

PROSPECTUS 2010



TEZPUR UNIVERSITY

(A Central University)

www.tezu.ernet.in

Tezpur-784 028, Assam

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IMPORTANT POINTS

This prospectus contains common application form for applying to any of the academic programmes mentioned below. Filled in application should be sent to the Controller of Examinations, Tezpur University.

- **B.Tech. Programme**
The University offers B.Tech. programme in five disciplines, viz., (i) Civil Engineering, (ii) Computer Science & Engineering (iii) Electronics & Communication Engineering, (iv) Mechanical Engineering and (v) Food Engineering & Technology. A single application will address all these five programmes. As selection will be based on AIEEE score, candidates appearing in **AIEEE 2010** are only eligible for the B.Tech. Programme at Tezpur University.
- **Integrated M.Sc. Programme**
The University offers Integrated M.Sc. programme in four disciplines, viz., Bioscience & Bioinformatics, Chemistry, Mathematics and Physics. Candidates need to fill in a single form stating their priority of the disciplines sought. Selection will be on the basis of combined examination.
- **M.Tech. / MCA / M.Sc. / M.A. / P.G. Diploma / Certificate course**
Candidates may apply for more than one programme separately. Selection will be based on the performance in TUEE-2010. For some programmes (M.Sc. in Molecular Biology and Biotechnology, M.Tech. in Computational Seismology, M.A. in Mass Communication and Journalism, P.G. Diploma in Mobile & Multimedia Communication and P.G. Diploma in Tourism Management) personal interview / GD are also conducted. Mathematics at 10+2 level is compulsory for candidates applying for M.Tech. in Food Processing Technology and MCA programmes. M.Tech. in Food Processing Technology is a three year course for B.Sc. while two years for B.Tech. / M.Sc. students. Candidates having qualifying degree on or after 1st January, 2009 are only eligible for MCA programme.
- **Ph.D. Programme**
Selection is based on written test and personal interview, to be conducted at the respective departments as per schedule. Candidates may apply in more than one eligible department separately.
- **NE domicile / Permanent Residence Certificate (PRC) requirement**
Candidates applying for NE quota in (i) M.Sc. in Molecular Biology and Biotechnology and (ii) B.Tech. must send attested copy of PRC along with application form.
- **GATE for M.Tech.**
GATE qualifying applicants will be given preference for admission in M.Tech. Applicants with a cut off GATE score of 330 (250 for SC/ST) may seek admission directly without writing the TUEE entrance. In case of adequate number of GATE qualified candidates apply for M.Tech., the admission of candidates through TUEE will be subjected to the availability of seats.
- **Eligibility**
It is the responsibility of the candidate to ascertain the fulfillment of the Tezpur University admission eligibility criteria.
- **All testimonials, in original, will be verified at the time of admission. In case any discrepancy found, admission of the candidate shall not be considered.**
- **One set of attested copies of marks sheets and certificates of all examinations should be submitted at the time of admission. The other documents required at the time of admission are 1) Migration Certificate, 2) Sponsorship / No Objection Certificate from the employer (if applicable), 3) SC / ST / OBC (Non-creamy layer) Certificate (if applicable), 4) Person with Disability (PWD) Certificate issued by the Competent Authority, (if applicable) and 5) Permanent Residence Certificate (PRC) of North-Eastern States (applicable to candidate applying for admission into B.Tech. programmes and M.Sc. in MBBT under North-East Quota as per the format given in Annexure –VIII).**

SECTION ONE

TEZPUR UNIVERSITY

THE UNIVERSITY

Tezpur University was established on 21st January, 1994 as a residential University. Over a span of 16 years, the University has played a leading role in transforming the scenario of higher education in the entire North-Eastern region through innovative, employment driven and interdisciplinary academic programmes with strong work ethics.

The University campus at Napaam, about 15 kilometers east of Tezpur, offers various undergraduate, postgraduate and Ph.D. programmes under five schools viz., Energy, Environment & Natural Resources; Engineering; Humanities & Social Sciences; Management Sciences and Science & Technology. The teachers and the students join this University from premier institutes of the country concocting a homogeneous national character. Apart from fulfilling the traditional role of the University - to create and disseminate new knowledge in diverse fields - it has been striving to keep pace with the developments taking place in a rapidly changing world. As per contemporary requirements, curriculum modernization by 'Cafeteria' approach, transparent and scientific evaluation system and relative grading have been adopted and practiced.

Over the years, the University has developed significant infrastructure for teaching and research. Besides, the University has earned distinction in creating a modern residential campus with quality amenities for living, recreation and sports. The Departments and many members of the faculty have received prestigious grants from funding agencies like ONGC, DST, DBT, DAE, UGC, AICTE, MS & PI, ICSSR, DRDO, CSIR, ISRO, NSC, MNCE, World Bank etc. for meaningful and socially relevant research and development.

FACILITIES

The University has the following facilities and services for the students and research scholars.

University Library

The University has a Central Library with a rapidly increasing collection of books, periodicals and journals. The library has the INFLIBNET connectivity to access other libraries. Most of the necessary books are available. Besides, the individual departments also have their own libraries. Online catalogue of books and journals is available for users.

Computing Facilities

The University has elaborate computing facilities accessible to the students. There is a modern state-of-the-art Central Computer Centre for use by the students and research scholars of Tezpur University in addition to the Departmental computer laboratories. Apart from a large number of PCs and several servers, all connected to the campus LAN, the Centre also has a 4-processor SGI ALTIX-350 server, high quality laser printers, scanners, multimedia accessories, etc. Various software systems are available that run in environments such as UNIX / LINUX, MS-Windows-2000 / NT / XP, and Novell Intra Netware. The campus LAN is connected to the Internet through its 512 kbps SCPC VSAT station of the ERNET.

Hostel Accommodation

The University has separate hostels for boys and girls to accommodate all students and research scholars.

Scholarships

A limited number of scholarships are offered to Tezpur University students by various Government / Semi-government organizations such as NEC, DBT, ITDP, MNES, DTE, AICTE, etc. Free studentships are also provided to a limited number of meritorious students belonging to economically weaker families.

There is provision of UGC for single girl child of the family pursuing non professional PG courses for granting scholarship under "Indira Gandhi Post Graduate Scholarship for Single Girl Child Scheme". University provides institutional fellowship to eligible Ph.D full time students.

Health Services

The University has a Health Centre to provide basic medical services with its own medical and paramedical staff. Further, the students are provided with the benefit of health insurance scheme.

Games and Sports

The University provides opportunities for students to excel in various departments of sports. The University has basketball, volleyball and tennis courts, cricket and football grounds with playing facilities under flood light. Indoor facilities like multi gymnasium and badminton arena of international standard are also available.

Tezpur University Alumni Association (TUAA)

TUAA was formed in the year 2000 to create a network of the Alumni of the University. The website of the association provides full listing of events, news and other relevant information.

Instruction Methodology

The medium of instruction / examination in the University at all levels is English. In framing the courses, care has been taken to see that they are NOT burdened with formal lectures only. There is adequate provision for seminars, tutorials, case studies, guided field works, etc., whatever necessary, to promote the habit of independent thinking.

To relate theoretical knowledge to the practical field, proper measures are taken to conduct case studies and guided field works. Group discussion is an integral part of the pedagogy to help students in increasing their analytical capability and creativity.

Academic Calendar

The University strictly adheres to a well planned academic calendar specifying the schedule of academic activities. Detailed academic calendar is made available in the University Website as well as in the departments in due time.

CURRICULUM

Each academic programme is designed to provide enough flexibility in the choice of courses for the students. Besides core (compulsory) courses for each programme, the students also have the option to choose courses of their own interest from the elective courses.

In framing the courses, proper care is taken to avoid over-emphasis on formal lectures alone. There is adequate provision for laboratory works, seminars, tutorials, case studies, guided field work, etc., wherever appropriate, to inculcate the spirit of independent thinking and enrich hands-on experience. Group discussion is an integral part of the curriculum in some of the programmes.

Evaluation System

Continuous and internal, relative grading is followed. Relative grading is awarded on the basis of continuous internal assessment through class tests, assignments, term-papers, seminars and term tests.

Grades signify the level of standard of qualitative / quantitative academic achievement, which the students attain in a particular course / research work. Each of the letter grades represent a Grade Point as tabulated below. The letter grades A+ to D are considered as Pass grades and F is considered as Fail grade.

Letter Grade	Grade Point	Description
A+	10	Outstanding
A	9	Excellent
B+	8	Very good
B	7	Good
C+	6	Average
C	5	Below Average
D	4	Marginal
F	0	Poor

In addition, there are other grades as stated below:

Letter Grades	Status	Remarks/Context
I	Incomplete	Assigned in case any evaluation component remains to be completed due to an extraordinary situation faced by the student. This grade must be converted to any of the regular grades above within the first month of beginning of the following semester by completing the remaining evaluation component(s).
X	Extended project	Assigned in case project work remains incomplete and the work is extended to the following semester.

Letter Grades	Status	Remarks/Context
S	Satisfactory	Assigned against satisfactory performance
U	Unsatisfactory	Assigned against unsatisfactory performance
W	Withdraw	Assigned if a student withdraws from a course after the last date for withdrawal of course.

Abridged Academic Calendar 2010

JANUARY 18	Commencement of classes for spring semester
MARCH 15-22	Mid-term tests
MAY 17-31	Spring semester end term examinations
JULY 30	Counselling and course registration for new entrants
AUGUST 02	Commencement of classes for autumn semester
OCTOBER 7-14	Mid-term tests
DECEMBER 1-13	Autumn semester end term examinations

Detail academic calendar is available in the University website (www.tezu.ernet.in) as well as in the departments.

PLACEMENT

The Training and Placement Cell of the University is the nodal agency in arranging summer and final placement of the students of the University. Many reputed organizations are taking active interest on our students in offering placements.

The professional and intellectual excellence of the students has succeeded in creating an impact in the corporate, government and other employment sectors within and outside the country. Our *Alumni* are the brand ambassadors of teaching & research programme of the University.

List of Major Recruiters of Tezpur University Students

Avon International	Girijananda C. Engg. College	NIIT
DRDO	GNRC	NIT
Apex Technologies Pvt. Ltd.	Godrej & Boyce Manufac. Co Ltd.	North Lakhimpur College
B & A Limited	Godrej Pacific Ltd.	Oil India Limited
Canara Bank	Govt. Art College	ONGC
Down Town Hospital Ltd.	Guwahati Refinery	ORACLE
IOC Ltd.	HCL	Pandu College
Jubilant Organosys	HDFC Bank	Bongaigaon College
NEDFi	Hyundai	Pradan
Aircel	IBM	PTI
Airtel	ICAR	Rajiv Gandhi University
Amar Asom	ICICI Bank	RIMS
American Express	IDBI Bank	St. Anthony's College
Arunachal University	IFB	SaS'ken
Asian Paints	IIT, Guwahati	Satyam Computers
Assam Engineering College	i-Process Services(I) Pvt. Ltd.	SEITCO Ltd.
Balsara Hygiene Ltd.	ISRO	SIEMEN'S Technology
Bardhaman Knitting	ITC Limited	SMIT
BEL	Ivista Solutions Ltd.	Wipro Infotech
Bell Ceramics	J. B. College	Smith Kline Beecham (Horlicks)

Berger Paints	Jamia Millia Islamia	Spice Jet
Business Standard	Johnson & Nicholson	SRD Nutrients
Cabsford	Kokrajhar College	SUZLON, Pune
Ceistream Technologies	LG Electronics Ltd.	T&I Limited
CII	Look East Channel	TATA AIG
Coca-Cola	Lucent Technology	TATA Infotech
Colgate-palmolive	Mac Lubricants	Tata Tea Ltd.
Creative Crest	Mahindra & Mahindra	Techpacindia Ltd.
Deskal	NF Railways	TERI, New Delhi
Disha	MOL India Ltd.	Tezpur University
Dr. Reddy's Laboratories	Monsanto	The Gujarat Co-operative Milk Marketing Federation Ltd.
Dymanics Orbit	NDTV	Toyota
Dyna Roof	NE TV	Vaisnavi Communication
E-TV	NEEPCO	Vethelpine India. Com
Force Computers	Nestle	Vinay Cements
Gauhati University	Net Decisions	Wipro
GenPact	News Live	Wipro GE

STUDENTS CODE OF CONDUCT

Students are to follow discipline as prescribed in the regulations on Maintenance of Discipline of the University. Violation of any clause by any student may lead to disciplinary action as per the regulations.

Ragging in any form is strictly prohibited inside or outside the University. Students found indulging in ragging shall be subjected to punishment as per rule.

IMPORTANT ACADEMIC RULES

Course registration

The courses opted by the students in a particular semester are to be registered on some specific date(s). For newly admitted students, registration of courses will be done on 30th July.

Attendance requirement

All students must attend every lecture, tutorial and practical classes, of the course registered by him/her. However, to account for late registration, sickness or such other contingencies, the attendance requirement will be a minimum 75% of the classes. Students with deficiency in attendance in a course will not be allowed to appear in the end-term examination and will be assigned an F (fail) grade in the course.

Renewal of admission

Every student will renew his/her admission in the successive semesters on the notified dates. No student is allowed to get himself/herself admitted after the scheduled date.

Academic probation

A student shall be placed on academic probation under the following situations

- The CGPA of the student falls below the critical limit of 4.5
- The student scores an F grade in any of the core courses.

The student gets a chance to clear Academic Probation at the beginning of the following semester.

Forced exit

A student is forced to discontinue the programme under the following conditions:

- the student secures F grade in 3 (three) or more courses in a semester,
- the student continues to be under Academic probation for two consecutive semesters,
- the student is not able to complete the requirements of the programme within the maximum specified duration.

[For detail rules please visit www.tezu.ernet.in]

SECTION TWO

B.Tech. PROGRAMME

B.TECH. PROGRAMME

Curriculum Structure

Duration:	Minimum	: 08 Semesters	
	Maximum	: 12 Semesters	
Credit Requirements:	Minimum Total	: 176	
	Core Courses	: 149	
	Electives	: 27	
	Humanities	: 03	
	Science	: 03	
	Department	: 12	
	Open	: 09	

Semester-wise Distribution of Courses for B. Tech. Programmes

FIRST YEAR Common to all disciplines

Semester I			Semester II		
CODE	Title	Credit	CODE	Title	Credit
MS 101	Mathematics I	4	MS 103	Mathematics II	4
PH 101	Physics I	4	PH 102	Physics II	4
CH 101	Chemistry	4	ME 102	Engineering Mechanics	4
EL 101	Basic Electrical Engineering	4	EL 102	Basic Electronics	5
ME 103	Workshop Practice	2	CO 101	Introductory Computing	3
ME 101	Engineering Graphics	3	CO 102	Computing Laboratory	2
Humanities Electives			Science Electives		
EG 101 / SO 101 / BM 101	Communicative English / Sociology / Elementary Economics	3	BT 101 / ES 101 / CH 102	Elements of Modern Biology / Envi- ronmental Science / Introductory Ma- terial Science	3

SECOND TO FOURTH YEAR CIVIL ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics-III	3	MS 202	Numerical Analysis	3
CE 201	Fluid Mechanics	3	CE 206	Elementary Civil Engineering Drawing	1
ME 201	Solid Mechanics	4	CE 207	Hydraulics & Hydraulic Structures	4
CE 202	Surveying	4	CE 208	Structural Analysis-I	4
CE 203	Building Materials & Technology	3	CE 209	Geotechnical Engineering-I	3
CE 204	Engineering Geology	3	CE 210	Transportation Engineering-I	3
CE 205	Surveying Practical	2	CE 211	Hydraulics Lab	2
			CE 212	Geotechnical Engineering Lab	2
Semester V			Semester VI		
BM 321	Fundamentals of Management	3	BM 322	Social Responsibility & Professional Ethics in Engineering	3
CE 301	Structural Design-I	4	CE 307	Structural Design-II	4
CE 302	Water Resources Engineering	3	CE 308	Environmental Engineering-II	3
CE 303	Structural Analysis-II	3	CE 309	Construction Engineering & Manage- ment	3
CE 304	Geotechnical Engineering-II	3		CE Elective-I	3
CE 305	Environmental Engineering-I	3		Open Elective-I	3
CE 306	Environmental Engineering Lab	2	CE 310	Concrete & Structure Lab	3

Semester VII			Semester VIII		
CODE	Title	Credit	CODE	Title	Credit
CE 401	Transportation Engineering-II	3		Open Elective-III	3
	Open Elective-II	3		CE Elective-IV	3
	CE Elective-II	3	CE 482	Project-II	12
	CE Elective-III	3			
CE 471	Industrial Summer Training	2			
CE 481	Project-I	6			
Electives					
CE 421	Advanced Reinforced Concrete Design	3	CE 430	Open Channel Flow	3
CE 422	Dynamics of Structures	3	CE 431	Hydraulic Structures	3
CE 423	Prestressed Concrete & Industrial Structures	3	CE 432	Hydraulic Machines	3
CE 424	Bridge Engineering	3	CE 433	Groundwater Hydrology & Management	3
CE 425	Soil Dynamics & Foundation Engineering	3	CE 434	Air Pollution & Industrial Waste Management	3
CE 426	Ground Improvement methods	3	CE 435	Solid Waste Engineering	3
CE 427	Earth Retaining Structures	3	CE 436	Environmental Impact Assessment	3
CE 428	Applied Geotechnical Engineering	3	CE 437	Remote Sensing & GIS	3
CE 429	Environmental Geotechniques	3	CE 438	Pavement Design	3

COMPUTER SCIENCE & ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	CO 205	Formal Language & Automata	3
CO 201	Discrete Structures	4	CO 206	Design and Analysis of Algorithms	4
CO 202	Digital Logic Design	4	CO 207	System Programming	3
CO 203	Data Structures	5	CO 208	Object Oriented Programming	4
CO 212	Computer Architecture and Organization	5	EL 221	Electronic Devices and Circuits	4
EL 204	Signals and Systems	3	EL 206	Principles of Communication	4
Semester V			Semester VI		
CO 301	Operating Systems	4	CO 306	Embedded Systems	4
CO 302	Database Systems	5	CO 307	Software Engineering	4
CO 303	Computer Graphics	4	CO 308	Compiler Design	4
CO 304	Principles of Programming Languages	3	BM 322	Social Responsibility and Professional Ethics in Engineering	3
CO 305	Computer Networks	4		CS Elective I	3
BM 321	Fundamentals of Management	3		Open Elective I	3
Semester VII			Semester VIII		
CODE	Title	Credit	CODE	Title	Credit
CO 401	Artificial Intelligence	3	-	CS Elective IV	3
-	CS Elective II	3	-	Open Elective III	3
-	CS Elective III	3	CO 482	Project II	12
-	Open Elective II	3			
CO 471	Industrial Summer Training	2			
CO 481	Project I	6			

Electives					
CODE	Title	Credit	CODE	Title	Credit
CO 421	Graph Theory	3	CO 422	Theory of Computation	3
CO 423	Web Technology	5	CO 424	E-Commerce	5
CO 425	VLSI Design	5	CO 426	Advanced Computer Architecture	3
CO 427	Modeling & Simulation	5	CO 428	Computer Peripherals & Interfacing	5
CO 429	Computer Systems Performance Evaluation	3	CO 430	Management Information System	3
CO 431	System Analysis and Design	3	CO 432	Information Theory & Coding	3
CO 433	Digital Signal Processing	3	CO 434	Image Processing	3
CO 435	Mobile Computing	3	CO 436	Wireless Communication	3
CO501	Network Management and Security	3	CO 502	Data Compression	3
CO 503	Fuzzy Logic and Neural Networks	3	CO 504	Natural Language Processing	3
CO 505	Advanced Database Management System	3	CO 506	Advanced Software Engineering	3
CO 507	Advanced Embedded Systems	3	CO 508	Grid Computing	3
CO 509	Computer Vision	3	CO 510	Robotics	3
CO 511	Ubiquitous and Pervasive Computing	3			

ELECTRONICS AND COMMUNICATION ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	EL 205	Integrated Circuits	4
EL 201	Switching Circuits & Digital Logic	4	EL 206	Principles of Communication	4
EL 202	Electrical Technology	4	EL 207	Instrumentation	4
EL 203	Analog Electronic Devices and Circuits	4	EL 208	Engineering Electromagnetics	3
EL 204	Signals and Systems	3	CO 221	Data Structures and Object Oriented Programming	4
CO 205	Computer Architecture and Organization	5	CO 222	System Software & Operating systems	4
Semester V			Semester VI		
EL 301	Digital Communication	4	EL 306	Communication Networks	4
EL 302	Microprocessors and Interfacing	4	EL 307	Device Modeling & Simulation	4
EL 303	Digital Signal Processing	4	EL 308	VLSI Design	4
EL 304	Control System Engineering	4	BM 302	Social Responsibility and Professional Ethics in Engineering	3
EL 305	Microwave Engineering	4		ECE Elective I	3
BM 301	Fundamentals of Management	3		Open Elective I	3
Semester VII			Semester VIII		
EL 401	Digital Systems Design and VHDL	4		ECE Elective IV	3
	ECE Elective II	3		Open Elective III	3
	ECE Elective III	3	EL 482	Project II	12
	Open Elective II	3			
EL 471	Industrial Summer Training	2			
EL 481	Project I	6			

