months )		Practical
4	Electives: Same as in the 3 <sup>rd</sup> Semester Electives	100	Theory
	Seminar	50	Seminar
	Industry Lectures	50	Theory
	Project	200	Practical

### Faculty:

- Professor-1
- Reader-1
- Lecturer-2

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/electronics\\_science.htm](http://www.guniv.ernet.in/faculty_of_science/electronics_science.htm)

## M.Sc. in Environmental Science

- Duration: 4 Semester spread over two academic years
- Intake: 10 per semester. Students are selected on the basis of written test.
- Distribution of papers

Semester	paper	Marks	Remarks
1	Fundamental Environmental Science	75	Theory
	Environmental Chemistry	75	
	Environmental Biology	75	
	Environmental Earth Science	75	
	Practical and Field Study	100	Practical
2	Statistical Methods for Environmental Data Analysis	75	Theory
	Environmental Pollution	75	
	Ecosystem Dynamics	75	
	Environmental Hazards	75	
	Practical and Field Study	100	Practical
3	Environmental Remote Sensing and GIS	75	Theory
	Analytical Methods for Environmental Monitoring	75	
	Environmental Health and Eco-toxicology	75	
	Eco-hydrology and watershed Management	75	
	Practical and Dissertation Seminar	100	Practical
4	Energy and Environment	75	Theory
	Environmental Impact Assessment	75	
	Environmental Law and Management	75	
	Special Paper: (Any one of the following papers) a. Environmental Pollution-Control and Mitigation b. Natural Hazard in NE India	75	

### Faculty:

**Professor-0**

**Reader-2**

**Lecturer-0**

**Web link:** [http://www.guniv.ernet.in/faculty\\_of\\_science/environmental\\_science/environmental\\_science\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/environmental_science/environmental_science_index.htm)

## M.Sc. in Geography

- Duration: 4 Semester spread over two academic years
- Intake: 35 per semester. Students are selected on merit basis (written test for other University students.)
- Distribution of papers

Semester	Paper	Marks	Remark
1	Principle and Concept in Geomorphology	50	Theory
	Process in Geomorphology	50	
	Climatology	50	
	Biogeography	50	
	Theoretical Basis of Economic geography	50	
	Geography of Economic activity	50	Practical
	Practical-I: On Geomorphology	50	
	Practical-II: On Climatology, Biogeography and Economic Geography	50	
2	Geography of Development of India	50	Theory
	Geography of Development of N.E. India	50	
	Theoretical Basis of Environmental geography	50	
	Environmental Problems	50	
	Nature and Approaches of Human Geography	50	
	Population and Settlement Geography	50	Practical
	Practical-I: & Field Work	50	
	Practical-II: On Human Geography	50	
3	Geographic Thoughts: Historical Development	50	Theory
	Geographic Thoughts: Contemporary Trnds	50	
	Quantitative Methods in Geography	50	
	Cartographic Methods in Geography	50	
	Fundamental of Social and Cultural Geography	50	
	Fundamental of Political Geography	50	Practical
	Practical-I: Quantitative Methods in Geography	50	
	Practical-II: Cartographic Methods in Geography	50	
4	Remote Sensing and GIS in Geography	50	Theory
	Research Methodology in Geography	50	
	Optional course-I		
	1. Advanced Cartography		
	2. Agricultural Geography		
	3. Environmental Geography		
	4. Fluvial Geomorphology		
	5. Geography of Rural Development		
	6. Urban Geography		
	7. Historical Geography		
8. Political Geography			
9. Population geography			
10. Regional Planning and development			
11. Remote Sensing and GIS in Geography			
12. Settlement Geography			
13. Social geography			
14. Geography of development			
Optional course-II (Any one from the Optional Course-I)	50		
Optional course-III (Any one from the Optional Course-I)	50		
Dissertation on Optional Course	50		
Practical-I: On Advanced Methods in Geography	50	Practical	
Practical-II: On Optional Course	50		

### Faculty:

**Professor-3**

**Reader-3**

**Lecturer-4**

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/geography/programmes/msc\\_geography.html](http://www.guniv.ernet.in/faculty_of_science/geography/programmes/msc_geography.html)

## M.Sc. in Instrumentation

Duration: 4 Semester spread over two academic years

Intake: 16 per semester. Students are selected on the basis of written test.