Electives					
CODE	Title	Credit	CODE	Title	Credit
EL 421	Image Processing	3	EL 422	Electronic Design Automation	3
EL 423	Medical Electronics	3	EL 424	Fiber Optic Communication	3
EL 425	Mobile Communication	3	EL 426	Fuzzy Logic and Neural Networks	3
EL 427	Satellite Communication Systems	3	EL 428	Information and Coding Theory	3
EL 429	Graph Theory	3	EL 430	Computer Vision	3
EL 431	MEMS and Microsystems Technology	3	EL 432	Advance Semiconductor Devices	3
EL 433	Biomedical Signal Processing	3	EL 434	Bioneuro Engineering	3
EL 435	Nanoelectronics	3	EL 436	Intelligent Instrumentation	3
EL 437	Wireless Communication	3	EL 438	Digital Signal Processor	3

FOOD ENGINEERING & TECHNOLOGY

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	FT 205	Food Biochemistry and Nutrition	4
FT 201	Food Chemistry	4	FT 206	Principles of Food Processing and Preservation	3
FT 202	Basic and Food Microbiology	3	FT 207	Transfer Processes in Food Engineering	4
FT 203	Fluid Mechanics	5	FT208	Mechanical Operations in Food Processing	4
FT 204	Computations in Food Processing	4	FT209	Fruits and Vegetables Process Technology	3
ME 205	Thermodynamics	4	EL 321	Instrumentation and Process Control	4
Semester V			Semester VI		
FT 301	Instrumental Methods of Food Analysis	2	FT 307	Food Quality and Safety	3
FT 302	Thermal Operations in Food Processing	4	FT 308	Food Plant Utilities	3
FT 303	Mass Transfer Operations in Food Processing	4	FT 309	Dairy Products Technology	3
FT 304	Cereals, Pulses and Oilseeds Processing Technology	4	FT 310	Food Process Equipment Design	3
FT 305	Biochemical Engineering	3	BM 322	Social Responsibility & Professional Ethics in Engineering	3
FT 306	Recent Advances in Food Research	1	-	FT Elective I	3
BM 321	Fundamentals of Management	3	-	Open Elective I *	3
Semester VII			Semester VIII		
FT 401	Food Packaging, Transportation and Storage	3	-	FT Elective IV	3
FT 402	Plant Design and Process Economics	3	-	Open Elective III	3
-	FT Elective II	3	FT 482	Project II	12
-	FT Elective III	3			
-	Open Elective II*	3			
FT 471	Industrial Summer Training #	2			
FT 481	Project I	6			

Electives					
CODE	Title	Credit	CODE	Title	Credit
Electives					
FT 421	Bakery and Confectionary Technology	3	FT 431	Food Process Design and Analysis	3
FT 422	Plantation Products and Spices Technology	3	FT 432	Food Process Automation	3
FT 423	Oils and Fats Technology	3	FT 433	Numerical Methods in Food Processing	3
FT 434	Processing Technology of Meat, Poultry and Fish	3	FT 434	Energy Conservation in Food Processing	3
FT 425	Fermented and Non Fermented Beverages	3	FT 435	Food Plant Hygiene and Sanitation	3
FT 426	Food Product Development	3	FT 436	Food Industry Waste Management	3
FT 427	Flavors Technology	3	FT 437	Industrial Safety and Hazards	3
FT 428	Specialty Foods: Nutra-ceuticals and Functional Foods	3	FT 438	Optimization Techniques	3
FT 429	Traditional Indian Foods	3	FT 439	Advanced Food Processing Methods	3
FT 430	Industrial Microbiology and Enzyme Technology	3	FT 440	Engineering Properties of Biological Materials	3

MECHANICAL ENGINEERING

Semester III			Semester IV		
CODE	Title	Credit	CODE	Title	Credit
MS 201	Mathematics III	3	MS 202	Mathematics IV	3
ME 201	Solid Mechanics	4	ME 207	Theory of Mechanisms & Machines	4
ME 202	Fluid Mechanics I	3	ME 208	Manufacturing Technology I	3
ME 203	Material Science	3	ME 209	Fluid Mechanics II	3
ME 204	Machine Drawing	2	ME 210	Mechanical Engineering Laboratory II	3
ME 205	Thermodynamics	4	CO 221	Data Structures & Object Oriented Programming	4
ME 206	Mechanical Engineering Laboratory I	3	EL 202	Electrical Technology	4
Semester V			Semester VI		
ME 301	Dynamics & Vibration of Machinery	3	ME 307	Applied Thermodynamics II	3
ME 302	Mechanical Measurements & Instrumentation	3	ME 308	Heat & Mass Transfer	4
ME 303	Manufacturing Technology II	3	ME 309	Systems & Control	3
ME 304	Applied Thermodynamics I	3	ME 310	Mechanical Engineering Laboratory III	3
ME 305	Mechanical Design	4	BM 322	Social Responsibility & Professional Ethics in Engineering	3
ME 306	Advanced Workshop Practice	3		ME Elective I	3
BM 321	Fundamentals of Management	3		Open Elective I	3
Semester VII			Semester VIII		
CODE	Title	Credit	CODE	Title	Credit
ME 401	Industrial Systems Engineering	3	-	ME Elective IV	3
-	ME Elective II	3	-	Open Elective III	3
-	ME Elective III	3	ME 482	Project II	12
-	Open Elective II	3			
ME 471	Industrial Summer Training	2			
ME 481	Project I	6			

Electives					
CODE	Title	Credit	CODE	Title	Credit
ME 421	Computer Graphics & Solid Modeling	3	ME 422	Optimization Methods in Engineering	3
ME 423	Mechanical Vibration	3	ME 424	Theory of Elasticity	3
ME 425	Machine Tools & Machining	3	ME 426	Reliability Engineering	3
ME 427	Productivity Improvement Techniques	3	ME 428	Finite Element Methods in Engineering	3
ME 429	Gas Turbine & Compressor	3	ME 430	Value Engineering	3
ME 431	Fracture and Fatigue	3	ME 432	Engineering Optimization	3
ME 433	Experimental Stress Analysis	3	ME 434	Composite Materials	3
ME 435	Machine Tool Design	3	ME 436	Combustion Engineering	3
ME 437	Tea Machineries	3	ME 438	Petroleum & Drilling Technology	3
ME 439	Refrigeration and Air Conditioning	3	ME 440	Advanced Solid Mechanics	3
ME 521	Robotics	3	ME 522	Quality Engineering	3
ME 523	Non-Conventional Energy	3	ME 524	Operations Management	3
ME 525	Tribology	3	ME 526	Modern Control System	3
ME 527	Computer Aided Design	3	ME 528	Computer Aided Process Planning	3
ME 529	Artificial Intelligence in Engineering	3	ME 531	Project Management	3
ME 532	Power Plant Engineering	3	ME 533	Energy Management	3
ME 534	Mechatronics	3			

SECTION THREE

DEGREE, DIPLOMA AND CERTIFICATE

Degree, Diploma and Certificate

Department	Programme	Eligibility	Duration (semesters)		In-take
			Min	Max	
Business Administration	Master of Business Administration (MBA)	Bachelor's degree in any discipline with a minimum of 50% marks in major / honours subject or in aggregate.	4	8	46
	P.G. Diploma in Tourism Management (PGDTM) (Modular)	Bachelor's degree in any subject with at least 45% marks in major / honours subject or in aggregate.	2	4	23
Chemical Sciences	M.Sc. in Chemical Sciences	B.Sc. with Chemistry as major / honours subject with a minimum of 45% marks (Physics and Mathematics as subsidiary subjects). Candidates from universities / institutes which do not offer major / honours, must have at least 50% marks in Chemistry as well as in aggregate with Physics, Chemistry and Mathematics as subject combination.	4	8	20
	Integrated M.Sc. in Chemistry	Minimum 60% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	10	12	10
Civil Engineering	B.Tech. in Civil Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	20
Computer Science & Engineering	B.Tech. in Computer Science & Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	52
	Master of Computer Application (MCA)	Bachelor's degree in any discipline with at least 50% marks in major / honours subject or in aggregate in case of students not having major. Passed in Mathematics at 10+2 level. The qualifying degree should not be obtained prior 1.1.2009.	6	10	54
	M.Tech. in Information Technology *	B.E. / B.Tech. degree in any discipline or MCA or its equivalent or M.Sc. in Computer Science / IT / Electronics / Mathematics / Statistics with at least 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	28
Cultural Studies	M.A. in Cultural Studies (Modular)	Bachelor's degree in any discipline with at least 45% marks in the major / honours subject. Candidates coming from universities / institutes which do not offer any major / honours, must have at least 50% marks in aggregate.	4	8	46
Electronics & Communication Engineering	B.Tech. in Electronics & Communication Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English.	8	12	52
	M.Tech. in Electronics Design & Technology *	B.E. / B.Tech. / AMIE or equivalent in Electronics / Electrical / Instrumentation Engineering or M.Sc. in Electronics / Instrumentation / Physics (Electronics as specialization) / AMIETE with at least 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	35

Department	Programme	Eligibility	Duration (semesters)		In-take
			Min	Max	
	M.Tech. in Bioelectronics**	B.E. / B.Tech. in Electronics & Communication Engineering / Instrumentation / Chemical Engineering / Computer Science & Engineering / Electrical Engineering / Biomedical Engineering / Bioengineering / Neuro Engineering / Genetic Engineering / Biotechnology / MBBS or M.Sc. in Biotechnology / Biochemistry / Chemistry / Polymer Science / Physics / Electronics / Nano Science & Technology / Instrumentation (with mathematics at 10+2 level) with at least 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	15
Energy	M.Tech. in Energy Technology*	B.E. / B.Tech. / AMIE or equivalent in Mechanical / Electrical / Electronics / Instrumentation / Chemical / Agricultural Engineering / Energy Engineering or M. Sc. in Physics and Chemistry with a minimum of 50% marks in aggregate. GATE qualified candidates will get preference.	4	8	28
English and Foreign Languages	M.A. in English	Bachelor's degree with at least 45% marks in English as major / honours subject. Candidates coming from universities / institutes which do not offer any major / honours must have at least 50% marks in aggregate with 50% mark in English.	4	8	46
	One year Certificate in Chinese (Full time)	10+2 with 45% of marks in aggregate.	2	3	39
Environmental Science	M.Sc. in Environmental Science	B.Sc. (Agri.) with 5.0 CGPA in 10 point scale / B.Sc. with minimum 50% marks in Chemistry / Zoology / Botany / Physics / Environmental Science as major / honours. Candidates from universities / institutes which do not offer major / honours must have at least 50% marks in aggregate.	4	8	23
Food Processing Technology	M.Tech. in Food Processing Technology	B.Sc. with Chemistry as one of the subjects / B.Sc. (Agri.) / B.Sc. Home Science with elective in Food and Nutrition / B.Sc. (Fishery) / B.V.Sc. with a minimum 50% marks or equivalent grade point average in major / honours subject. Candidates must have passed Mathematics at 10+2 level. Candidates from universities / institutes which do not offer major / honours must have at least 50% marks in aggregate or equivalent grade point.	6	10	18
	M.Tech. in Food Processing Technology (lateral entry)	B.E. / B.Tech. degree in Food Processing Technology / Food Technology / Food Technology and Biochemical Engineering / Food Processing Engineering / M.Sc. degree in Food Processing Technology/ Food Technology with at least 50% marks in aggregate or, equivalent CGPA. GATE qualified candidates will get preference.	4	8	7
	B.Tech. in Food Engineering & Technology	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass marks in English	8	12	10

Department	Programme	Eligibility	Duration (semesters)		In-take
			Min	Max	
Mass Communication and Journalism	M.A. in Mass Communication and Journalism	Bachelor's degree in any discipline with at least 45% marks in the major / honours subject. Candidates from universities / institutes which do not offer major / honours must have at least 50% marks in aggregate.	4	8	31
	P.G. Diploma in Mobile and Multimedia Communication	Bachelor's degree in any discipline with at least 45% marks for candidates with honours and 50% marks for candidates with pass courses. For sponsored candidates, a minimum 2 years of service with sponsoring organizations and a Bachelor's degree in any discipline is required.	2	4	15
Mathematical Sciences	M.A. / M.Sc. in Mathematics	B.A. / B.Sc. with 45% marks in major / honours (either Mathematics or Statistics). Candidates with Statistics major / honours must have minimum 50% marks in Mathematics as a subsidiary course. Candidates coming from universities / institutes which do not offer any major / honours must have 50% marks in aggregate and at least 50% mark in Mathematics.	4	8	54
	M.Tech. in Computational Seismology	Master's Degree in Mathematics / Statistics / Physics / Computer Science / Earth Science (Mathematics at degree level) or Bachelor's degree in Engineering (except Chemical / Metallurgical / Agricultural / Bio / Textile) with at least 50% marks in aggregate.	4	8	12
	Integrated M.Sc. in Mathematics	Minimum 60% aggregate marks in Mathematics, Physics, Chemistry / Statistics, subjects at 10+2 and pass mark in English.	10	12	10
Mechanical Engineering	B.Tech. in Mechanical Engineering	Minimum 50% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass mark in English.	8	12	52
Molecular Biology and Biotechnology	M.Sc. in Molecular Biology and Biotechnology ***	Bachelor's degree in Physical, Biological, Agricultural, Veterinary, Fishery Sciences, Pharmacy, Engineering / Technology, four years B.S. programme, MBBS, BDS with a minimum 55% marks in major / honours. Candidates from universities / institutes which do not offer major / honours must have at least 55% marks in aggregate.	4	8	30
	Integrated M.Sc. in Bioscience and Bioinformatics	Minimum 60% aggregate marks with Biology, Chemistry, Physics and / or Mathematics subjects at 10+2 and pass mark in English.	10	12	10
Physics	M.Sc. in Physics	B.Sc. with minimum 45% marks in Physics as major / honours subject and Mathematics as one of the subsidiary subjects. Candidates from universities / institutes which do not offer major / honours must have minimum 50% marks in Physics as well as in aggregate with Mathematics as one of the subjects.	4	8	28

Department	Programme	Eligibility	Duration (semesters)		In-take
			Min	Max	
	M.Sc. in Nano Science & Technology	(i) B.Sc. with 45% marks in Physics as major / honours subjects and Chemistry, Biology / Mathematics as allied subjects Or, (ii) with 45% marks in Chemistry as major / honours subject with Physics, Biology / Mathematics as allied subjects or, (iii) with 45% marks in Biology as major / honours subject with Physics, Chemistry / Mathematics as allied subjects. Candidates from universities / institutes which do not offer major / honours must have minimum 50% marks in aggregate with Physics / Chemistry / Biology / Mathematics as one of the subjects.	4	8	15
	Integrated M.Sc. in Physics	Minimum 60% aggregate marks in PCM (Phys, Chem and Math) subjects at 10+2 and pass mark in English.	10	12	10
Sociology	M.A. in Sociology	Bachelor's degree with at least 45% marks in Sociology major / honours or in any subject offered as major / honours. Candidates from universities / institutes which do not offer major / honours must have at least 50% marks in aggregate.	4	8	23

Relaxation: 5% relaxation in marks for candidates belonging to SC/ST categories.

- * 5 seats are reserved for sponsored candidates (they have to qualify in the TUEE)
- ** 3 seats are reserved for sponsored candidates (they have to qualify in the TUEE)
- *** Only ten seats will be filled up through TUEE. The application form attached with this prospectus is only for these ten seats. For rest of the seats, candidates are selected for admission through "All India Combined Entrance Test" conducted by the Jawaharlal Nehru University, New Delhi under the sponsorship of the Department of Biotechnology, Government of India, New Delhi (eligibility as decided by DBT, Government of India from time to time).

ADMISSION PROCEDURE

How to Apply

Eligible candidates seeking admission into various programmes are required to fill in Tezpur University (TU) application form. TU application form along with the prospectus can be obtained from the (i) designated branches of AXIS BANK by paying Rs. 270/- for SC / ST categories and Rs. 520/- for General Categories or (ii) in person by paying Rs. 250/- for SC / ST categories and Rs. 500/- for General Category at the Office of the Controller Examinations, T.U., or (iii) by sending a request to the Controller of examinations, T.U. with a demand draft of Rs. 310/- for SC / ST categories and Rs. 560/- for general categories drawn in favour of the Registrar, Tezpur University, payable at Tezpur, with a self addressed unstamped envelope of 36 cm x 25 cm., or (iv) downloading the forms from the website (www.tezu.ernet.in). Downloaded application form should be accompanied with a bank draft (drawn in favour of the Registrar, Tezpur University, payable at Tezpur) for Rs. 250/-, for SC / ST categories and Rs. 500/-, for other categories. Filled in application should reach the Controller of Examinations, Tezpur University on or before the last date as given in **Annexure I**.

Candidates applying for more than one programmes must apply separately for each programme. For Integrated M.Sc., candidates can apply for all four programmes in a single application form. Candidates who have appeared / are appearing in the qualifying examination before August, 2010 may also apply.

It may be noted that Tezpur University is located outside the Tezpur city and some private courier services may not deliver the documents to the University in time. Applications received after the last date will not be considered in any circumstance.

Please fill in the application form neatly using capital letters as far as possible.

Column 7, 12 to 16: Tick the appropriate box.

Column 19: Write the AIEEE Roll No. along with the year of appearing (enclose a copy of AIEEE admit card).

Column 20 : Choice of Discipline

Indicate three disciplines in order of your preference from the list below (for B.Tech. only)

Code	Programme
CE	Civil Engineering
CSE	Computer Science & Engineering
ECE	Electronics & Communication Engineering
FET	Food Engineering & Technology
ME	Mechanical Engineering

Indicate disciplines in order of your preference from the list below (for Integrated M.Sc. only)

Code	Programme
BIOINFO	Bioscience & Bioinformatics
CHEM	Chemistry
MATH	Mathematics
PHYS	Physics

Admit cum Acknowledgement Cards (Programmes other than B.Tech.)

Fill in the Acknowledgement cum Admit Card (in duplicate) attached to this prospectus and send them along with the Application Form.

Entrance Examination Centre (other than for B.Tech. & Ph.D.): To be filled in the Acknowledgement cum Admit card

Centre	Code	Address
Agartala	01	Tripura University, Agartala, Tripura
Bangalore	02	Indian Institute of Science, Bangalore - 560012
Bhubaneswar	03	B.J.B. College (Autonomous), Bhubaneswar, Orissa
Delhi	04	Kirori Mal College, University of Delhi, New Delhi
Dibrugarh	05	Dibrugarh University, Dibrugarh
Guwahati	06	Gauhati University, Gopinath Bordoloi Nagar, Guwahati, Assam
Hyderabad	07	Nizam College, Opposite L.B. stadium, Basheer Bag, Hyderabad, Andhra Pradesh
Imphal	08	D.M. College of Science, Imphal, Manipur
Itanagar	09	North Eastern Regional Institute of Science & Technology (NERIST), Nirjuli, Itanagar
Jorhat	10	J.B. College, Jorhat, Assam
Kokrajhar	11	Kokrajhar College, Kokrajhar, Assam
Kolkata	12	Presidency College, Kolkata, West Bengal
North Lakhimpur	13	North Lakhimpur College, Khelmati, North Lakhimpur, Assam
Patna	14	Central University of Bihar, BIT Campus, P.O. B.V. College, Patna 800014
Pune	15	University of Pune, Ganeshkhind, Pune
Shiliguri	16	North Bengal University, Raja Rammohanpur, Darjeeling, West Bengal
Shillong	17	St. Anthony's College, Shillong, Meghalaya
Silchar	18	G.C. College, College Road, Silchar
Tezpur	19	Tezpur University, Napaam, Tezpur, Assam

Enclosures

Photocopies of following documents are to be submitted along with the application.

- Bank draft (if the form is downloaded)
- Acknowledgement cum admit card (duly filled)
- Self addressed envelope with postage stamp of Rs. 5/-
- A copy of AIEEE admit card (for B.Tech. only)

The selected candidates will have to produce all relevant documents in original at the time of admission. They also have to submit attested copies of all mark sheets and certificates at the time of admission.

Selection of eligible candidates

(a) B.Tech. programmes

- (i) Candidates seeking admission to the B.Tech. programmes are required to appear in the AIEEE-2010 to be conducted by CBSE, New Delhi. All Admission shall be based on AIEEE score.
- (ii) 50% seats are reserved for the NE States. For admission to these seats the candidates are also required to submit applications to Tezpur University in the prescribed form provided.
- (iii) Admission to the remaining 50% open seats shall be made through the central counseling of AIEEE

(b) Integrated M.Sc.

Candidates qualifying the entrance examination conducted by TUEE-2010 for Integrated M.Sc. programmes will be called for admission according to his/her performance in the examination.

(c) P.G. Programmes (other than MBA)

Candidates seeking admission shall have to appear in the TUEE-2010 as per the schedule given in **Annexure II**. For M.Tech. programmes in Information Technology, Electronics Design and Technology and Bioelectronics, however, candidates with valid GATE score of 330 (250 for SC/ST) or above in respective disciplines

may seek direct admission. For some programmes candidates selected through TUEE-2010 shall be required to appear for Group Discussion and Personal Interview, the dates for which will be intimated in due course.

In case of non-receipt of admit card, a candidate may contact the TUEE Official at the examination centre with proof of submission of application on the day of examination. Duplicate admit card may be issued on the spot.

The results of entrance examinations are likely to be declared in the fourth week of June 2010.

Seats are reserved for SC / ST / OBC (NCL) and Persons with Disabilities (PWD) candidates as per central government rules. **PWD candidates with at least 40% permanent disabilities will only be considered.**

The list of selected candidates for admission, including a waiting list, will be notified in the University Notice Board. Also the list will be made available on the University Website.

No TA / DA will be paid to the candidates for appearing in the entrance examination and / or interview.

Admission

The Schedule of Course Registration and Admission is given in Annexure III. Selected candidates will be admitted to the concerned programme on payment of requisite fees. The candidate's presence at the time of verification of testimonials etc., course registration and hostel admission is essential.

In case of a gap of one year or more between completion of qualifying examination and the year of admission, the candidate must produce a 'Gap certificate' from the District Police Authorities or an affidavit specifying his / her occupation during the Gap period.

Provisional Admission

Candidates who have appeared / are appearing in the qualifying examination before the date of admission in the year 2010 may be admitted provisionally if otherwise found eligible at the entrance examination and / or interview, provided that

- 1. they have passed all the earlier examinations held for the same degree without any carryover of subject and satisfying the academic minimum eligibility criteria specified for the concerned academic programme;**
- 2. all academic works including theory and practical of qualifying examinations should be completed before the admission.**
- 3. they produce the evidence of passing the qualifying examination with requisite qualification on or before 31 October, 2010 failing which they will be debarred from appearing the semester end examination.**

Application for Hostel Accommodation

Candidates requiring hostel accommodation need to indicate in column 16 of the application Form.

Commencement of Classes

Classes for all the programmes will commence on 02 August, 2010 as mentioned in Academic Calendar in Section one. Students admitted to any of the programmes shall have to report to the Head of the Department concerned within a week from the date of commencement of classes; otherwise his / her seat may be forfeited.

Refund of Caution Deposit

Refund of caution money shall be made to a student after his / her release from the University. The claim for refund of caution money shall not be entertained beyond a period of one year from the date of release of the student. Refund of caution money shall be made against application in prescribed form and production of Release Order.

The fees deposited by the candidate shall not be refunded if the seat is withdrawn after the last day of admission and the vacant seat is not filled in from the waiting list.

CANVASSING IN ANY FORM LEADS TO DISQUALIFICATION

Course outlines for the entrance examinations

(I) B.Tech. Programme: As per AIEEE (visit: www.aieee.nic.in)

(II) P.G. Degree/Diploma/Certificate Programme

Candidates are to sit for Tezpur University Entrance Examinations (TUEE), 2010 to be held during May 28 - 30, 2010. Entrance Examinations for all programmes will be of two hours duration and will carry 100 marks.

M.Sc. in Chemical Sciences: The questions are on the basis of B.Sc. (Chemistry Major) syllabus along with 10+2 standard Mathematics, Physics, Biology and General Aptitude. The test comprises of both objective as well as descriptive type questions. The distribution of marks is as per the following - General Science (10), Physical Chemistry (30), Organic Chemistry (30) and Inorganic Chemistry (30).

M.Sc. in Molecular Biology and Biotechnology: The entrance examination is held for 10 seats (out of 30 seats) reserved for the domicile of North East India. Questions (objective type & short writing type) on higher secondary level Chemistry, Physics and Mathematics and graduate level Life Science subjects. The written test is followed by personal interview. The final selection is based on the written test and personal interview.

M.A./M.Sc. in Mathematics: Questions (both objective and descriptive) will be on Graduate level (Pass Course) Mathematics consisting of Algebra, Calculus, Co-ordinate Geometry, Differential Equations, Vectors, Mechanics, Fundamentals of Statistics etc.

M.Sc. in Physics: Upto B.Sc. Physics (Honours) syllabus. There are two papers in the entrance test. The first paper is of objective type and the second paper is of short descriptive type to examine the conceptual clarity of the candidate.

M.Sc. in Nano Science and Technology: Upto B.Sc. honours in Physics/Chemistry/Biology syllabus. The test will have two parts. Part A will consist of 50 objective type questions of one mark each. Part B consists of about 10 short descriptive type questions of 10 marks each of which any five have to be answered.

M.Sc. in Environmental Science: The test paper shall have both objective as well as short descriptive type of questions covering (a) 10+2 level science subjects (Biology, Chemistry and Physics) and (b) Basic concepts of environmental science, environmental pollution, current environmental issues, agro-ecosystems, Agro-ecology, agriculture including hill agriculture, weather and climate systems.

M.A. in Cultural Studies: The written test includes questions (descriptive as well as objective type) covering (a) General Information on North East India, particularly Assam, (b) Elementary Knowledge about the artistic and cultural heritage of India with particular reference to the North East India. The candidates may have to face an interview.

M.A. in English: The entrance examination assesses whether the candidate has the level of knowledge and skills expected of a student who has graduated/is going to graduate with major/honours in English.

M.A. in Mass Communication and Journalism: The written test shall comprise of both objective and subjective questions. The objective questions consist of current affairs, general knowledge, English language, general awareness on Northeast India and the basics of mass media. The subjective section is to test the candidate's writing skills, creative and analytical capabilities.

The final selection will be based on written test, group discussion and personal interview.

M.A. in Sociology: The written test includes questions (objective as well as subjective type) on (i) general awareness and (ii) understanding of various socio-economic issues.

MCA: The written test consists of three parts: (i) Logical Reasoning and Basic Mathematical Ability, (ii) Mathematics (10+2 level) or fundamentals of Computer Science and (iii) English composition.

M.Tech. in Information Technology: The written test will be based on Programming in C, Computer Organiza-

tion, Data Structures, Operating Systems, System Software, Computer Network, DBMS and Theory of Computation. The candidates may have to face an interview.

M.Tech. in Electronics Design & Technology: B.E. or equivalent level courses on Electronics and Communication Engineering, Electrical Engineering, AMIE in Electronics, M.Sc. in Physics with Electronics as special paper, M.Sc. in Electronics Sciences.

M.Tech. in Bioelectronics: B.E/B.Tech. level courses in Electronics Engineering, Electrical Engineering, Instrumentation Engineering, Communication Engineering, Biomedical Engineering, Chemical Engineering, Bioengineering, Computer Science & Engineering, Biotechnology, MBBS level, M.Sc. level courses on Chemistry, Biophysics, Molecular Biology, Cell Biology, Molecular Biology & Biotechnology, Polymer Science and Electronics.

M.Tech. in Computational Seismology: There will be two types of questions. Objective/multiple choice (25 questions covering 50 marks) and Descriptive/long questions (10 questions covering 50 marks) covering topics from mathematics, Statistics, Physics, Earth Sciences and Engineering. From the descriptive type a total of 10 questions are to be answered out of 25 questions. The final selection will be done after personal interview.

M.Tech. in Food Processing Technology: The test paper shall have both objective as well as short descriptive type questions covering (10+2 level) science subjects viz, Mathematics, Chemistry, Physics and Biology/Basic Food Chemistry / Biochemistry / Food & Nutrition, Basic Food Processing (e.g. fruits & vegetables, cereals, legumes, milk, fish, meat and poultry) and Basic Food Microbiology and 10+2+3 level.

M.Tech. in Food Processing Technology (lateral entry): The test paper shall have both objective as well as short descriptive type questions covering Food Engineering, Fruits and Vegetable Processing and Cereal and Pulse Processing, Food Packaging, Heat and Mass transfer in Food Processing, Food Chemistry and Biochemistry, Food Biotechnology, Storage Technology, Dairy technology, cereal, Milk, Meat and Fish Processing, Food Microbiology, Beverage processing, Biochemical Engineering etc.

M.Tech. in Energy Technology: The test paper will include questions on the basic knowledge of Mathematics, Physics and Chemistry (Graduate level courses in Science and Engineering) and knowledge of different forms of energy. The final selection is based on written test. GATE qualified candidates will get preference.

Certificate in Chinese: The entrance examination will assess the candidate's knowledge of English grammar and usage, ability to write coherent paragraphs in English and general information about China

P.G. Diploma in Mobile and Multimedia Communication: The written test shall comprise of both objective and subjective type questions. The objective questions will consist of tests on English Language, General Knowledge, Computer Knowledge, Current Affairs, Culture and Traditions of North East India. The subjective questions are to test the candidates' sensitivity towards social issues and writing skills. The final selection will be based on the written test and personal interview.

P.G. Diploma in Tourism Management: The written test of objective type will consist of General Knowledge, Test of Reasoning and Test of English. Short listed candidates (based on the written test) will have to appear for a personal interview.

(III) Integrated M.Sc. in Bioscience & Bioinformatics / Chemistry / Mathematics / Physics: Test comprising of 80 objective questions, 20 questions each from Physics, Chemistry, Mathematics and biology, of which candidates are to answer 50 questions. Each question carries 2 marks and for every incorrect answer 0.5 marks will be deducted.

(IV) Ph.D. Programme: Candidates are selected based on the performance in the written test followed by personal interview. The syllabus for the examination will be as per respective P.G. / U.G. courses.

SECTION FOUR

Ph.D. PROGRAMME

Ph.D. PROGRAMME

Categories of Candidates

The University shall admit Ph.D. students under the following categories:

- a) **Full Time:** Students under this category shall work full time for the Ph.D. courses / research. They may apply for fellowship / assistantship available from different funding agencies.
- b) **Sponsored:** Candidates may be sponsored by recognised R&D organisations, national institutions, other universities, government organizations or industries. They shall be admitted through the normal process, and they shall not be entitled to any fellowship / assistantship from the University. They shall work full time for the Ph.D. courses / research.
- c) **Project Fellows:** Students working on different research projects at Tezpur University may be admitted to the Ph.D. programme provided they satisfy the eligibility criteria, subject to the consent of the Principal Investigator of the project.
- d) **Part Time:** Candidates employed in academic institution / University (including Tezpur University) / R&D organizations may be considered for admission into the Ph.D. programme of Tezpur University, following the normal admission procedure. They shall fulfill the stipulated requirements for Ph.D. admission.

(Categories b, c and d are to apply through proper channel)

Eligibility for Admission

Master's Degree in Humanities and Social Sciences / Management Sciences / Science / Engineering / Technology or Master degree in the allied subject with consistently good academic record and a minimum of 55% marks or an equivalent CGPA in the Master's Degree / B.E. / B.Tech. with an aggregate of 80% marks or equivalent CGPA with valid GATE score.

A fellowship in Chartered Accountancy / Company Secretaryship from a recognized Indian or foreign institution with not less than 60% of marks or equivalent CGPA having a minimum of Bachelor's Degree.

Relaxation in requisite qualifications for SC / ST candidates shall be followed as per Central Govt. rules.

Selection Procedure

Selection of the candidates will strictly be done on merit based on performance in the Entrance Test followed by personal interview.

Academic Session

Academic session of the University shall be from August to July and shall consist of two semester – Autumn (July to December) and Spring (January to June). For details please refer to the Academic Calendar in the web-site (www.tezu.ernet.in).

Requisite qualification for admission into various disciplines of Ph.D. programmes

School	Department	Qualification
Science & Technology	Chemical Sciences	M.Sc. in all branches of Chemical Science / Physics or M.E. / M.Tech. in related subject. NET qualified candidates will be preferred.
	Mathematical Sciences	M.A. / M.Sc. degree in Mathematics / Statistics / Physics / Computational Seismology / Economics with requisite background in Mathematics.
	Physics	M.Sc. in Physics / Electronics / Geophysics / Material Science / Applied Mathematics/ Nano Science & Technology. M.Phil., M.Tech. in Solid State Materials / Material Science / Electronics / Energy.
	Molecular Biology & Biotechnology	M.Sc. in Biotechnology / Molecular Biology / Mol. Biology & Biotechnology / Biochemistry / Microbiology / Genetics / Plant Breeding / Agricultural Biotechnology / Life Sciences / Botany / Zoology / Applied Botany / Biophysics / Bioinformatics.

School	Department	Qualification
Engineering	Electronics & Communication Engineering	M.E. / M.Tech. / M.Sc. Engg. / MS in Electronics / Communication / Electronics Design / Electrical / Instrumentation / Control / Microwave / Biomedical / Bioelectronics / Biotechnology / Computer Science / Information Technology. M.Sc. in Electronics / Physics / Applied Mathematics. MCA with Physics, Chemistry and Mathematics in Bachelor degree, MBBS with MD / MS degree. B.E. / B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE score.
	Computer Science & Engineering	M.Tech. in Computer Science / I.T. / Electronics MCA M.Sc. in Computer Science / I.T. BE / B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE score.
	Food Processing Technology	M.Sc. / M.Tech. / M.E. degree in Food Technology / Food Science and Technology / Food Processing Technology / Food and Nutrition / Microbiology / Food Microbiology / Applied Microbiology / Biochemistry / Chemistry / Biotechnology / Food Engineering / Dairy Engineering / Food Biotechnology Engineering.
Humanities & Social Science	English & Foreign Language	M.A. in English (specialization may be in American Literature, ELT or Linguistics) M.A. in Linguistics
	Cultural Studies	Post graduates of any discipline of Humanities and Social Sciences, having proven knowledge of Folklore, Societies, Cultures, Language and Literatures, Ethnic Groups and other related topics with special reference to North-East India
	Sociology	M.A. in Sociology / Cultural Studies / Anthropology (with specialization in Social Anthropology) / Economics / History / Political Science / Philosophy / Mass Communication / English / Law / Management.
Energy, Environment & Natural Resources	Energy	M.Sc. / ME / M.Tech. degree in Energy Technology / Energy Management / Energy related Engineering & Technology / Physics / Chemistry / Agriculture / Allied subjects.
	Environmental Science	M.Sc. in Environmental Science / Botany / Applied Botany / Chemistry / Physics / Zoology / Earth Sciences / Agro-forestry / Life Science. M.Sc.(Agri) in Crop Physiology / Biochemistry / Horticulture / Agronomy / Soil Science / Meteorology. M.Sc. in Agricultural Science.
Management Sciences	Business Administration	MBA / PGDM M.Com. M.A. / M.Sc. in Economics M.A. in Psychology / Sociology / Anthropology and Cultural Studies MCA M.T.M. / M.T.A. FCA / FCS / FICWA M.E. / M. Tech. in any discipline M.Sc. in Agriculture / Home Science / Fishery / Statistics M.V.Sc. in (Veterinary Science)

Seats are reserved for SC / ST / OBC (NCL), Kashmiri Migrant and Person with Disability (PWD) candidates as per the Central Government rules. PWD candidates with at least 40% permanent disabilities will only be considered.

Recognized Supervisors

1. Department of Business Administration

Dr. (Mrs.) C. Goswami, Professor	Finance
Dr. M. K. Sarma, Professor	Services Marketing
Dr. C. Goswami, Associate Professor	Consumer Behaviour and Promotional Strategies, Tourism
Dr. S. S. Sarkar, Associate Professor (On lien)	Finance, Accounting, Taxation & Social Development Issues
Dr. (Mrs) P. Baruah, Associate Professor	Human Resource Development

2. Department of Chemical Sciences

Dr. S. K. Dolui, Professor	Fibre reinforced plastic, self reinforced plastic, water based coating and adhesive, diffusion of small molecule through plastic.
Dr. N. S. Islam, Professor	Synthetic Inorganic Chemistry and Biomimetic Chemistry of Transition Metals
Dr. T. K. Maji, Professor	Grafting on fibres, Rubber processing, Reaction engineering, Emulsion Polymer, Textile finishing.
Dr. N. Karak, Professor	Synthesis of Polymer, Polymer Blends and Nanocomposites
Dr. R. K. Dutta, Associate Professor	Surfactant and Drinking Water
Dr. R. C. Deka, Associate Professor	Theoretical Chemistry and Computer Modeling.
Dr. R. Bora, Associate Professor	Synthesis of bioactive molecule, Development of green methods.
Dr. A. J. Thakur, Associate Professor	Heterocyclic chemistry, Organic synthesis and Molecular container chemistry
Dr. A. K. Phukan, Assistant Professor	Theoretical Inorganic and Organometallic chemistry
Dr. P. Pujari, Assistant Professor	Physical chemistry

3. Department of Computer Science & Engineering

Dr. M. Dutta, Professor	Optimization, Computational Theory
Dr. D. K. Saikia, Professor	Networks, Mobile Computing
Dr. D. K. Bhattacharyya, Professor	Data Mining, Cryptography
Dr. S. K. Sinha, Professor	Workflow Automation, Web Services, Security
Dr. S. M. Hazarika, Associate Professor	Spatial Reasoning, Cognitive Vision, Rehabilitation Robotics
Dr. U. Sharma, Associate Professor	Natural Language Processing
Dr. N. Sarma, Associate Professor	Wireless Networks and Distributed System
Dr. B. Bora, Associate Professor	Data Mining

4. Department of Cultural Studies

Dr. S. K. Dutta, Professor	Folkloristics, Assamese Literature, Language & Culture
Dr. P. M. Sarma, Associate Professor	Cultural Studies, Literary Theories
Dr. P. J. Mahanta, Professor	Culture and Literature
Dr. D. P. Nath, Associate Professor	Gender Studies
Dr. P. M. Dutta, Assistant Professor	Heritage Studies

5. Department of Electronics & Communication Engineering

Dr. M. Bhuyan, Professor	Sensor Design, Image Processing, Machine Vision.
Dr. P. P. Sahu, Professor	Optical Network and its components, Wireless Communication Circuits, Neuro-Engineering
Dr. S. Bhattacharyya, Associate Professor	Microwave Antennas
Dr. J. C. Dutta, Associate Professor	Bioelectronics

6. Department of Energy

Dr. D. Konwer, Professor	Biomass Energy, Fossil Fuels, Energy & Environment, Waste Management.
Dr. S. K. Samdarshi, Professor	Solar Energy, Solar Photocatalysis, Hydrogen Energy, Energy Education.
Dr. D. C. Baruah, Professor	Biomass Energy, Energy Management and Mathematical Modeling and Farm Mechanisation
Dr. D. Deka, Associate Professor	Bio-fuels, Biomass Assessment, Bio-energy and Environment
Dr. R. Katakya, Assistant Professor	Energy and Environment, Biomass energy

7. Department of English and Foreign Languages

Dr. M. M. Sarma, Professor	Applied Linguistics, Literature in English
Dr. B. K. Danta, Professor	American Literature, Critical Theory
Dr. F. Danta, Professor	American Literature, Cultural Studies
Dr. P. K. Das, Associate Professor	American Literature, Indian Writing in English
Dr. M. Borbora, Associate Professor	Linguistics (Syntax, Psycholinguistics)
Dr. G. K. Baruah, Associate Professor	Linguistics, Cognitive Semantics, Philosophy of Language

8. Department of Environmental Science

Dr. K. K. Baruah, Professor	Environmental Physiology and Biochemistry
Dr. K. P. Sarma, Professor	Environmental Pollution, Remediation of Toxic Substances
Dr. R. R. Hoque, Associate Professor	Environmental Monitoring and Assessment, Air Pollution
Dr. A. K. Das, Assistant Professor	Geomorphology
Dr. (Mrs) Kh. A. L. Devi, Assistant Professor	Forest Ecology (Population Ecology and Regeneration Ecology), Conservation of Biological Diversity

9. Department of Food Processing Technology

Dr. (Ms.) C. L. Mahanta, Professor	Rice Science & Technology, Food Product Development & Food Quality.
Dr. S. C. Deka, Professor	Food Biochemistry & Food Quality

10. Department of Mathematical Sciences

Dr. M. Borah, Professor	Discrete Distribution, Combinational Optimization, Genetic Algorithms, Numerical Analysis.
Dr. N. Deka Baruah, Professor	Number Theory, Ramanujan's Mathematics
Dr. D. Hazarika, Associate Professor	General Topology, Fuzzy Sets and Application
Dr. M. Hazarika, Associate Professor	Functional Analysis, Operator Theory
Dr. M. Nath, Associate Professor	Ordinary Graph Spectra, Inverse Eigen Value Problem
Dr. B. Deka, Assistant Professor	Finite Element Method

11. Department of Molecular Biology and Biotechnology

Dr. B. K. Konwar, Professor	Plant Biotechnology, Microbial Genetics, Petroleum Biotechnology
Dr. A. K. Buragohain, Professor	Plant Biotechnology, Microbial Biotechnology, Molecules Biology
Dr. A. K. Mukherjee, Professor	Biochemistry, Microbial Biotechnology, Enzyme Technology
Dr. (Mrs) S. Baruah, Associate Professor	Immunology, Immunogenetics
Dr. S. K. Ray, Assistant Professor	Molecular Biology
Dr. A. Ramteke, Assistant Professor	Radiation Oncology

12. Department of Physics

Dr. A. Choudhury, Professor	Condensed Matter Physics, Laser Physics, Quantum Electronics
Dr. A. Kumar, Professor	Condensed Matter Physics, Materials Science, GPS
Dr. J. K. Sarma, Professor	Theoretical High Energy Physics, Particle Physics
Dr. N. S. Bhattacharyya, Associate Professor	Microwaves
Dr. P. Deb, Associate Professor	Nano Science and Nano Technology, Physics of Materials
Dr. N. Das, Associate Professor	Plasma Physics
Dr. G. A. Ahmed, Assistant Professor	Laser Physics, Optoelectronics
Dr. D. Mohanta, Assistant Professor	Condensed Matter Physics , Nanoscience
Dr. P. K. Karmakar, Assistant Professor	Plasma Physics, Non-linear Dynamics

13. Department of Sociology

Dr. C. K. Sarma, Associate Professor	Social Development, Culture & Media Studies, Environmental Sociology, Nationalism.
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SECTION FIVE

DEPARTMENTS

BUSINESS ADMINISTRATION

The Department of Business Administration came into existence in 1995 with the objective of producing quality management professionals and carrying out research in the areas of Finance, Human Resources, Marketing, Production and Systems Management. The Department also offers a Programme on Tourism Management.