Distribution of papers

Semester	Paper	Marks	Remarks
1	Fundamentals of Instrumentation	100	Theory
	Linear Electronics	150	Theory-100 Practical-50
	Mathematics-I	100	Theory
	Digital Circuits and System	150	Theory-100 Practical-50
	Microprocessor and Computer Fundamentals	150	
	Practical and workshop practice	50	Practical
2	Transducer and Instrumentation	150	Theory-100 Practical-50
	Electronics Device and Application	150	
	Computer Architecture, Peripherals and Interfacing	150	
	Control system	100	Theory
	Mathematics-II	100	
	Workshop Practice	50	Practical
3	Microprocessor Based Instrumentation	150	Theory-100 Practical-50
	Industrial Instrumentation	150	
	Numerical Methods and Operation Research	100	theory
	Elective – I <ul style="list-style-type: none"> <li>• Modeling and Simulation</li> <li>• Optoelectronics and electronic instrumentation.</li> <li>• Instrumentation System Design</li> <li>• X- ray Diffract meter and X- ray Fluorescence</li> <li>• Communication System</li> </ul>	100	
	Elective-II: Any one from the ElectivesI	100	
	Project Work	100	Practical
4	Process Control	150	Theory-100 Practical -50
	Analytical Instruments	150	
	Elective-III <ul style="list-style-type: none"> <li>• Environmental pollution control</li> <li>• Biomedical Instrumentation</li> <li>• Computer Network</li> <li>• Artificial Intelligence</li> <li>• Agro Electronics And Green House Instrumentation</li> <li>• Digital Signal Processing</li> </ul>	100	Theory
	Elective-IV: Any one from the Electives-III	100	
	Project Work	200	Practical

### Faculty:

- Professor-2
- Reader-2
- Lecturer--1

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/usic/usic\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/usic/usic_index.htm)

## M.Sc. in Mathematics

Duration: 4 Semester spread over two academic years

Intake: 80 per semester. Students are selected on merit basis (written test for other University students.)

Distribution of papers

Semester	Paper	Marks	Remarks
1	Algebra	100	Theory
	Differential Equation	100	
	Mechanics and Tensor	100	
	Real Analysis and Lebesgue Measure	100	
	Topology	100	
2	Complex Analysis	100	Theory
	Discrete Mathematics (Logic, Boolean Algebra, Recurrence Relation and Generating Function)	100	
	Functional Analysis	100	
	Linear and Non Linear programming	100	
	Mathematical Methods (Integral Equation, Integral Transform & Calculus of Variation)	100	
3	Theory of Numbers	100	Theory
	Partial Differential Equation/Computer Algebra and Application	100	
	Differential Geometry of Manifolds/Measure Theory/Special Theory of Relativity	100	
	Advanced Commutative Algebra / Harmonic Analysis / Space Dynamics	100	
	Advanced Topology / * Mathematical Logic / Chaos Theory / Hydrodynamics and Continuum Mechanics	100	
4	Graph Theory	100	Theory
	Numerical Analysis and Computer Programming in C	100	
	Dynamical System / General Theory of Relativity and Cosmology / Advanced Functional Analysis	100	
	Fluid Dynamics / Algebraic Curves / Fuzzy Sets and its applications	100	
	Projective representation / Group Theory / Operational Research / Computer Science / MHD / Computational Fluid Dynamics	100	

### Faculty:

- Professor-6
- Reader-6
- Lecturer-0

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/mathematics/programmes/msc\\_maths.htm](http://www.guniv.ernet.in/faculty_of_science/mathematics/programmes/msc_maths.htm)

## M.Sc. in Physics

Duration: 4 Semester spread over two academic years

Intake: 45 per semester. Students are selected on merit basis (written test for other University students.)

Distribution of papers

Semester	Paper	Marks	Remarks
1	Mathematical Physics	100	Theory
	Classical mechanics	100	
	Quantum Mechanics	100	
	Electrodynamics	100	
	General Practical-I	100	Practical
2	Atomic and Molecular Physics	100	Theory
	Condensed Mater Physics	100	
	Electronics	100	
	Nuclear Physics and Cosmic rays	100	
	General Practical-II	100	Practical
3	Statistical Mechanics	100	Theory
	(C) Numerical Analysis and Computer Programming (D) General theory of Relativity	50+50	
	Electives: Part-I <ul style="list-style-type: none"><li>• Astrophysics</li><li>• Adv. Spectroscopy &amp; Laser</li><li>• Adv. Electronics</li><li>• High Energy Physics</li><li>• Nuclear Physics</li><li>• Crystallography &amp; Molecular Biophysics</li><li>• Adv. Condensed Mater Physics</li></ul>	100	
	Electives: Part-II: Any from the Part-I	100	
	General Practical-III	100	Practical
4	Adv. Quantum Mechanics	100	Theory
	Elective: Part-I: Any from the Part-I (Third semester)	100	Seminar
	Electives: Part-II: Any from the Part-I (Third semester)	100	Theory
	Elective Practical I/Dissertation Any from the Part-I (Third semester)	100	Practical
	Elective Practical II/Dissertation <ul style="list-style-type: none"><li>• Any from the Part-I (Third semester)</li></ul>	100	