Programmes

1. P.G. Diploma in Tourism Management (PGDTM)
(This is a modular programme. A student can opt for a certificate after successful completion of the first semester)
2. Master of Business Administration (MBA)
3. Master of Business Administration, Part-time (MBA), (3 years, 6 semesters)
4. Ph.D.

Faculty

Professor

Sarma, M. K., Ph.D. (Tezpur University), Dean (Management Sciences)
Goswami, C., Ph.D. (Gauhati University), HoD

Associate Professor

Sarkar, S. S., Ph.D. (Tezpur University) (*on lien*)
Goswami, C., Ph.D. (Tezpur University)
Baruah, P., Ph.D (Tezpur University)
Sarma, T. R., Ph.D. (Gauhati University)

Assistant Professor

Barpujary, H., MCA (Tezpur University)
Roy, A., MBA (Tezpur University)
Prakash, G., MMS (Allahabad University) (*on lien*)
Mahanta, K., MBA (Assam University)

Facilities

The Department is well equipped with modern educational facilities like state of the art computer laboratory and instructional audio-visual aids including LCD Projector etc. The Department has an air conditioned board room for facilitating case study, group discussion etc.

Research Activity

Number of papers published in referred journals in 2009: 02

Number of ongoing research project/consultancy: 01/03

Select Publications

1. C. Goswami and P. J. Patar, Role of stakeholders in promoting ecotourism, *Int. J. Tour. Travel*, 2: 57-67 (2009).
2. M. K. Sarma and B.Dey, Tourism Management: Information source usage among motive based segments of travelers to newly emerging tourist destinations, *J. Tour. Management* (2009), doi : 10.1016/i.tourman.2009.03.015.

Courses offered in P.G. Diploma (Tourism Management)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
TM 411	Fundamentals of Tourism	4	TM 412	Destination Geography, History and Heritage	4
TM 413	Leisure Delivery System	4	TM 414	Interpersonal Skills	4
TM 415	Information Based Management	4	TM 424	Tourism Practices	4
TM 421	Management Fundamentals	2	TM 422	Finance and Accounting for Tourism	4
TM 423	Tourism Entrepreneurship	4	TM 416	Term Paper	4
TM 425	Resort Management	4	TM 426	Project	6

CHEMICAL SCIENCES

The Department was established in the year 1997 with the objective of providing students with broad based training in various disciplines related to Chemical Sciences. The Department is offering Integrated M.Sc. in Chemistry and M.Sc. in Chemical Sciences. The programme provides students with a wide choice of elective courses relevant to the frontiers of these branches of Chemical Sciences. The faculty members are involved in advanced research programmes in the areas of synthesis, characterization and processing of polymers, nano-composite materials, bioinorganic chemistry, surfactant systems, synthetic organic chemistry, theoretical chemistry and environmental chemistry.

Programmes

1. Integrated M.Sc. in Chemistry
2. M.Sc. in Chemical Sciences
3. Ph.D. in Chemistry

Faculty

Professor

Dolui, S. K., Ph.D. (IIT, Kharagpur)
Islam, N. S., Ph.D. (NEHU, Shillong)
Maji, T. K., Ph.D. (Calcutta University)
Karak, N., Ph.D. (IIT Kharagpur)

Associate Professor

Dutta, R. K., Ph.D. (NEHU, Shillong), HoD
Deka, R. C., Ph.D. (NCL, Pune)
Borah, R., Ph.D. (Gauhati University)
Thakur, A. J., Ph.D. (RRL, Jorhat)

Assistant Professor

Phukan, A. K., Ph.D. (Hyderabad University)
Pujari, P., Ph.D. (IIT Guwahati)
Bania, K. K., M.Sc. (Gauhati University)

Facilities

The Department is equipped with sophisticated instrumentation facilities, which include FTIR, CHN Analyzer, Thermal Analyzer, UV-Visible Spectrophotometer, Universal Testing Machine (UTM), Atomic Absorption Spectrophotometer, Polarizing Microscope, Computational facilities etc. in addition to laboratories for research and post-graduate level Chemistry, Petro-Chemicals and Polymer Laboratories and a Polymer Processing Workshop. Besides these the University has central instrument facilities of Scanning Electron Microscope and 400MHz Nuclear Magnetic Resonance, GC-MS and ICPAES.

Award

The highest scorer among the students of Applied Chemistry programme is awarded with the Applied Chemistry Education Award.

Research Activity

Number of papers published in referred journals in 2009: 58

Number of ongoing research projects: 19

Select Publications

1. B. Kalita and R.C. Deka, Reaction intermediates of CO oxidation on gas phase Pd₄ clusters: A density functional study, J. Am. Chem. Soc. (in press, 2009)
2. B. Kalita and R.C. Deka, Investigation of reverse-hydrogen spillover on zeolite supported palladium tetramer by ONIOM method, J. Phys. Chem. C, 113: 16070-16076 (2009).
3. R. Konwarh, N. Karak, S. K. Rai and A.K. Mukherjee, Polymer-assisted iron oxide magnetic nanoparticle immobilized keratinase, Nanotechnology, 20: 225107-225114 (2009).

Other relevant information

The Department has received financial assistance under UGC-SAP and DST-FIST special grants for strengthening teaching, research and training.

Courses offered in M.Sc. (Chemical Sciences)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
CH 401	Principles of Inorganic Chemistry	3	CH 411	Spectroscopic Principles	3
CH 402	Principles of Organic Chemistry	3	CH 412	Seminar	1
CH 403	Chemical and Statistical Thermodynamics	3	CH 413	Laboratory Course in Inorganic Chemistry	6
CH 404	Quantum Chemistry and Chemical Bonding	3	CH 501	Chemical Applications of Spectroscopy	3
CH 405	Computers in Chemistry	3	CH 502	Special Topics in Organic Chemistry	3
CH 406	Laboratory Course in Organic Chemistry	6	CH 503	Physical Chemistry of Surface and Condensed Systems	3
CH 407	Chemistry of Transition Elements	3	CH 504	Special Topics in Inorganic Chemistry	3
CH 408	Organic Reaction and Mechanism	3	CH 508	Laboratory Course in Physical Chemistry	6
CH 409	Chemical Dynamics and Electrochemistry	3	CH 509	Environmental and Green Chemistry	3
CH 410	Advanced Analytical Techniques	3	CH 521	Project Work	9
Electives					
CH 505	Catalysis	3	CH 514	Organometallic Chemistry	3
CH 506	Bio-inorganic Chemistry	3	CH 515	Molecular Modelling of Organic and Inorganic Compounds	3
CH 507	Newer Methods in Organic Synthesis	3	CH 516	Inorganic Photochemistry	3
CH 510	Polymer Chemistry	3	CH 517	Analytical Chemistry	3
CH 511	Chemistry of Materials	3	CH 518	Industrial Chemistry	3
CH 512	Medicinal Chemistry	3	CH 519	Nuclear and Radio Chemistry	3
CH 513	Surfactants and Interfacial Phenomena	3	CH 520	Bioactive Molecules	3

CIVIL ENGINEERING

The Department of Civil Engineering was started in 2009 with the objective of producing quality manpower in the field of national need for infrastructure development by offering appropriate academic programmes at U.G. as well as P.G. levels and to carry out research in the frontier area of Civil Engineering. The department is, at present, in the process of recruiting faculty members and setting-up the laboratories.

Programmes

1. B.Tech. in Civil Engineering

Faculty

Assistant Professor

- Saikia, A., M.Tech. (IIT Kharagpur)
Ahamad K.U., M.Tech. (IIT Guwahati)

COMPUTER SCIENCE & ENGINEERING

The erstwhile Department of Computer Science and Information Technology has been renamed as the Department of Computer Science and Engineering with the starting of the School of Engineering in August 2006. The Department has the support of the Department of Science and Technology (DST), Govt. of India under its FIST programme since 2005 and UGC's SAP (DRS Phase-I) since 2009. In addition to the academic programmes at the UG as well as the PG levels the Department has been carrying out active research in the fields of computational theory, computer networks, mobile computing, soft computing & data mining, natural language processing, workflow management, cryptography, qualitative spatial reasoning and distributed systems.

Programmes

1. B.Tech. in Computer Science & Engineering
2. M.Tech. in Information Technology
3. Master of Computer Application (MCA)
4. Ph.D.

Faculty

Professor

- Dutta, M., Ph.D. (IIT Kanpur)
Saikia, D. K., Ph.D. (IIT Kharagpur), Dean (Engineering)
Bhattacharyya, D. K., Ph.D. (Tezpur University), HoD
Sinha, S. K., Ph.D. (Tezpur University)

Associate Professor

- Hazarika, S.M., Ph.D. (Leeds, England)
Sharma, U., Ph.D. (Tezpur University)
Saharia, S., MCA (Dibrugarh University)
Sarma, N., Ph.D. (IIT Guwahati)
Borah, B., Ph.D. (Tezpur University)

Assistant Professor

- Singh, S. I., MCA (Manipur University)
Nath, B., M.Tech. (Tezpur University)
Satapathy, S. S., M.Tech. (Tezpur University)
Singh, B. L., M.Tech. (Tezpur University)
Das, R., MCA (Dibrugarh University)
Deka, S., M.Tech. (Tezpur University)
Boro, D., M.Tech. (Tezpur University)

Facilities

The Department has several state-of-the-art computer laboratories with a host of servers, workstations and a large number of PC terminals connected to the campus-wide LAN with access to the Internet. The systems run on wide variety of operating systems including Linux, Windows NT/XP/vista 2003, Sun Solaris, etc. The laboratory is equipped with up-to-date office automation software, DBMS packages, graphics and animation packages, multimedia authoring packages, GIS packages, Web servers & browsers, Lotus Domino server,

MATLAB, NS2 Qualnet, Mathematica, Matrox, SPSS in addition to the various state-of-the art compilers and programming environments. The network laboratory is equipped with wireless and wireline network equipment, wireless sensor network accessories, LAN trainers, internet security trainers etc. There is a hardware laboratory equipped with various training kits, experimental setup, analyzer equipment etc.

Departmental Library

The Department has a library with a collection of more than 1000 book volumes in the field of computer science and information technology. The library also receives 8 international and 3 national journals in the field of computer science in addition to those at the central library. The digital libraries of ACM, IEEE, applicable to the school.

Scholarship

M.Tech. students with GATE qualification are eligible for scholarship of Rs. 5000/- per month from AICTE. Other M.Tech., B.Tech. and MCA students have also been receiving scholarships from other sources such as NEC.

Research Activity

Number of papers published in referred journals in 2009: 17

Number of ongoing research project: 12

Select Publications

1. R. Das, D.K. Bhattacharyya, and J.K. Kalita, A new Approach for clustering gene expression time series data, Int. J. Bioinform. and Res. Applicatns. 5 : 310-328 (2009).
2. N. Sarma and S. Nandi, Route stability based QoS routing in mobile AdHoc Networks, Wireless Personal Commun. J. (In press, 2009)
3. R. Das, D.K. Bhattacharyya, and J. K. Kalita, Clustering Gene expression data using an effective dissimilarity measure, Int. J. Compu. Biosci. (Special issue) (In press, 2009)

Courses offered in M.Tech. (Information Technology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
CS 531	Objective Oriented Programming & Design	5	IT 610	Advanced Database System	4
CS 601	Design and Analysis of Algorithms	3	CS 634	Selected Topics in Computer Networks	4
IT 611	Distributed Systems	3	IT 604	Term Project –I	8
			IT 605	Term Project- II	16
Electives					
CS 502	System Software	3	CS 528	Digital Signal Processing	4
CS 505	Software Engineering	4	CS 529	Embedded Systems	4
CS 507	Computer Networks	4	CS 531	Object Oriented Programming & Design	5
CS 508	Database Management	5	CS 532	Compiler Design	4
CS 509	Data Communication	4	CS 602	Image Processing	3
IT 503	Multimedia Systems	4	CS 607	Optimization Technique	3
IT 504	E-Commerce	3	CS 606	Computer Architecture & Parallel Processing	3
IT 506	Logic Programming	3	CS 610	Bioinformatics	3
IT 521	Programming and Data Structure	4	IT 509	Data Mining & Data Warehousing	4
IT 522	Computer Architecture	4	IT 510	Advanced Operating Systems	4

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
IT 523	Discrete Mathematics	3	CS 621	Mobile Computing	4
CS 424	Formal Language and Automata	3			
IT 518	Graph Theory	4	CS 623	Randomized Algorithms	3
CS 522	Computer Graphics	4	CS 624	Web Technology	4
CS 523	Enterprise Resource Planning	3	CS 625	Intelligent Assistive Systems	3
CS 524	Theory of Computation	3	CS 725	Knowledge Representation & Reasoning	4
CS 525	Artificial Intelligence	3	CS 727	Formal Verification	4
IT 507	Computer Security & Cryptography	3	CS 731	Data Mining in Security	4
CO 504	Natural Language Processing	3			

Courses offered in MCA

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
CS 404	Programming & Problem Solving	5	CS 502	System Software	3
CS 405	Discrete Mathematics	3	CS 504	Operating System	4
CS 406	Digital Logic	4	CS 505	Software Engineering	4
CS 407	Information and Communication Technology	4	CS 507	Computer Networks	4
CS 403	File Structures	2	CS 508	Database Management	5
CS 408	Data Structures	5	CS 509	Data Communication	4
CS 409	Comp. Organization & Architecture	5	CS 514	Minor Project	8
			CS 515	Major Project	16
Electives					
CS 421	Graph Theory	3	CS 601	Design & Analysis of Algorithms	3
CS 422	Numerical Methods	4	CS 602	Image Processing	3
CS 423	Graphical User Interface Programming	3	CS 604	Optimization Techniques	3
CS 424	Formal Language & Automata	3	CS 605	Simulation & Modeling	4
CS 522	Computer Graphics	4	CS 606	Computer Architecture & Parallel Processing	3
CS 523	Enterprise Resource Planning	3	CS 609	Geographic Information Systems	3
CS 524	Theory of Computation	3	CS 610	Bioinformatics	3
CS 525	Artificial Intelligence	3	IT 611	Distributed Systems	3
CS 526	Management Information Systems	3	CS 621	Mobile Computing	4
CS 528	Digital Signal Processing	3	CS 622	Software Testing Quality Assurance and Maintenance	4
CS 529	Embedded Systems	4	CS 623	Randomized Algorithms	3
CS 530	Social & Professional Issues in Computing	3	CS 624	Web Technology	4
CS 531	Object Oriented Programming & Design	5	CS 625	Intelligent Assistive Systems	3
CS 532	Compiler Design	4	BM 421	Accounting & Financial Management	3
IT 503	Multimedia Systems	4	MS 405	Probability & Statistics	4
IT 504	E-Commerce	3	BM 504	Managerial Economics	4
IT 509	Data Mining & Data Warehousing	4	BM 501	Foundation of Management	3
IT 507	Computer Security & Cryptography	3			

CULTURAL STUDIES

The Department was established in 1995 with an aim to impart theoretical as well as methodological teachings in Cultural Studies and to develop manpower to study the rich, diverse and varied cultures of the North East India. The thrust areas of research are Folklore, culture, heritage as well as linguistic and Ethnic studies of Assam and other regions of the North East.

Programmes

1. M.A. in Cultural Studies (Modular)
2. Ph.D.

Faculty

Professor

Dutta, S. K., Ph.D. (Visva-Bharati), HoD
Mahanta, P.J., Ph.D. (Gauhati University)

Associate Professor

Sarma, P. M., Ph.D. (Gauhati University)
Nath, D. P., Ph.D. (Tezpur University)

Assistant Professor

Goswami, M., M.Phil. (Delhi University)
Dutta, P. M., Ph.D. (Tezpur University)
Konwar (Gogoi), J., Ph.D. (Dibrugarh University)
Das, J. V., M.A. (Tezpur University)

Facilities

Apart from the Central Library, the Department has its own library, the Pratibha Kath Hazarika Memorial Library. The Department has a cultural museum and a studio equipped with audio-visual teaching aids.

Research Activity

Number of papers published in referred journals in 2009: 06

Number of ongoing research project: 03

Select Publication

1. P. Dutta, M. M. Sarma, Baresahariya Bhaona: Community Drama Festival of Assam: A living tradition, Asian Theatre Journal, 26 (2009) .

Courses offered in M.A. (Cultural Studies)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
CT 401	Culture, Society and Tradition- I	5	CT 501	Culture, Society and Tradition- II	4
CT 402	Folkloristics-I	4	CT 502	Folkloristics-II	5
CT 403	Language as related to Culture	4	CT 503	Research Methodology	5
CT 404	Visual and Performing Arts	5	CT 505	Cultural and Literary Theories: Recent Trends	5
CT 405	Culture & Society (N.E Indian Perspective)	5	CT 506	Art and Aesthetics: An Introduction	5
CT 406	Indian Society: Structure and Change	5	CT 507	Elements of Semiotics	5
CT 408	Literatures of N.E India	4	CT 508	Dissertation	5
CT 407	Literature as related to Culture	4			
Electives					
CT 504	Cultural Conservation	4	CT 510	North East Indian Folklore Studies	4
CT 509	Cultural Tourism	4			

ELECTRONICS & COMMUNICATION ENGINEERING

The Department started functioning with the first batch of students admitted in 1997 into the M.Tech. in Electronics Design & Technology course. This course has been designed with an aim to meet the industry requirements in the field of Electronics Design with emphasis on latest technological developments. From August 2004, the Department has started a new programme "M.Tech. in Bioelectronics" approved by the UGC under its innovative Programmes - Teaching and Research in interdisciplinary and emerging areas. The courses, designed with interdisciplinary relevance, aims at producing professionals in the fields of medical, food safety, agriculture, defense, biotech and biosensor industries. Both courses have been recognised by AICTE. The Department has also started B. Tech. programme in Electronics and Communication Engineering from August 2006.

Programmes

1. B.Tech. in Electronics & Communication Engineering
2. M.Tech. in Electronics Design & Technology
3. M.Tech. in Bioelectronics
4. Ph.D.

Faculty

Professor

Bhuyan, M., Ph.D. (Gauhati University)
Sahu, P. P., Ph.D. (Jadavpur University), HoD

Associate Professor

Bhattacharyya, S., Ph.D. (Delhi University)
Dutta, J. C., Ph.D. (Jadavpur University)

Assistant Professor

Sharma, S., M.Tech. (Tezpur University)
Roy, S., M.Tech. (Tezpur University)
Chutia, R., M.Tech. (Tezpur University)
Deka, B., M.Tech. (Tezpur University)
Hazarika, D., M.Tech. (IIT Guwahati)
Kakoty, N.M., M.Tech. (Tezpur University)
Nath, V.K., M.Tech. (Tezpur University)
Baruah, R., M.Tech. (Tezpur University)
Mondal, B., M.Tech. (Tezpur University)
Sonowal, D., M.Tech. (Tezpur University)

Facilities

Digital and Microprocessor Laboratory: There are a good number of analog and digital ICs and their application facilities, logic analysers, microprocessors, microcontrollers, data acquisition cards, stepper motor controller cards, relay & opto-coupler interfacing cards etc.

Instrumentation Laboratory: It is equipped with temperature transducers - thermocouple, IC sensors, Multi-channel temperature indicators, Load cell indicator, humidity sensor, sensor interfacing to PC, Industrial type of remote transmitter, PC based stepper motor, Servo motor driver etc.

PCB Fabrication Facilities: It is equipped with Art work table, magnifier, photo resist U. V. exposure unit, photo resist coating whirler, sprayer, oven etching machine, guillotine shearing machine, high speed drill, roller tining machine and all necessary chemicals.

Computer Laboratory: Computer hardware consists of Pentium based PCs attached to a LAN server by powerful Pentium Based Novel Netware consisting of about 25 terminals all connected to Internal Server.

Software: There are up-to-date office automation software, ORACLE, Web Server & browser, MATLAB, Circuit Simulator like MICROSIM, PCB layout, CPLD-FPGA Electronic Design Automation (EDA) software, High Performance Data Acquisition - Control- Manipulation Software – GENIE, Lab View, XILINX, ORCAD.

Mechanical Workshop: It is equipped with the following machines: Lathe, High Speed Drilling, Milling, Turning, Wood Working Grinding, Shearing, Cutting, Bending, Electric Welding Plastic Welding etc.

Bioelectronics' Engineering Laboratory: Robotics, vision development with Lab view, E-nose, Insectronics, Device Simulator.

Biomedical Laboratory: ECG, EEG etc.

Microwave Laboratory: Microwave measurement set-up with Gunn diode etc.

Library: The Departmental Library has a good number of volumes relevant to the curriculum.

Research Activity

Number of papers published in referred journals in 2009: 07

Number of ongoing research projects: 03

Select Publications

1. P.P. Sahu, Variable optical attenuator using thermo-optic two mode interference device with fast response time, Appl. Optics, 48: 4213-4218(2009).
2. P.P. Sahu, and M. Singh, Multichannel direct sequence spread spectrum signaling using code phase shift keying, Computer and Electrical Engineering, 35 : 218-226(2009).
3. M. Bhuyan et al. Electronic nose for black-tea, classification and correlation of measurements with “tea taster” marks, IEEE Transac. on Instrumen. and Measurem, 57 : 1313-1321(2009).

Courses offered in M.Tech. (Electronics Design & Technology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
EL516	Design of Fine Mechanics and Power Devices	4	EL 521	Design & Technology of Electronic devices	4
EL 517	Physical and Industrial Design of Electronic Systems	4	EL 522	Intelligent Instrumentation	5
EL518	VLSI Design	5	EL 523	Advanced Programming Language	5
EL 519	Design of Digital Systems	5	EL528	Seminar-I	1
EL520	Quality and Reliability Engineering	4	EL 529	Seminar -II	1
			EL 601	M. Tech. Project (2 semesters) dissertation	24
Elective Courses					
EL 525	Data Communication	5	EL 524	Modeling and Simulation	5
EL 527	Information Systems	5	EL 526	Application Software	5

Courses offered in M.Tech. (Bioelectronics)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
BE 501	Basic Bioelectronics	4	BE 509	Biomathematics	3
BE 502	Advanced Bioelectronic Devices	4	BE 510	Bioelectronic Systems & Controls	3
BE 503	Biomedical Signal Processing	5	BE 511	Basic Bioelectronics lab	4
BE 505	Bioinspired Systems & Engineering	4	BE 512	Advanced Bioelectronics Lab	4
BE 506	Biomedical Image Processing	4	BE 514	Seminar	1
BE 504	Neuroengineering	3	BE 601	M.Tech Dissertation (2 semesters)	24
Electives					
BE 507	Bioinformatics	4	BE 513	Biomedical Electronics	4
BE 508	BioMEMS & Nanotechnology	4			

ENERGY

Initially, a centre for Non-conventional Energy was established in the University in 1995, which offered a One-Year Diploma Programme in Non-conventional Energy Tech. The centre was converted to a Department of Energy in 1996, with an aim to produce a manpower pool in the field of Energy at different levels, develop new and efficient Energy technologies and carry out research, development and extension activities in diverse areas of energy. The thrust areas of research are Biomass Energy, Solar Energy, Wind Energy, Hydro Energy and Energy Management.

Programmes

1. M.Tech. in Energy Technology
2. Ph.D.

Faculty

Professor

- Konwer, D., Ph.D. (Punjab University)
Samdarshi, S. K., Ph.D. (IIT Delhi), HoD
Baruah, D. C., Ph.D. (Punjab Agricultural University)

Associate Professor

- Deka, D., Ph.D. (Tezpur University)

Assistant Professor

- Mahapatra, S., M.Tech. (Jadavpur University)
Kataki, R., Ph.D. (Tezpur University)

Facilities

Laboratory

The Department is equipped with various equipments such as GasChromatograph, Computerized power meter, Bomb Calorimeter, Biomass gasifier system, Solar radiation measuring equipments, Wind speed direction measuring equipments, Wind electric generator, Briquetting Press, Single cylinder 4-stroke petrol engine Test Rig with electrical Dynamometer, Fibertech apparatus, Toxic Gas analyzer, Carbon-Hydrogen analyzer, UV-visible spectrophotometer, TOC Analyser, Petrol and Diesel Engine Test set-up, Hydrocarbon type Analyser, Pyrolyser, Adiabatic Bomb Calorimeter, TBP Apparatus, Duel Fuel Engine, Vacuum Distillation Apparatus, Microhydel test set-up, Research Radiometer, Solar thermal collector test set-up, Solar Dryer, Peristaltic Pump, Ultrasonicator, Programmable Muffle Furnace, Biodiesel Plant and various renewable energy systems.

Departmental Library

A good number of books, video cassettes and CDs on Energy are available for the students, A number of national and international journals related to different areas of energy are also being subscribed.

Scholarship

Ministry of Non-conventional Energy Sources (MNES), Government of India offers fellowship for M. Tech. and Ph.D. students up to Rs. 12,000/- and Rs. 15,000/- per month respectively under its National Renewable Energy Fellowship Schemes on the basis of GATE score. MHRD fellowships are also available for GATE qualified candidates. NEC fellowships are available for the students from North East regions. Two URFSMS fellowships are available for the students registered in Ph.D. programme.

Research Activity

Number of papers published in referred journals in 2009: 03

Number of ongoing research projects: 04

Select Publications

1. S. Paul, J. P. Saikia, S.K. Samdarshi, B.K. Konwar, Investigation of antioxidant property of ironoxide particles by 1'-1'diphenylpicryl....., J. Mag. and Mag. Mater. 321: 3621-3623(2009).
2. B.C. Kusre, D.C.Baruah, P.K. Bordoloi, and S.C. Patra, Assessment of hydropower potentialusing GIS and hydrological modeling technique in Kopili River basin in Assam (India), Appl. Energy (doi. 10.1016/j. apenergy2009.07.019).
3. M. Chakraborty, D. C. Baruah, and D. Konwer, Investigation of terminalia (terminalia belerica Robx.) seed oil as prospective biodiesel source for North-East India, Fuel Process. Technol. 90: 1435-1441(2009).

Courses offered in M.Tech. (Energy Technology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
EN 566	Fuel Technology	3	EN 567	Power Plant Engineering	3
EN 568	Biomass Energy	3	EN 569	Solar Energy Utilization	3
EN 570	Heat Transfer	3	EN 571	Other Non-conventional Energy Sources	3
EN 572	Energy, Ecology & Environment	3	EN 573	Energy Management and Auditing	3
EN 574	Energy, Economics & Planning	3	EN 575	Numerical Methods & Computational Techniques	3
EN 576	Energy Lab - I	2	EN 577	Energy Lab - II	2
	Elective – I	3		Elective - II	3
EN 578	Major Project (Part - I)	10	EN 579	Major Project (Part - II)	20
Electives					
EN 584	Advanced Bio-energy	3	EN 585	Advanced Solar Thermal Energy	3
EN 586	Solar Photovoltaic Energy	3	EN 587	Petroleum Refining	3
EN 588	Petroleum Exploration, Drilling & Production	3	EN 589	Wind Energy Utilization	3
EN 590	Hydrogen Energy & Fuel Cell	3	EN 592	Energy, Climate Change and Carbon Trades	3

ENGLISH AND FOREIGN LANGUAGES

The Department, which was established in 1994, aims to provide instruction and carry out research in English Literature, New Literature in English, American Literature, Indian Writing in English, Women's writing in English, English Language Teaching, Linguistics.

The Department is at present covered by the SAP-DRS project of the UGC (awarded in April 2009)

Programmes

1. M.A. in English
2. One Year Certificate Course in Chinese (Full Time)
3. Basic and Advanced French (Part Time)
4. Ph.D.

Faculty

Professor

Sarma, M. M., Ph.D. (Dibrugarh University)
 Danta, B. K., Ph.D. (Utkal University), Dean (Humanities & Social Sciences)
 Danta, F., Ph.D. (Dibrugarh University), HoD

Associate Professor

Das, P. K., Ph.D. (Gauhati University)
 Barbora, M., Ph.D. (Tezpur University)
 Borah, G. K., Ph.D. (NTNU, Trodheim, Norway)

Assistant Professor

Mohapatra, D., Ph.D. (CIEFL, Hyderabad)
 Medhi, H., M.Phil. (Delhi University)
 Kundu, D., M.A. (Visva-Bharati) (*on lien*)
 Chakraborty, R., M.Phil. (JNU, New Delhi)
 Narzary, R., M.A. (NEHU, Shillong)
 Jha, M. K., M.A. (JNU, New Delhi) (*ad hoc*)

Facilities

Digital Language Laboratory

The Department has a digital multimedia, multipurpose language laboratory with fifteen booths. Students can improve their pronunciation of English and foreign languages (Chinese and French) at the moment and develop interactive language skills by utilizing the software and other facilities available in the Laboratory.

Departmental Library

Selected books and photocopied materials relating to literature, linguistics and ELT are available in the Departmental Library. The Department also has a collection of audio cassette of English Pronunciation and spoken English and a number of video CDs on literary texts. The Department has a small computer Laboratory for use of students and research scholars.

Research Activity

SAP-DRS project on Travel Writing, Life Writing, and Assamese Language

Number of papers published in referred journals in 2009: 05

Number of ongoing research projects: 03

Courses offered in M.A. (English)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
EG 421	Medieval & Renaissance Literature	3	EG 429	Theory of Criticism II	4
EG 422	Literature of Renaissance and restoration	3	EG 430	Literature and Culture: 1780 - 1830	4
EG 423	Renaissance to Enlightenment: Literature and Thought	3	EG 431	Literature and Culture: 1830 - 1900	4
EG 424	Theory of Criticism	3	EG 548	20 th Century Literature: Poetry and Drama Fiction and Drama	4

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
EG 425	Structure of English and English Phonetics	3	EG 549	20 th Century Literature: Prose and Fiction	4
EG 426	Introductory Linguistics I	2	EG 550	Post Colonial Literature in English	4
EG 427	Introductory Linguistics II	3	EG 551	American and Canadian Literature in English	4
EG 428	ELT	3	EG 552	Communication and Media	3
Electives					
EG 561	Genre Study: Fiction I	3	EG 575	Linguistics I	3
EG 562	Genre Study: Fiction II	3	EG 576	Linguistics II	3
EG 563	Gender and Literature I	3	EG 577	Cognitive Grammar I	3
EG 564	Gender and Literature II	3	EG 578	Cognitive Grammar II	3
EG 565	Indian Writing in English I	3	EG 580	ELT - I	3
EG 566	Indian Writing in English II	3	EG 581	ELT - II	3
EG 567	Literature of the USA I	3	EG 585	Dissertation	6
EG 568	Literature of the USA II	3			

Courses offered in One Year Certificate in Chinese (Full Time) programme

CODE	Title	Credit	CODE	Title	Credit
CL 401	Reading Chinese Text -I	3	CL 402	Reading Chinese Text-II	3
CL 403	Comprehension and Translation	3	CL 404	Composition and Translation	3
CL 405	Introduction to China-I	3	CL 406	Introduction -to China -II	3
CL 407	Chinese Oral Skills -I	3	CL 408	Chinese Oral Skills-II	3

ENVIRONMENTAL SCIENCE

The Department was established in 2003 with the objective of imparting education on regional and global environmental issues. The curriculum for the M. Sc. programme focuses on all important aspects of Environmental Science covering contemporary problems of natural resource conservation and environmental quality. Thrust areas of research include Environmental Pollution, Green house gas emission, and Riverine Hazards.

Programmes

1. M.Sc. in Environmental Science
2. Ph.D.

Faculty

Professor

Baruah, K. K., Ph.D. (Punjab Agricultural University)
Sarma, K. P., Ph.D. (NEHU, Shillong), HoD

Associate Professor

Hoque, R. R., Ph.D. (JNU, New Delhi)

Assistant Professor

Das, A. K., Ph.D (JNU, New Delhi)
Devi, A., Ph.D. (NEHU, Shillong)
Gogoi, N., Ph.D. (Dibrugarh University)

Facilities

The Department has a sophisticated instrumentation laboratory to facilitate research and other academic activities. The laboratory have the following equipments: Laser Leaf Area Meter with Root Measurement Attachment, Light Meter, Portable Photosynthesis Systems, Gas Chromatograph, High Precision Electronic Balance, UV-VIS Spectrophotometer. A GIS laboratory, a meteorological observatory and a plant culture house will be established in the near future.

Research Activity

Number of papers published in referred journals in 2009: 06

Number of ongoing research projects: 02

Select Publications

1. P. K. Gupta, V. Gupta, C. Sharma, S.N. Das, N. Purkait, T.K. Adhya, H. Pathak, R. Ramesh, K.K. Baruah, L. Venkatratnam, G. Singh, C.S.P. Iyer, Development of methane factors for Indian paddy fields and emission of national budget, *Chemosphere*, 74: 590 - 598 (2009).
2. K. P. Sarma, and B. Talukdar, Sedimental characteristics and concentration of heavy metals in water sediments of the effluent discharging water body of Nagaon Paper Mill, Assam, *Asian J. Water, Environ. & Pollut.*, 6 (4) : 97 – 102 (2009)
3. K. K. Baruah, B. Gogoi and P. Gogoi., Plant Physiological and Soil characteristics associated with methane and nitrous oxide emission from rice paddy. *Plant Physio. & Mol. Bio.* (In press, 2009).

Courses offered in M. Sc. (Environmental Science)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
ES 501	Fundamentals of Environmental Science	3	ES 513	Environmental Impact Assessment	3
ES 502	Elements of Ecology	3	ES 514	Waste Management	3
ES 503	Environmental Chemistry	3	ES 516	Global Climate Change and its Impacts	3
ES 505	Natural Hazards	3	ES 518	Environmental Laws & Policies	2
ES 506	Basics of Computer Science	2	ES 529	Principles of Instrumental Methods and Analysis	3
ES 507	Environmental Biology	3	ES 530	Environmental Geo-Science	3
ES 508	Environmental Physics	3	ES 531	Climatology and Meteorology	3

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
ES 510	Energy and Environment	3	ES 532	Agriculture and Environmental Sustainability	3
ES 511	Environmental Pollution	4	ES 533	Fundamentals of Statistics	3
ES 512	Environmental Plant Physiology and Biochemistry	4	ES 500	Projects/ Dissertation	10
ES 519	Seminar in Environmental Science	1			
Electives					
ES 520	Cell Biology	2	ES 535	Statistical Methods	2
ES 521	Photosynthesis & Respiration	2	ES 536	Environmental Biotechnology	2
ES 523	Human Population, Social Issues and the Environment	2	ES 537	Agro-forestry and Forest Management	2
ES 526	Pesticides in relation to environment	2	ES 538	Biodiversity and Conservation	2
ES 534	Soil Science and Soil ecology	2	ES 539	Remote Sensing and GIS	2

FOOD PROCESSING TECHNOLOGY

Established in 2006, the Department of Food Processing Technology started M.Sc. programme from August 2006, which was then upgraded to M.Tech. programme in Food Processing Technology from August 2009. The M.Tech. programme is the first of its kind that is being offered by any university in the North East India. The M.Tech. syllabus is structured to fulfill two main objectives. First, to generate skilled manpower for rapidly growing food industries in the region; and second, to train the graduates to excel as future entrepreneurs. The syllabus includes courses on processing, engineering, chemistry, microbiology, analysis, packaging of foods. Adequate emphasis is given on laboratory and field work. Industrial training and visits to food industries are included in the programme to further reinforce practical experience of the students. The Department is also offering B.Tech. Programme in Food Engineering & Technology.

Programmes

1. B.Tech. in Food Engineering & Technology
2. M.Tech. in Food Processing Technology
3. Ph.D.

Faculty

Professor

Mahanta, C. L., Ph.D. (CFTRI, Mysore), HoD
 Deka, S. C., Ph.D. (Haryana Agricultural University)

Associate Professor

Hazarika, M. K., (IIT Kharagpur)

Assistant Professor

Sit, N., M.Tech. (G. B. Pant University of Agriculture & Technology)
 Mishra, P., M.Tech. (Harcourt Buttlar Technological Institute, Kanpur)
 Badwaick, L. S., M.Tech. (Sant Longowal Institute of Engineering and Technology, Longowal)

Facilities

The Department is equipped with processing and analytical equipments. The University library is well stocked with text and reference books. Electronic journals and print journals on Food Processing Technology are also available.

Research Activity

Number of papers published in referred journals in 2009: 01

Number of ongoing research projects: 02

Courses offered in M.Tech (Food Processing Technology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
FP 401	Principles of Food Processing	3	FP 519	Design of Food Processing Equipment	3
FP 402	Food Chemistry	3	FP 600	Simulation & Modeling	4
FP 403	Food Analysis	3	EL 475	Basic Electrical & Electronics	3
FP 405	Biochemistry and Nutrition	4	EL 476	Instrumentation & Control in Food Processing	4
FP 411	Food Processing Engineering	3	CS 451	Computer Fundamentals & Programming	3
FP 513	Business Management	3	MS 400	Applied Mathematics & Statistics	4
FP 514	Quality Control in Food Processing Industries	4	BT404	Microbiology	4
FP 515	Advanced Food Engineering	5	BT 422	Food Microbiology	3
FP 516	Packaging & Storage Technology	3	FP 615	Seminar	1
FP 417	Food Plant Design & Product Development	4	FP 616	Mini project	6

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
FP 518	Emerging Technologies in Food Processing	2	FP 617	Major Project	18
Elective Courses					
FP 407	Technology of Cereals and Legumes	3	FP 601	Computational Method in Engineering	3
FP 408	Technology of Milk and Milk Products	3	FP 602	Bioprocess Engineering	3
FP 409	Technology of Fruits and Vegetables	3	FP 603	Optimization Techniques	3
FP 410	Technology of Plantation Products	3	FP 604	Food Rheology	3
FP 503	Technology of Fish, Meat and Poultry	3	FP 605	Drying & Dehydration	3
FP 504	Technology of Oilseeds and Fats	3	FP 606	Heat & Mass Transfer	3
FP 520	Waste Management & Byproduct Utilization in Food Industries	3	BT 412	Fermentation and Process Control	3
FP 521	Food Supply Chain Management	3	BT 417	Food Biotechnology	4
FP 522	Novel Separation Techniques	3			

MASS COMMUNICATION AND JOURNALISM

The Department was started in 2001 to provide training in Journalism and Mass Communication and undertake researches in tune with changing needs of the society. The thrust areas of the Department are Mass Communication and Community Media, laying emphasis on theories and practice of communication and media by imparting skills in Radio, Television, Newspaper, News Media, Advertising and Public Relation productions.