### Faculty:

- Professor-7
- Reader-4
- Lecturer-4
- Vacant-6

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/physics/physics\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/physics/physics_index.htm)

### M.Sc. in Statistics

- Duration: 4 Semester spread over two academic years
- Intake: 30 per semester. Students are selected on merit basis (written test for other University students.)
- Distribution of papers

Semester	paper	Marks	Remarks
1	Real Analysis and Integral Transform	100	Theory
	Measure Theory	100	
	Linear Algebra & Linear Programming Problem	100	
	Sample Survey and design of Experiment	100	
	Practical Based on Above Four Papers	100	Practical
2	Distribution Theory	100	Theory
	Computer Programming in C	100	
	Statistical Inference (I)	100	
	Sample Survey and design of Experiment	100	
	Practical Based on Above Four papers	100	Practical
3	Testing of Hypothesis	100	Theory
	Multivariate Analysis (I) & Stochastic Process (I)	100	
	Demography and Time Series	100	
	Special Paper a. Survival Analysis (I) b. Computer Application: Knowledge Discovery and Data Mining c. Econometrics (I) d. Demography (I) e. Operation Research(I) f. Actuarial Statistics (I)	100	
	Practical based first 3 Papers	100	
4	Inference (III)	100	Theory
	Multivariate Analysis (II) & Stochastic Process (II)	100	
	Statistics for National Development Theory and Simulation	100	
	Special Paper a. Survival Analysis (II) b. Computational Mathematics c. Econometrics (II) d. Demography (II) e. Operation Research(II) f. Actuarial Statistics (II)	100	
	Practical based first 3 Papers	100	
	Project Report	50	

### Faculty:

Professor-4

Reader-2

Lecturer-2

Web link: [http://www.guniv.ernet.in/faculty\\_of\\_science/statistics/statistics\\_index.htm](http://www.guniv.ernet.in/faculty_of_science/statistics/statistics_index.htm)

### M.Sc. in Zoology

- Duration: 4 Semester spread over two academic years
- Intake: 35 per semester. Students are selected on merit basis (written test for other University students.).
- Distribution of papers.

Semester	paper	Marks	Remarks
1	Biosystematics, Taxonomy, Biostatistics and bioinformatics	100	Theory
	Evolution and Genetics	100	
	Environmental Biology and Wildlife Biology	100	
	Practical	50	
	Practical	50	Practical
2	Developmental Biology and tool and techniques	100	Theory
	Ecology and limnology	100	
	Ethology, Sociobiology and Biodiversity	100	
	Practical	50	
	Practical	50	Practical
3	Cell Biology, Immunology and Biochemistry	100	Theory
	Physiology and Endocrinology	100	
	Entomology and Fisheries	100	
	Practical	50	
	Practical	50	Practical
4	Special Paper-I	100	Theory
	Special Paper-II	100	
	Special Paper-III	100	
	Practical	50	Practical
	Practical	50	

Note: In Semester-4, Students will have the option to offer special papers in any one of the following group

Group-1: Animal Ecology and Wildlife Biology

(i) Ecosystem Function and Stability, (ii) Wildlife Habitat, (iii) Conservation and Management

Group-2: Animal Physiology and Biochemistry

(i) Biochemistry, (ii) Organ physiology and Immunology, (iii) Endocrinology

Group-3: Entomology

(i) Insect morphology Insect Ecology, (ii) Insect Physiology, (iii) Economic Entomology and Pest Control

Group-4: Cell and Molecular Biology

(i) Cell Structure and Function, (ii) Molecular Biology, Genome Organization and Molecular Techniques.

Group-5: Fish Biology and Fishery science

(i) General Ichthyology, (ii) Cultural Fisheries, (iii) Fish Biology and Biotechnology

#### Faculty:

Professor-4

Reader-2

Lecturer-2

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