Programmes

1. M.A. in Mass Communication and Journalism
2. Post Graduate Diploma in Mobile and Multimedia Communication

Faculty

Associate Professor

- Anbarasan, P., M.Phil. (JNU, New Delhi)
- Arul Selvan, K. S., Ph.D. (Manipal University) (*on lien*)
- Bora, A., Ph.D. (Guwahati University)
- Murthy, C.S.H.N., Ph.D. (Andhra University)

Assistant Professor

- Chakraborty, J., MMC (Assam University), HoD
- Pegu, U. K., MMC (Assam University)
- Kabi, Kh., M.A. (Madras University)
- Nagaraju, A., M.A. (University of Hyderabad) (*on lien*)
- Borah, A., M.A. (Tezpur University)
- Daimari, P.J., M.A. (Tezpur University)
- Malakar, K., M.A. (Jamia Millia University)
- Lakhendra, B., M.A. (BHU)

Facilities

The Department is endowed with specialized equipment for print, TV, and web journalism. These include industry grade digital video cameras, linear and non-linear editing suites, all in broadcast quality. Students get hands-on experience in multi camera production in the well-equipped studio. An exclusive multimedia lab with latest software enables students to gather expertise in the nuances of different media productions. A well equipped screening room with a 100 seat capacity for the screening and discussion of short films.

Departmental Library

The Central library has a collection of more than 3000 books related to all core and allied areas of mass communication. The University also subscribes to 20 national and international research journals for the Department.

Productions

Students as part of their academic curriculum produced lab journals, audio programmes, web designs, brochures, TV news bulletin, documentary films and traditional communication programmes like puppet shows and street plays.

Courses offered in M.A. (Mass Communication and Journalism)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
MC 451	Introduction to Communication	3	MC 458	Media Law and Ethics	3
MC 452	Reporting and Writing	4	MC 459	Communication Research Methods	3
MC 453	Advertising and Public Relations	3	MC 460	Elective G A	4
MC 454	Evolution of Indian Media	3	MC 461	Elective G A	4
MC 455	Understanding New Media	3	MC 462	Broadcast Media Production	3
MC 456	Visual Communication	3	MC 463	Online Journalism I	3
MC 457	Foundations of Journalism I	1	MC 464	Foundations of Journalism II	1
MC 465	Political and Cultural Communication	3	MC 476	International Communication	3

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
MC 466	Development Communication	3	MC 477	Film Studies	3
MC 467	Elective G A	4	MC 478	Elective G A	4
MC 468	Elective G A	4	MC 479	Elective G A	4
MC 469	Elective G B	3	MC 480	Elective G B	3
MC 470	Elective G B	3	MC 481	Elective G B	3
MC 471	Elective G B	3	MC 482	Elective G B	3
MC 472	Elective G B	3	MC 483	Elective G B	3
MC 473	Foundations of Journalism III	1	MC 484	Foundations of Journalism IV	1
MC 474	Internship I	3	MC 485	Internship II	3
MC 475	Communication Research Project	4			
Electives					
MC 460	Reporting and Editing	4	MC 478	Analytical and Opinion Writing	4
MC 461	Advanced Advertising and Public Relations	4	MC 479	Media Management	4
MC 467	Specialized Reporting	4	MC 480	Post Production – Editing	3
MC 468	Marketing Communication	4	MC 481	Multimedia Journalism	3
MC 469	Multi Camera Production & Documentary	3	MC 482	Advanced Communication Research Methods	3
MC 470	Online Journalism II	3	MC 483	Radio Production II	3
MC 471	Communication Theories	3			
MC 472	Radio Production I	3			

Course offered in PG Diploma (Mobile and Multimedia Communication)

CODE	Title	Credit
MM 401	Introduction to Communication and Media	3
MM 402	Broadcast Media Production	4
MM 403	Basics of Convergence Technologies	4
MM 404	Communications for Social Change	4
MM 405	Persuasive Communication in Practice	6
MM 406	Perspectives of North East India	3
MM 407	Internship	6

MATHEMATICAL SCIENCES

The Department was started in July 1994 with the objective of producing trained manpower for undertaking research and teaching in mathematics and allied branches of basic or applied sciences. The Department carries out research in the areas of discrete probability distribution, genetic algorithms / combinatorial optimization, pattern recognition, operator theory, fuzzy mathematics, number theory and mathematics influenced by Ramanujan, finite element method etc.

Programmes

1. Integrated M.Sc. in Mathematics
2. M.A./M.Sc. in Mathematics
3. M.Tech. in Computational Seismology
4. Ph.D. in Mathematical Sciences

Faculty

Professor

Borah, M., Ph.D. (Gauhati University)
Baruah, N. D., Ph.D. (Tezpur University), HoD

Associate Professor

Hazarika, D., Ph.D. (JMI, Delhi)
Hazarika, M., Ph.D. (Tezpur University)
Nath, M., Ph.D. (IIT Guwahati)

Assistant Professor

Sarmah, B. P., M.Sc. (Gauhati University)
Dutta, S., M.Sc. (Delhi University)
Barman, R., M.Sc. (IIT Delhi)
Sen, S., M.Sc. (Gauhati University)
Haloi, R., M.Sc. (Gauhati University)
Deka, B., Ph.D. (IIT Guwahati)

Facilities

The Department has a state of the art computer laboratory established with assistance from the DST. It is equipped with 2 high performance servers, 2 workstations and 35 PCs. The latest scientific and mathematical software packages are available. The laboratory is fully networked and it is linked with the Central Computer Center via LAN with access to the INTERNET.

Departmental Library

The Departmental Library has a collection of books contributed by the National Board of Higher Mathematics (NBHM) and Inter University Centre for Astronomy and Astrophysics (IUCAA) besides other text books.

Research Activity

Number of papers published in referred journals in 2009: 18
Number of ongoing research projects: 03

Select Publications

1. M. Borah, A. K. Mukherjee, and S. K. Rai, To study the influence of different componenets of fermentable substrates on induction of extracellular α -amylase synthesis by *Bacillus subtilis* DM-03 in Solid-state fermentation and exploration of feasibility for inclusion of α -amylase in laundry detergent formulations, *Biochem. Engg. J.*, 43: 149-156 (2009).
2. N. D. Baruah, B. C. Berndt, and H. H. Chan, Ramanujan's series for $1/\pi$: a survey, *Am. Math. Monthly*, 116: 567-587 (2009).
3. B. Deka and R.K.Sinha, Finite element methods for semilinear elliptic and parabolic interface problems, *Appl. Numer. Math.* 59: 1870-1883 (2009).

Courses offered in the M.A. / M.Sc. (Mathematics)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
MS 401	Abstract Algebra	4	MS 408	Topology	4
MS 403	Linear Algebra	4	MS 410	Functional Analysis	4
MS 405	Real Analysis	4	MS 424	Computer Laboratory II	1
MS 409	Probability & Statistics	4	MS 501	Classical Mechanics	4
MS 411	Computer Programming+	4	MS 507	Partial Differential Equations	4
MS 421	Computer Laboratory I	2	MS 508	Mathematical Methods	4

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
MS 416	Numerical Analysis+	3	MS 503	Mathematical Programming	4
MS 414	Ordinary Differential Equations	4	MS 513	Project	6
MS 406	Complex Analysis	4			
+ Course for which there is a separate practical unit assigned as Computer Laboratory I/II					
Electives					
MS 541	Fluid Mechanics	4	MS 572	Operations Theory -II	4
MS 542	Electrodynamics	4	MS 573	Number Theory - II	4
MS 543	Relativity	4	MS 574	Advanced Algebra - II	4
MS 544	Operation Research	4	MS 576	Quantum Mechanics -II	4
MS 545	Elliptic Curves	4	MS 576	Mathematical Modelling-I	4
MS 546	Algebraic Number Theory	4	MS 578	High Energy Astrophysics	4
MS 547	Numerical Linear Algebra	4	MS 579	Mag. Hydr. & Plasma Physics -II	4
MS 548	Mathematical Logic	4	MS 580	Sampling Techniques -II	4
MS 549	Graph Theory	4	MS 581	Stochastic Processes - II	4
MS 552	Operator Theory	4	MS 582	Reliability Theory	4
MS 553	Number Theory I	4	MS 583	Advance Analysis –II	4
MS 554	Advanced Algebra - I	4	MS 584	Multivariate Analysis -I	4
MS 556	Quantum Mechanics -I	4	MS 585	Fuzzy Sets & Applications-II	4
MS 557	Mathematical Modelling-I	4	MS 586	Parallel Numerical Algorithms	4
MS 558	General Theory of Relativity	4	MS 587	Finite Element Method	4
MS 559	Mag. Hydr. & Plasma Physics -I	4	MS 588	Applied Matrix Theory	4
MS 560	Sampling Techniques -I	4	MS 591	Computational Fluid Dynamics	4
MS 561	Stochastic Processes - I	4	MS 591	Computational Fluid Dynamics	4
MS 562	Statistical Quality Control	4	MS 593	Wavelets and Applications	4
MS 563	Advance Analysis –I	4	MS 594	Advanced Topology-I	4
MS 564	Multivariate Analysis -I	4	MS 595	Numerical Solutions of ODE	4
MS 565	Fuzzy Sets & Applications-I	4	MS 596	Advanced Topology-II	4
MS 566	Fourier Analysis	4	MS 597	Numerical Solutions of PDE	4
MS 567	Continuum Mechanics	4	MS 598	Algebraic Geometry	4
MS 568	Theory of Distribution and Sobolev Spaces	4	MS 599	Probability Theory	4

Courses offered in M.Tech. (Computational Seismology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
SM 611	Continuum Mechanics	4	SM 623	Computational Seismology	6
SM 612	Stochastic Processes & Time Series Analysis	4	SM 622	Inverse Theory and Statistical Inference	4
SM 613	Physics of the Earth and Geodynamics	4	SM 621	Mathematical Methods in Seismology	4
SM 614	Computational Techniques & Programming	4	SM 615	Finite Element Methods and Optimization Techniques	4
SM 610	Computational Laboratory-I	5	SM 620	Computational Laboratory -II	6
SM 640	M.Tech Dissertation- I	10	SM 650	M.Tech Dissertation- II	14
Elective Courses					
SM 631	Computer Graphics and Visualization	4	SM 637	Structural Dynamics & Earthquake Engineering	4
SM 632	Pattern Recognition in Geo-sciences	4	SM 638	Fuzzy Set Theory & Applications	4
SM 634	Digital Signal Processing	4	SM 639	Geo-informatics & Data Analysis	4
SM 635	Advanced in Seismology	4			

MECHANICAL ENGINEERING

The Department of Mechanical Engineering was started in July, 2006 under School of Engineering initially for offering B. Tech. degree in Mechanical Engineering. The aim of the Department is to produce well trained and motivated manpower in the field of Mechanical Engineering as per present industrial requirements. The department has the vision of starting research activities with introduction of M. Tech and Ph.D. programme in the near future.

Programme

1. B.Tech in Mechanical Engineering

Faculty

Assistant Professor

- Gogoi, T. K., M.Tech. (IIT Kharagpur), HoD
- Dutta, P. P., M.Tech. (Tezpur University)
- Kalita, P., M.Tech. (Institute of Technology, BHU)
- Dutta, P. P., M.E. (Birla Institute of Technology, Mesra)
- Kirtania, S., M.Tech (IIT Guwahati)

Facilities

Laboratories

Strength of Material Laboratory: The laboratory is well equipped with Computerized Universal Testing Machine, Impact Testing Machine, Brinell Hardness Tester, Rockwell Hardness Tester and Vicker's Hardness Tester etc.

Fluid Mechanics Laboratory: The laboratory is equipped with Hydraulic Benches, Flow Meter demonstration module, Flow through Weir Apparatus, Energy loss in bend Module, Osborne-Reynolds Apparatus, Bernoulli's Apparatus, Orifice Discharge Apparatus and Impact of Jet Apparatus etc.

Theory of Machine and Mechanism Laboratory: This laboratory is equipped with equipments like Universal Governor Apparatus, Gyroscope, Whirling of Shaft Apparatus, Static and Dynamic Balancing Apparatus etc.

Kinematics Laboratory: This laboratory has different types of gear model, clutch model, belt drive model, mechanism model, and cam drive model, cut-section internal combustion engine model etc. for demonstration to students.

CAD/CAM Laboratory: This laboratory is equipped with latest version of design and analysis software like Pro-Engineer Wildfire 3.0 etc.

Workshop

The workshop is equipped with a number of conventional centre Lathe Machines, Radial Drilling Machine, Slotting Machine, MIG Welding Machine. The department has a production type CNC Lathe Machine, Universal Milling Machine, Horizontal Milling Machine, Vertical Milling Machine, Shaping Machine, Universal Tool & Cutter Grinder, Surface Grinding Machine, Pedestal Grinding Machine, High Speed Precision Lathe Machine, Pillar Drilling Machine, Arc Welding Machine very and will procuring few other sophisticated machinery shortly.

The other Laboratory, vibration laboratory, turbo machinery laboratory, metrology laboratory, thermal science, automobile engineering lab will likely to be started shortly (Under Processing).

MOLECULAR BIOLOGY AND BIOTECHNOLOGY

The Department of Molecular Biology and Biotechnology was established in July 1997 with the objectives to train and create quality human resources and persuasion of quality research work in the challenging and frontier areas of modern biotechnology. The Department has a close linkage with the industry and academic institutes of the country. The current research activities in the Department includes microbial biotechnology, petroleum biotechnology, snake venom biochemistry, enzymology, and enzyme technology, plant biotechnology, medicinal plants, immunology and immunogenetics, molecular evolution and nanobiotechnology.

Programmes

1. Integrated M.Sc. in Bioscience and Bioinformatics
2. M.Sc. in Molecular Biology and Biotechnology
3. Ph.D.

Faculty

Professor

Konwar, B. K., Ph.D. (Imperial College, London), Dean (Science & Technology)
Buragohain, A. K., Ph.D. (Imperial College, London) (*On lien*)
Mukherjee, A. K., Ph.D. (Burdwan University), HoD

Associate Professor

Baruah, S., Ph.D. (Panjab University)

Assistant Professor

Ramteke, A., Ph.D. (JNU, New Delhi)
Ray, S. K., Ph.D. (CCMB, Hyderabad; degree awarded by JNU)
Mandal, M., M.Phil., Ph.D., (IGIB, Delhi; degree awarded by DU)
Medhi, T., Ph.D. (IIT Kharagpur)
Kalita, E., M.Sc. (Tezpur University)

Facilities

The Department houses a range of sophisticated equipment such as Gel Documentation System, High Pressure Liquid Chromatography, Protein Purification System, Fraction Collector, Electrophoresis system, Millipore Water Purification System, PCR Machine, Fermentor, CO₂ incubator, Ultra Sonicator, Incubated Shaker, Deep Freeze, Tensiometer, Inverted Microscope, Tissue Culture Facility, Gas Chromatography -MS, UV-VIS Spectrophotometer, Deep freezer, Cold room, Pulse field Gel Electrophoresis Apparatus, 2-D gel electrophoresis apparatus, High Speed Centrifuge, ELISA reader.

Departmental Library

Apart from basic and advanced text books in the Departmental library, additional books, collection of latest references books, number of foreign and national journals as well as Electronic journals in the University library.

Fellowship

The students admitted to the M. Sc. programme are eligible for a DBT sponsored monthly studentship of Rupees one thousand two hundred only.

Research Activity

Number of papers published in referred journals in 2009: 15

Number of ongoing research projects: 04

Select Publications

1. S. Dutta, N. Karak, J. P. Saikia and B. K. Konwar, Biocompatible epoxy modified bio-based polyurethane nanocomposites: mechanical property, cytotoxicity and biodegradation, *Bioresour. Technol.*, 100: 6391-6397 (2009).
2. S. Baruah, S. D. Lourembam, C.E. Sawian, I. Baruah, D. Goswami, Temporal and Spatial variation in MSP1 clonal composition of *Plasmodium falciparum* in districts of Assam, Northeast India" *Infection, Genetics and Evolution*, 9: 853-859(2009).
3. S.K. Rai, A.K. Mukherjee, Ecological significance and some biotechnological application of an organic solvent stable alkaline serine protease from *Bacillus Subtilis* strain DM-04. *Bioresour. Technol.* 100: 2642–2645 (2009).

Other relevant information

The department has been ranked as 5th among all the institutes offering Biotechnology M. Sc. programme in India (Survey by Biospectrum).

The Department has received financial assistance under UGC-SAP, DST-FIST and DBT special grant for strengthening teaching research and training. The Department is also the Nodal Centre of the DBT, Ministry of Science and Technology for the up gradation and improvement of the infrastructure facilities of the Medical Colleges of the North East India

Courses offered in M.Sc. (Molecular Biology and Biotechnology)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
BT 401	Genetics & Cytogenetics	3	BT 402	Cell Biology	3
BT 403	Biochemistry	4	BT 404	Microbiology	4
BT 405	Remedial Mathematics		BT 406	Biophysics	2
BT 407	Techniques and instrumentation	3	BT 408	Enzymes and Enzyme Technology	3
BT 409	Immunology	4	BT 410	Molecular Biology	4
BT 411	Cell and Tissue Culture	4	BT 412	Fermentation and Process Control	4
BT 413	Genetic Engineering I	4	BT 414	Application of Computer in Biotechnology	3
BT 418	Credit Seminar	2	BT 419	Genetic Engineering II	4
BT 421	Project	14	BT 420	Management & Legal Issues in Biotechnology	2
Elective Courses					
BT 415	Animal Biotechnology	4	BT 416	Plant Biotechnology	4
BT 417	Food Biotechnology	4			

PHYSICS

The Department was started in 1998 with an objective to produce trained manpower for teaching and undertaking theoretical as well as experimental research in different branches of Physics and Materials Science. Since its inception the Department has sought to create a quality environment in physics teaching and research. Research activities are being carried out in the areas of condensed matter physics, photonics, high energy physics, microwaves, plasma physics and Nanoscience and technology.

Programmes

1. Integrated M.Sc. in Physics
2. M.Sc. in Physics
3. M.Sc. in Nano Science & Technology
4. Ph.D.

Faculty

Professor

Choudhury, A., Ph.D. (Oxford University)
Kumar, A., Ph.D. (IIT Kanpur)
Sarma, J. K., Ph.D. (Gauhati University), HoD

Associate Professor

Bhattacharyya, N. S., Ph.D. (Delhi University)
Das, N., Ph.D. (Gauhati University)
Deb, P., Ph.D. (Jadavpur University)

Assistant Professor

Ahmed, G. A., Ph.D. (Gauhati University)
Mohanta, D., Ph.D. (Tezpur University)
Francis, Ng. K., M.Sc. (Delhi University)
Karmakar, P.K., Ph.D. (Gauhati University)
Das, M., Ph.D. (Gauhati University)

Facilities

The Department has a rich collection of devices and instruments related to Photonics, Electronics, Condensed Matter Physics and Nanoscience at research level in addition to general laboratory instruments for postgraduate teaching in physics. The Department has 25MW pulsed Nd-YAG laser, High Vacuum Coating, X-band Microwave Bench, Electrochemical Workstation, LCR HiTester Meter, SEM, XRD and Spectrophotometer as major research equipment. The Department also has a computer laboratory.

Research Activity

Number of papers published in referred journals in 2009: 25

Number of ongoing research projects: 14

Select Publications

1. J. M. Laskar, D. Mohanta, A. Choudhury, Observation of discrete LSP states in isolated nanoscale Ag-particles synthesized via photochemical reduction route, Euro. Phys. J:Appl. Phys. 46, 20602 (2009).
2. R. Baishya, and J.K. Sarma, Evolution of spin dependent structure functions from DGLAP equations in leading order and NLO, Phys. Rev. D 79, 034030 (2009).

Courses offered in M.Sc. (Physics)

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
PH 400	Physics Lab - I	5	PH 411	Statistical Physics	3
PH 402	Quantum Mechanics - I	3	PH 413	Computational Techniques	3
PH 403	Mathematical Methods of Physics - I	3	PH 415	Nuclear Theory & Particle Physics	3
PH 404	Electromagnetic Theory - I	3	PH 499	Physics Lab - II	5
PH 405	Semiconductor Devices	3	PH 500	Project Work - I	5
PH 407	Quantum Mechanics - II	3	PH 501	Condensed Matter Physics & Material Science - I	3

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
PH 409	Mathematical Methods of Physics-II	3	PH 503	Atomic & Molecular Physics	3
PH 410	Analog & Digital Electronics	4	PH 599	Project Work - II	5
Electives					
PH 401	Classical Mechanics	3	PH 521	Introduction to Parton Models	3
PH 504	Laser Physics	3	PH 522	Communication Systems	3
PH 505	Coherent Optical System	3	PH 523	Microwaves	3
PH 506	Physics of thin Film	3	PH 524	Digital Signal Processing	3
PH 507	Physics of Low Temperature	3	PH 525	Microprocessor & Digital Signal Processing Based System	3
PH 509	Condensed Matter Physics & Material Science - II	3	PH 526	Plasma Physics-I	3
PH 510	Fibre Optics & Optoelectronics	3	PH 527	Plasma Physic - II	3
PH 511	Image Processing	3	PH 528	Solid State Ionics	3
PH 512	Physics of Remote Sensing	3	PH 529	Advanced Material Science	3
PH 513	Photonics Devices	3	PH 530	Nano Structures - I	3
PH 514	Super Conductivity & Critical Phenomena	3	PH 531	Nano Structures- II	3
PH 515	Physics of Integrated Circuits	3	PH 532	Quantum Electrodynamics	3
PH 516	Probes of Solid State Physics	3	PH 533	General Theory of Relativity	3
PH 517	Physics of Solid State Devices	3	PH 534	Astrophysics and Cosmology	3
PH 519	Quantum Field Theory	3	PH 535	Electromagnetic Theory - II	3
PH 520	Modern Particle Physics	3			

Courses offered in M.Sc. (Nano Science and Technology)

NS 401	Quantum Mechanics	3	NS 413	Measurement & Analysis Lab - I	5
NS 402	Electronics	3	NS 414	Instrumental Methods of Analysis	4
NS 403	Computational Techniques	3	NS 415	Measurement & Analysis Lab -II	5
NS 404	Basic Polymer Science	3	NS 501	Surface Science	3
NS 405	Cell & Molecular Architecture of Cells	3	NS 502	Optical Properties of Nanostructures	3
NS 407	Statistical Physics	3	NS 503	Electrical & Magnetic Properties of Nanostructures	3
NS 408	Condensed Matter Physics	3	NS 504	Biosynthesis of Nanoparticles & Applications	3
NS 410	Nanostructures	3	NS 505	Minor Project	5
NS 411	Fundamentals of Molecular Biology & Elements of Immunology	3	NS 506	Major Project	12

Apart from the faculty members of the Department of Physics, classes are also taken by faculty members of the department of Chemical Sciences and Molecular Biology and Biotechnology for M.Sc. in Nano Science and Technology course.

SOCIOLOGY

The major objective of the programme is to disseminate knowledge in sociological theory and method with a view to creating a pool of trained manpower that is sensitive to the regional specificities with a national as well as -global perspective.

Programmes

1. M.A. in Sociology
2. Ph.D.

Faculty

Professor

Karna, M. N., Ph.D. (Patna University)

Associate Professor

Sharma, C. K., M.Phil., Ph.D. (Delhi University), HoD

Assistant Professor

Deka, R., M.A. (University of Pune)

Das, A. K., M.Phil. (Delhi University)

Courses offered

Core Courses					
CODE	Title	Credit	CODE	Title	Credit
SC 401	Sociological Theories - I	5	SC 407	Political Sociology	5
SC 402	Sociological Theories - II	5	SC 408	Research Methodology	5
SC 403	Sociology of Kinship	3	SC 501	Industrial Sociology	4
SC 404	Social Stratification	5	SC 502	Social Demography	4
SC 405	Sociology of India	5	SC 503	Social Movements in India	4
SC 406	Economic Sociology	4	SC 504	Sociology of Northeast India	4
			SC 505	Project	6
Electives					
Students will choose <i>any four</i> from the- following:					
SC 521	Sociology of Medicine	4	SC 525	Environmental Sociology	4
SC 522	Quantitative Sociology	4	SC 526	Sociology of Development	4
SC 523	Sociology of Culture and Mass Media	4	SC 527	Gender and Society	4
SC 524	Criminology	4			

SECTION SIX

MODEL QUESTIONS

Integrated M.Sc.

Test comprises of 80 objective questions, 20 questions each from Physics, Chemistry, Mathematics and biology, of which candidates are to answer 50 questions. Each question carries 2 marks and for every incorrect answer 0.5 mark will be deducted.

Chemistry

- Predict the shapes of the following molecules with the help of Valence Shell Electron Pair Repulsion Theory:
i) NH_3 ii) SF_4 iii) CH_4
- Write down the bond order of the following species:
i) O_2 ii) N_2 iii) He_2

Physics

- A cylinder with a height of 28.5cm and an inside diameter of 10.4cm is filled with pure water which is at normal temperature and pressure. What is mass of the water in kilograms?
(a) 0.242kg (b) 2.420Kg (c) 24.20Kg (d) 242.0Kg
- A ball is dropped out of a window near the top of a building. If it accelerates towards the ground at a rate of 9.80 m/s^2 , what is the velocity when it has fallen 4.00 m?
(a) -7.32m/s (b) 6.95 m/s (c) 6.25 m/s (d) -8.85 m/s

Mathematics

Choose the correct alternative.

- The number of ways one can invite 3 or more of his/her 6 friends is
(a) 24 (b) 42 (c) 18 (d) 12
- If c is a negative real number and $f(x) = \frac{|x|}{x}$ then the value of $|f(c) - f(-c)|$ is
(a) 0 (b) c (c) 2 (d) $2c$

Biology

- Sarcoplasm is the cytoplasm of
a. Nerve fibres
b. Muscle fibres
c. Both a and b
d. None of these
- The cruciform loops of DNA contains
a. Satellite DNA
b. Palindromic DNA
c. Single stranded DNA
d. Z-DNA

Department of Business Administration
PG Diploma in Tourism Management

The Written Test consists of the following : No negative marks for wrong answers
1. Test of GK : 40 marks; 2. Test of reasoning : 30 marks; 3. Test of English : 30 marks.

Total marks : 100

Time : 2 hours

General Knowledge :

1. Which is the largest sugarcane producing state in India ?
(a) Bihar (b) Andhra Pradesh (c) Uttar Pradesh (d) Assam
2. Which particular city is known as the "Garden City" of India ?
(a) Mysore (b) Bangalore (c) Agra (d) Varanasi
3. Mother Teresa arrived in India from Europe in the year
(a) 1910 (b) 1921 (c) 1929 (d) 1939
4. What is the name of the currency of Russia ?
(a) Mark (b) Yen (c) Ruble (d) Peso

English : Which of the Phases marked (1), (2) and (3) given below should replace the phrase given in bold in the following sentences.

1. She cooks, washes dishes, does her homework and take relaxing.
i) relaxing then
ii) then relaxes
iii) then relaxing
iv) take relaxes
v) no correction required
2. Fill in the blanks with the help of the alternatives given below
Charles Darwin was (6) to his studies to a point of madness. However, his findings
(7) fruits when he got success in propagating the evolutionary principles. According to this theory, there is
always (8) for existence or the (9) of the fittest. this theory
taught man to (10) Himself to his prevailing environment.
Q. 6. (a) Addicted (b) Devoted (c) Given (d) Recommended
Q. 7. (a) Bore (b) Gave (c) Carried (d) Indicated
Q. 8. (a) Efforts (b) Striving (c) Struggle (d) Fight
Q. 9. (a) Life (b) Survival (c) Dominance (d) Destruction
Q. 10. (a) Adapt (b) Adopt (c) Adept (d) Adhere

Reasoning :

1. the age of a man is three times the sum of the ages of his two sons. Five years after, his age will be double the sum of the ages of his sons. The father's present age is
(a) 40 years (b) 45 years (c) 50 years (d) 55 years
2. A town 'P' is located in a particular district. The town 'A' is West of P. Town 'T' is East of 'P'. Town 'K' is East of 'B' but West of 'T' and 'A'. They are all in the same district. Which town is the farther West ?
(a) P (b) K (c) B (d) A

Non-Verbal Reasoning :

1. 1 2 3 4
2. I II III IV V

In above set of figures (I) to (IV), some parts are shown to change their positions in a regular direction. Following the same sequence, which one of the following will appear at the fifth stage ?

- (a) (b) (c) (d)

Answers :

General Knowledge : 1(b), 2(c), 3(a), 4(c), 5(c)

English : 1(2), 6(b), 7 (a), 8(c), 9(b), 10(a)

Reasoning : 1(b), 2(c)

Non-Verbal Reasoning : 1(1), 2(c)

Department of Chemical Sciences
M. Sc. Chemical Sciences

General Science: 10 marks ; Physical Chemistry 30 marks; Organic Chemistry 30 marks; Inorganic Chemistry 30 marks

General Science:

Write the correct answer in the box. Each question carries 1 mark. There is no genitive mark for incorrect answer

1. One closed bottle with water at 30°C is taken to moon. If on the surface of moon cork of the bottle is opened, then-
 - a. Water will freeze
 - b. Water will boil
 - c. Water will be dissociated into H₂ and O₂
 - d. There will not be any effect

2. The temperature at the bottom of waterfall will be more than that at the top because-
 - a. Large area of falling water heat up due to sun rays
 - b. Falling water takes heat from the sun
 - c. At the bottom potential energy of water is large
 - d. The potential energy of falling water is converted into heat.

3. The upper and lower fixed points of a faulty thermometer are 5°C and 105°C. If the thermometer reads 25°C, what is the actual temperature?
 - a. 15°C
 - b. 20°C
 - c. 30°C
 - d. 35°C

Physical Chemistry (each question carries two marks)

4. Write the Hamiltonian operator of a free particle moving in one direction under the influence of zero potential energy.
5. Write the electronic configuration for N₂, N₂⁻ and N₂⁺.
6. Derive the relation:

$$C_p - C_v = \left[p + \left(\frac{\partial E}{\partial V} \right)_T \right] \left(\frac{\partial V}{\partial T} \right)_p$$

7. Show that entropy change in a binary mixture for isothermal process is maximum when $x_1 = x_2 = \frac{1}{2}$

Organic Chemistry (each question carries two marks)

8. How many stereoisomers are possible for bromochloriodomethane? Draw their three dimensional structures and label as S and R?
9. Predict the product of the following Michael addition reaction:
Methyl vinyl ketone + malonic ester
10. What is Hammett constant σ ?
11. On hydrolysis of DNA, it is found that although the ratio of bases vary from one DNA to another, the ratios of C:G and A:T are always 1:1.
 - (a) How are these ratios consistent with the double helix concept?
 - (b) How do the complementary bases interact with one another?

Inorganic Chemistry (each question carries two marks)

12. Dipole moment of NH₃ molecule is larger than that of NF₃. Explain.
13. Write the d-orbital splitting diagram for a square pyramidal and a trigonal bipyramidal complex.
14. The electronic spectrum of KMnO₄ shows a broad band at 18000 cm⁻¹, while in K₂CrO₄ the band is observed at a higher frequency 26000 cm⁻¹. Assign the bands and explain the trend.
15. Which among the following electronic transitions will have the lowest energy?
 - (a) $n \rightarrow \sigma^*$
 - (b) $n \rightarrow \pi^*$
 - (c) $\sigma \rightarrow \sigma^*$
 - (d) $\pi \rightarrow \pi^*$

Department of Computer Science & Engineering
Master of Computer Application (MCA)

Full Marks: 100

Time: 2 hours

Candidates needs to score minimum qualifying marks in each section.

The entrance examination question paper will contain three sections:

1. Section I (Logical Reasoning) : 40 marks
2. Section II (Mathematics or Computer Basics) : 30 marks
3. Section III (English Composition & Comprehension) : 30 marks

To qualify for selection a candidate must secure at least 20% marks in each of the sections

Section I

In this section every correct answer will fetch 2 (two) marks and for every wrong answer 1 (one) mark will be deducted.

1. What is the next number in the series - 121, 169, 289, 361, 526, _ ?
(A) 841 (B) 625 (C) 784 (D) 729 (E) none of these
2. A cube with all sides painted is divided into small cubes of equal sizes. The edge of a small cube is exactly one-fourth as that of the original cube. Therefore, the number of small cubes with only one side painted is -
(A) 4 (B) 6 (C) 12 (D) 24 (E) 36

Section II

In this Section answer questions in either Group A or Group B

Group A

Each correct answer will fetch 2½ (two and half) marks and for every wrong answer 1 (one) mark will be deducted.

1. The number of two digit numbers that can be written by using the digits 2 and 3 is
(A) ${}^{10}C_2 + {}^9C_2$ (B) 2^{10} (C) $2^{10} - 2$ (D) $10!$ (E) None of these
2. The term independent of x in the expansion of $(x^2 - 1/x)^4$ is
(A) 1 (B) -1 (C) 48 (D) 0 (E) None

Group B

Each correct answer will fetch 2 (two) marks and for every wrong answer 1 (one) mark will be deducted.

1. The 8bit 's complement binary representation of -35 is
(A) - 00100011 (B) 11100011
(C) 110111101 (D) 10110001
2. An EPROM with 16-bit address bus and 4-bit data bus contains -
(A) 32 KB (B) 64 KB (C) 256 KB (D) 128 KB

Section III

1. Write a precise in about 50 words for a given passage. 10 marks
2. Comprehension: Read the given passage and answer the set of questions based on it. 10 marks
3. Vocabulary test. 10 marks

Department of Computer Science & Engineering M. Tech. in Information Technology

The question paper consists of three Sections A, B and C.

- Section A consists of 40 multiple choice questions of 1 mark each, Section B consists of 15 short questions of 2 marks each and Section C consists of conventional questions on Programming in C of total 30 marks.
- There will be no negative marks but no partial credit will be given for questions in Section A.

SECTION - A

- Q1. In which one of the following page replacement policies, Belady's anomaly may occur?
 A. FIFO B. Optimal C. LRU D. MRU
 E. None of them Ans _____
- Q2. The Address Resolution Protocol (ARP) is used for -
 A. finding the IP address from the DNS
 B. finding the IP address of the default gateway
 C. finding the IP address that corresponds to a MAC address
 D. finding the MAC address that corresponds to an IP address Ans _____

SECTION - B

- Q1. Consider a relation scheme R= (A, B, C, D) on which the following functional dependencies hold: {AB → D, CB → D, A → C, C → A}. What is the highest normal form satisfied in this relation scheme R?
- Q2. Routing table of a router is shown below:

Destination	Subnet Mask	Interface
128.75.43.0	255.255.255.0	Eth0
128.75.43.0	255.255.255.192	Eth1
192.12.17.5	255.255.255.255	Eth2
default		Eth3

- On which interface will the router forward packets addressed to destinations 128.75.43.16 and 192.12.17.6 respectively?
- Q3. If one uses quick sort algorithm to sort the following numbers in ascending order
 20, 47, 15, 8, 9, 18, 4, 40, 30, 12
 what would be the order of these numbers after 2nd pass of the algorithm? (Assume that the 1st element is taken as the pivot element)

SECTION - C

- Q1. Write a program in C which takes an integer as input and prints the 2's complement representation of the integer using 32 bits.
- Q2. Suppose an integer list is represented by the structure

```
struct inode { int val ;
              struct inode *next ;};
typedef struct inode *intlist;
```

 Write a function **intlist reverse (intlist p)** which returns the reversed list of the supplied list **p**.

Department of Cultural Studies
MA in Cultural Studies

Type 1:

Show your acquaintance with the following in 50 words

5x4=20

Satras of Assam; Loktak lake; Nongkrem dance; Baul Songs; Kathakali;

Type 2:

Tick the correct option in the following:

1x10=10

- i. Ali-aye-ligang is a festival of the Bodos/Misings/Karbis/none of the above.
- ii. *Dhokla* is a Gujrati/ Marathi/ Assamese/Bengali food item.
- iii. *Kimono* is worn by a Kenyan/ Sudanese/ Japanese/ Mexican woman.
- iv. *The Golden Bough* is a famous garden/movie/book/painting.

Type 3:

Give the full forms of the following:

2x5=10

ISRO, ABILAC, NEZCC, IGNCA

Type 4:

Mark the odd item out with reason:

2x5=10

- i. Mughlai Chicken/Biryani/Kebab/Chowmein
- ii. Prakash Padukone/Syde Modi/ Dipankar Bhattacharjee/ Leander Paes
- iii. Baghdad/Bangkok/Bangalore/Bejing.

Type 5:

Match the followings

1X5=5

- | | |
|--------------------|------------|
| i. Dokhna | Mising |
| ii. Ribigaseng | Literature |
| iii. Jhumpa Lahiri | Bodo |

Type 6:

Write notes on any two of the following:

10X2=20

- i. Brahmaputra
- ii. Women in TV Serials
- iii. Shopping Mall
- iv. Multiplex and Cinema

Type 7:

Comprehension Test.

Department of Electronics & Communication Engineering
M. Tech in Electronics Design & Technology

There will be negative marking. For every wrong answer 1/4th of the marks will be deducted.

1. Which of the following meters has the highest accuracy ?
 (a) moving iron meter (b) moving coil meter
 (c) rectifier type meter (d) thermocouple meter

2. The internal resistance of an ammeter should be very low in order to have
 (a) high accuracy (b) high sensitivity
 (c) maximum voltage drop across the meter (d) minimum effect on the current in the circuit

3. The characteristic equation of a closed loop control system is given as
 $s^2 + 4s + 16 = 0$
 The resonant frequency in radians/sec of the system is
 (a) 2 (b) $2\sqrt{3}$
 (c) 4 (d) $2\sqrt{2}$

4. For the root locus plot of the system having the loop transfer function given by

$$G(s)H(s) = \frac{K}{s(s+4)(s^2+4s+5)}$$

 (a) no breakaway point (b) three real breakaway point
 (c) only one breakaway point (d) one real and two complex breakaway points

5. A Class-A transformer coupled, transistor power amplifier is required to deliver a power output of 10 W. The maximum power rating of the transistor should not be less than
 (a) 5 W (b) 10 W
 (c) 20 W (d) 40 W

6. The early effect in a bipolar junction transistor is caused by
 (a) fast turn on (b) fast turn off
 (c) large collector base reverse bias (d) large emitter base forward bias

7. In an 8085 microprocessor system with memory mapped I/O
 (a) I/O devices have 16 – bit address (b) I/O devices are accessed using IN and OUT instruction
 (c) there can be a maximum of 256 input(d) arithmetic and logic and 256 output devices operations can be directly performed with the I/O data.

8. The minimum number of NAND gates required to implement the Boolean function $A + \overline{AB} + \overline{ABC}$ is equal to
 (a) 3 (b) 1
 (c) 4 (d) 7

9. An amplitude modulated voltage has modulation index of 100%. If the carrier is suppressed, the percentage power saving is
 (a) 50 % (b) 66.6%
 (c) 75 % (d) 25 %

10. The drawback of FM relative to AM is that
 (a) noise is very high for high (b) larger bandwidth is required modulation frequencies
 (c) higher modulating power is required (d) higher output power is required.

Department of Electronics & Communication Engineering
M.Tech. in Bioelectronics

Full Marks 100

Time 2 Hours

Answer either Part A or Part B (Write the answer in the block provided in CAPITAL letter)

Instructions There will be total 50 questions in each part. Each Question will carry equal marks. There will be negative marking. For every wrong answer 1/4th of the marks will be deducted.

PART A

- 1) Electro- Encephelograph is
A) Diagnostic tool for heart ailment
B) Diagnostic tool for Brain ailment
C) Instrument used for measuring blood pressure
D) Instrument used to hear pulse/heart beat
- 2) In modern electronic multimeters a FET or MOSFET is preferred over BJT because
A) Its input resistance is high
B) Its input resistance is high and does not vary with change of range
C) Its input resistance is low
- 3) A dc electronic voltmeter using chopper stabilization is free from errors due to
A) Low CMRR
B) Amplifier drift
C) Source output impedance
D) Interference
- 4) Feedback in an amplifier
(A) Reduces sensitivity and increase gain
(B) Reduces sensitivity as well as gain
(C) Increases sensitivity as well as gain
(D) Increases sensitivity and reduces gain
- 5) The ECG is used to detect
(A) Heart attack
(B) Heart block
(C) Coronary of thrombosis
(D) All the above

PART B

- 1) The best definition for resolution is:
A. The minimum distance between two objects that can be distinguished
B. The magnification of a microscope
C. The observed size divided by the actual size
D. None of the above
- 2) In ionic bonds,
A) electrons are shared unequally between atoms
B) neutrons are transferred between atoms
C) protons are shared equally between atoms
D) electrons are transferred between atoms
- 3) The chemical properties of an atom are primarily determined by the number of
A) neutrons it has in its nucleus
B) isotopes it forms
C) protons it has in its nucleus
D) electrons it has in its outermost energy level
- 4) Ions involved in the conduction of nerve impulse is
(A) Na⁺, K⁺
(B) Na⁺, Ca²⁺
(C) Ca²⁺, Mg²⁺
(D) K⁺, Mg²⁺
- 5) Which is mismatched?
(A) Cerebrum – memory
(B) Medulla oblongata – temperature regulation
(C) Cerebellum – equilibrium
(D) Olfactory lobes – smell

**Department of English & Foreign Language English
MA in English**

English

[Important: The questions given here are indicative, not exhaustive.]

1. Objective type questions(History of literature, books, authors, characters, concepts): 20 (10 to 20 questions, each carrying 1 or 2 marks)
 - a) Who wrote *The Way of All Flesh* ?
 - b) Name another book by the writer of the *Faerie Queene*.
 - c) Where do you find the Shakespeare character named Viola?
 - d) Who introduced the concept of 'negative capability' ?
 - e) Name two of George Eliot's contemporaries.

2. Write short notes on any three: 5x3=15
 - a) Personal satire
 - b) Simile and metaphor
 - c) Interlude
 - d) Sprung rhythm

3. Write an essay in not more than 200 words on any one of the following: 15
 - a) Elizabethan Comedy
 - b) Romanticism and classicism
 - c) The Question of Morality in Victorian Literature.
 - d) Point of view in the Novel.

4. Explanation of a passage from Shakespeare for example (not more than 100 words) 10

Could great men thunder
As Jove himself does, Jove would ne'er be quiet,
For every pelting petty officer
Would use his heaven for thunder; nothing but thunder.
Merciful Heaven,
Thou rather with thy sharp and sulphurous bolt
Splits the unwedgeable and gnarled oak,
Than the soft myrtle. But man, proud man,
Dress'd in a little brief authority,
Most ignorant of what he's most assur'd—
His glassy essence—like an angry ape
Plays such fantastic tricks before high heaven
As makes the angels weep; who, with our spleens,
Would all themselves laugh mortal.
(Shakespeare, *Measure for Measure* Act 2: Sc 2)

5. Explanation of / comprehension questions from an unseen passage: 2x5=10

6. (a) Synonyms and antonyms:
(b) Vocabulary Test:
(c) Correction of errors:
(d) Usage (prepositions, tenses, adverbs etc.):

Department of Environmental Science

M.Sc. in Environmental Science

The question paper contains two sections viz., section-A and section-B. Section-A will cover the syllabus of Physics and Chemistry and Section-B will cover the syllabus of Biological Sciences.

The test paper shall have both objectives as well as of short descriptive type questions covering (a) 10 + 2 level science subjects (Biology, Chemistry, and Physics) and (b) Basic concepts of environmental science, environmental pollution, current environmental issues, agro-ecosystems, agro-ecology, agriculture including hill agriculture, weather and climate system.

(No negative marking for wrong answer)

Marks: 100

Time: 2 hours

1. I. Fill up the gaps –
 - (a) Bowman's capsule is the organ found in human -----
 - (b) Shade tolerant plants are known as
 - (c) Bacteria and fungi which live on dead organic matter are called.....
 - (d) The causal organism of sheath blight of rice is
 - (e) The enzyme for converting glucose to glucose 6-phosphate in glycolysis is
2. Write short notes on—
 - (a) Centromere (b) nucleoid (c) hydrogen bonding (d) periodic properties of elements
3. Choose the correct answer:
 - (a) Root cap is absent in—
 - (i) hydrophytes (ii) lithophytes (iii) xerophytes (iv) mesophytes
 - (b) Bacteria differ from viruses in –
 - (i) Pathogenic nature (ii) genetic material
 - (iii) having well defined cytoplasm (iv) lacking proper nucleus
 - (c) Which of the following has net dipole moment –
 - (i) CCl_2 (ii) C_2H_2 (iii) H_2O (iv) CO_2
 - (d) *Itai itai* disease is caused due to –
 - (i) As poisoning (ii) As deficiency (iii) Cd deficiency (iv) Cd poisoning
 - (e) Identify the vector quantity
 - (i) time (ii) work (iii) heat (iv) electric field
 - (f) The standard value of atmospheric pressure
 - (i) 1013.25 mb (ii) 1013.30 mb (iii) 1013.40 mb (iv) 1013.45 mb
 - (g) Loess is an outcome of –
 - (i) Aeolian erosion landform
 - (ii) Aeolian deposition landform
 - (iii) fluvial deposition landform
 - (iv) fluvial erosion landform
 - (h) Which of the following is the correct sequence in terms of abundance in the atmosphere
 - (i) N_2 , O_2 , H_2 , Ar (ii) N_2 , H_2 , O_2 , Ar (iii) O_2 , N_2 , H_2 , Ar (iv) H_2 , O_2 , N_2 , Ar
 - (i) which of the following is an example of sedimentary rock:
 - (i) granite (ii) Basalt (iii) Limestone (iv) Slate
 - (j) Transition of inner electron in heavy metals results in emission of
 - (i) X-ray Photons (ii) Visible light (iii) Infra red (iv) Microwave photons
4. Short answer type:
 - (a) What is integrated pest management?
 - (b) How will you distinguish between N and Mg deficiency symptoms of plants in field?
 - (c) Explain the heating process of earth's atmosphere.
 - (d) H_2O molecule is V-shaped. Why?

Department of Food Processing Technology M.Tech. in Food Processing Technology

Full Marks: 100

Time: 2 hours

The question paper contains two sections viz. Section A and Section B of 50 marks each. Sec A is objective and is further divided into two parts viz. Part I of 20 marks from 10+2 PCMB and Part II of 30 marks from Basic Food Chemistry / Biochemistry / Nutrition and Processing. Sec B is of subjective type and contains 6 questions out of which 5 are to be attempted. Question number 1 and 2 are compulsory.
(No negative marking for wrong answer)

Section: A (Objective) Part I

Choose the correct alternatives:

1. The term independent of x in the expansion of $(x^2+1/x)^{12}$ is:
(i) 120 (ii) 285 (iii) 495 (iv) 595
2. *E. coli* is a
(i) bacteria (ii) fungi (iii) algae (iv) protista
3. In an adiabatic process
(i) Temperature remains constant (ii) Pressure remains constant
(iii) Energy remains constant (iv) Volume remains constant
4. (i) One kilowatt hour is equal to
(i) 36×10^5 J (ii) 36×10^3 J (iii) 36×10^3 J (iv) 36×10^5 J

Part II

5. The complete oxidation of glucose yields ATP equal to
(i) 64 (ii) 36 (iii) 121 (iv) 2
6. The alcohol content in wine is between
(i) 9-14% (ii) 18-25% (iii) 30-35% (iv) 40-50%
7. The temperature time combination for pasteurization of milk is
(i) 63°C for 30 min. (ii) 72°C to 15 Sec. (iii) both (iv) none

Section B

Attempt any 5 questions (Question nos. 1 and 2 are compulsory):

1. (a) How many milliliters of a 2.0M H_2SO_4 will be required to react with 20 g of NaOH
(b) A mixture of 16 g of oxygen gas and 28 g of nitrogen gas are placed in a one litre container at 273 K. What is the partial pressure of each gas and the total pressure in the container?
(c) How would you make a solution of 0.5 M sucrose? (Molecular weight of sucrose 360)
2. (a) A rectangular sheet of metal of length 6m and width 2m is given. Four equal squares are removed from the corners. The sides of the sheet are now turned up to form an open rectangular box. Find approximately the height of the box, such that the volume is maximum.
b) Evaluate
$$\int_0^{\pi} \frac{x \sin x}{1 + \cos^2 x}$$
3. Write the processing methods for
a) Wine b) Butter
4. a) What is the relevance of microbiology in food processing and preservation?
b) Write the importance of yeast in foods.

Department of Food Processing Technology
M.Tech. in Food Processing Technology (Lateral Entry)

Full Marks: 100

Time: 2 hours

The question paper will be divided into two parts A and B of 50 marks each. Part A will be objective type and will contain multiple choices, fill in the blanks and match the following type of questions. Part B will be of subjective type. Questions for both the parts will cover unit operations in food engineering, fruit and vegetable processing, cereals and pulses processing, food packaging, heat and mass transfer in food processing, food chemistry and biochemistry, food biotechnology, storage technologies, dairy technology, meat and fish processing, food microbiology, beverage processing, biochemical engineering etc.

Part A
(No negative marking for wrong answer)

I. Choose the correct answer

1. Degree of unsaturation in oils & fats is measured by
(a) Iodine value (b) Saponification value (c) Acid value (d) All the above
2. Which one is called the milk sugar?
(a) Maltose (b) Lactose (c) Sucrose (d) Galactose
3. The Reynolds's no. for a vegetable oil of viscosity 0.03 Pa s and density 850 kg/m³ flowing in a 50 mm bore pipe at a mean velocity of 0.75 m/s is
a) 1023 b) 1063 c) 1077 d) 1087

II. Fill in the blanks

1. 50 % moisture content on wet basis is ----- % moisture content on dry basis.
2. Glycolysis takes place in ----- of cell.

III. Match the following:

1. Sucrose	a) Glucose + glucose
2. Maltose	b) Glucose + fructose

Part B

1. A tube 60mm OD is insulated with a 50mm layer of silica foam, for which the conductivity is 0.055 W/m.K, followed with a 40 mm layer of cork with a conductivity of 0.05 W/m.K. If the temperature of the outer surface of the pipe is 423 K and the temperature of the outer surface of the cork is 303 K, calculate heat loss in watts per meter of pipe. 5
2. Determine the respective masses of 10% and 50% (by weight) aqueous sucrose solution which must be mixed to prepare 100 kg of a 22% sucrose solution. 5
3. Explain the manufacturing process of cheddar cheese. 5

Department of Mathematical Sciences
M.A. / M.Sc. in Mathematics

- The question paper consists of two sections: **Section A** of **60** marks and **Section B** of **40** marks.
- The duration of the test will be of **2 hours**.
- **Section A** will consist of 30 multiple-choice questions (all compulsory) of 2 marks each. In this section, 1 mark will be deducted for each wrong answer.
- **Section B** will consist of about 10/12 descriptive type questions of 5 marks each. Any 8 (eight) questions are to be answered from this section in the space provided in the answer paper.

SECTION A

Choose the correct alternative

1. G be a finite group of order 15. Then G has an element of order
(a) 2 (b) 4 (c) 3 (d) 6
2. α, β, γ Let be the roots of the equation $x^3 + 5x + 13 = 0$. Then the value of $\frac{1}{\alpha\beta} + \frac{1}{\beta\gamma} + \frac{1}{\gamma\alpha}$ is
(a) 5/13 (b) 1 (c) 0 (d) -5/13
3. Let G be an abelian group of order 16. Let $Z(G)$ be the center of G . Then the possible orders for $Z(G)$ are
(a) 1, 4, 8, 16 (b) 4, 8 (c) 1, 2, 4, 8, 16 (d) none of (a), (b), and (c).
4. Differential equation of all circles passing through the origin and having their centers on the y -axis is
(a) $(y^2 - x^2)\frac{dy}{dx} = -2xy$ (b) $(y^2 + x^2)\frac{dy}{dx} = 2xy$
(c) $y^2 + x^2 = 2\frac{dy}{dx}$ (d) $y^2 - x^2 = 2\frac{dy}{dx}$

SECTION B

1. Solve the following system of equations using matrix theory:
$$\begin{aligned} x + 2y + z &= 1 \\ x + y + 2z &= 9 \\ 2x + y - z &= 2 \end{aligned}$$
2. If $x = \frac{2}{1!} - \frac{4}{3!} + \frac{6}{5!} - \dots$ and $y = 1 + \frac{2}{1!} - \frac{2^3}{3!} + \frac{2^5}{5!} - \dots$ then show that $x^2 = y$.
3. Let $\beta = \begin{bmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ 1 & 3 & 8 & 7 & 6 & 5 & 2 & 4 \end{bmatrix} \in S_8$. Find the followings:
(i) β^{101}
(ii) β^{99}
(iii) the smallest positive integer n for which $\beta^n = \beta^{-3}$.
4. Let $f : R \rightarrow R$ be a continuous function and $x_0 \in R$ such that $f(x_0) > 0$. Prove that there exists $\delta > 0$ such that $f(x) > 0$ for every $x \in (x_0 - \delta, x_0 + \delta)$.
5. Find the directional derivative of $\phi = 4xz^3 - 3x^2y^2z$ at $(2, -1, 2)$ in the direction of $2\hat{i} - 3\hat{j} + 6\hat{k}$.
6. Evaluate $\iint_S (\vec{F} \cdot \hat{n}) ds$, where $\vec{F} = 2y\hat{i} - z\hat{j} + x^2\hat{k}$ and S is the surface of the parabolic cylinder $y^2 = 8x$ included in the first octant and bounded by $y = 4$ and $z = 6$.

Department of Mathematical Sciences
M.Tech. in Computational Seismology

Full Marks: 100

Time: 2 hours

- The question paper shall consist of Two Sections: **Section A** and **Section B**.
 - **Section A** shall consist of 40 multiple choice questions (all compulsory) of 2 marks each.
Section B shall consist 5 descriptive type questions
Both sections cover the topics from
1. MATHEMATICS 2. STATISTICS 3. Physics 4. Earth Sciences 5. Engineering
- In **Section B**, there will be 1 question from each subsection (**1 to 5**). In this section candidates can attempt a maximum of 2 subsections and answer any 2 questions of 10 marks each from these 2 subsections only.
- There will be negative marks for **Section A**. One mark will be deducted for each wrong answer.
 - Partial credit will be given for questions in **section B**. Answers to the questions should appear in the space provided and nowhere else.

Section A

(Choose the correct answer using \surd mark)

1. Let S be the solution space of a set of m homogeneous linear equations with real coefficients in n unknowns. If A is the matrix of this system of equations. Then
(A) dimension of S = n-rank A (B) dimension of S is always n
(C) dimension of S is infinite (D) dimension of S = n+rank A
2. The function $\frac{\sin(z)}{z^2}$ has
(A) pole of order 2 at the origin with residue 1 (B) pole of order 1 at the origin with residue 1
(C) pole of order 1 at the origin with residue 2 (D) None of these
3. Given any two events A and B, which of the following statements is not necessarily true?
(A) $P(A) \geq P(A \cap B)$ (B) $P(B) \leq P(A \cup B)$ (C) $P(A \cap B) \leq P(A \cup B)$ (D) $P(A) + P(B) \leq P(A \cup B)$
4. A cricket ball bowled at 140km/hr is straight driven with heavy bat. At the instance of collision, the bat is moving towards the ball with a speed of 10km/hr. If the bat is much heavier than the ball, the speed with which the ball will travel is
(A) 140km/hr (B) 160km/hr (C) 130km/hr (D) 150km/hr
5. In an 8bit computer, which of the following number can not be represented
(A) 264 (B) 132 (C) 0 (D) -132

Section B

Subsection: Mathematics

1. Let X and Y be two Banach spaces. Let $\langle T_n \rangle$ be a sequence of bounded linear operators from X to Y. Let T be another linear operator define from X to Y such that
$$T(x) = \lim_{n \rightarrow \infty} \sum T_n(x)$$

Prove that T is also bounded.

Subsection: Statistics

2. A random sample of size n is available from a bivariate normal population with mean vector (μ_1, μ_2) . Develop a test procedure to test the hypothesis $H_0: \mu_1 = 2\mu_2$ against $H_1: \mu_1 \neq 2\mu_2$.

Subsection: Physics

3. In order to increase the efficiency of a Carnot engine most effectively, would you increase source temperature (T_1) keeping sink temperature (T_2) constant. Or would you decrease T_2 keeping T_1 constant. Explain analytically.

Subsection: Earth Sciences

4. Give a brief account on Global Warming with special reference to North east India.

Subsection: Engineering

5. Find the conversion time of a successive approximation A/D conversion which uses a 2 MHz clock and a 5 bit binary ladder containing 8V reference. What is the conversion rate?

Department of Mass Communication & Journalism
MA in Mass Communication & Journalism

Total Marks : 100

Time : 2 hours

0.25 negative mark for every wrong answer

- The Admission Test Booklet has been designed to test your knowledge in the English language, general knowledge, current affairs, media, culture and tradition of North East India, etc.
- There will be passages and questions following them. You will have to read the passages thoroughly and then answer the questions.
- There will be some questions on synonyms and antonyms.
- There will be some questions with jumbled sentences. You will have to rearrange the jumbled parts into a meaningful sentence.

Example:

Women

(P) are more likely to give birth prematurely

(Q) and their babies are at increased risk

(R) who are poorly nourished or sick

(S) of death and disability

(A) RQSP

(B) RPQS

(C) QSPR

(D) QSRP

Ans: (B)

- Some idioms or phrases might also be given and you will have to choose the right option for the correct meaning of the phrase.
- Questions on general knowledge, current affairs and media might be on the following lines :

1. **'Folio' is the supplement of which newspaper:**

(A) The Hindu

(B) The Statesman

(C) Assam Tribune

(D) The Telegraph

2. **Which news channel of North-East recently launched the entertainment channel 'Rang'?**

(A) DY365

(B) Newslive

(C) NETV

(D) Doordarshan

3. **Who is the Chief Minister of Sikkim ?**

(A) Pawan Chamling

(B) Mukut Mithi

(C) Tarun Gogoi

(D) None of these

4. **In which year did AR Rahman win the Oscar for best music direction?**

(A) 2009

(B) 2008

(C) 2007

(D) 2006

5. **Life ho to Aisi is the advertising slogan of which of the following**

(A) Coca-Cola

(B) Pepsi

(C) Thums Up

(D) LIMCA

6. **For many years, Neighbour's Envy, Owner's Pride was the advertising catchline of which of the following ?**

(A) PHILIPS TV

(B) ONIDA TV

(C) BPL TV

(D) LG TV

- There will also be short answer type questions

7. **'Young India' was edited by _____**

8. **Nogkrem is a folk dance form in the state of _____**

Besides the above, you will be asked to write Essays / Features on a contemporary issue or a theme OR a feature by taking clues from a photograph. This is to test your perception, vocabulary, expression, style of writing, presentation, creativity and analytical skills etc.

9. **Violence in the society is becoming more and more crude and gory. Are media acting as 'fueler' or spoiler of violence ? Discuss.**

Department of Mass Communication & Journalism PG Diploma in Mobile and Multimedia Communication

Total Marks: 70

Time 2 Hours

0.25 negative marks for every wrong answer

- The Admission Test Booklet has been designed to test your knowledge on English language, general knowledge, computer knowledge, current affairs, media, culture and tradition of North East India etc.
- There will be passages, and questions following them. You will have to read the passages thoroughly and then answer the questions.
- There will be some questions on synonyms and antonyms.
- Some idioms or phrases might also be given and you will have to choose the right option for the correct meaning of the phrase.
- Questions on general knowledge, computer, current affairs and media might be on the following lines:
 - A. Find the suitable answer from among the choices
 - 1. IPCC means
 - a. Indian Penal for Climate Change
 - b. Intergovernmental Panel on Climate change
 - c. International public and Climate change on any two
 - d. Indian People and Climate change
 - 2. Name of the union minister for Information and Broadcasting
 - a. Mr. Jay Ram Ramesh
 - b. Ms. Renuka Chaudhery
 - c. Ms. Ambika Soni
 - d. Mr. N.D.Tiwari
- There will be short answer type questions
 - A. "Rangmilir Hanhi" was written by.....
 - B. Oja Pali is a folk dance form in the state of
- Besides the above, you will be asked to write essays. This is to test your perceptions, vocabulary, expression, style of writing, presentation, creativity and analytical skills etc.

Write an essay not exceeding 500 words on any one of the following topics.

- a. National Rural Employment Guarantee Scheme.
- b. Role of Media in Youth Empowerment
- c. Effects of Global Warming.

Department of Molecular Biology and Biotechnology
M.Sc. Molecular Biology and Biotechnology

Note: Each question is compulsory. Two (02) marks will be awarded for correct answer and one (01) mark will be deducted for wrong answer. There will be no negative marking in Part B.

Sample Questions:

MM: 80

PART A Multiple Choice Questions

1. The work done when one mole of an ideal gas expand freely into vacuum
 - a. $-P\Delta V$
 - b. $P\Delta V$
 - c. ΔG
 - d. Zero

2. Which of the following solid is a better conductor of electricity?
 - a. Pure NaCl crystals
 - b. Diamond
 - c. Graphite
 - d. Marble pieces

3. A man walks along a rectangle whose perimeter is six kms. If the area of the rectangle is two sq.kms, what is the difference between the length and breadth of the rectangle?
 - a. $\frac{1}{2}$ km
 - b. 1 km
 - c. $1\frac{1}{2}$ km
 - d. 2 km

4. Insulin is secreted by
 - a. β -cells of pancreas
 - b. α -cells of pancreas
 - c. δ -cells of pancreas
 - d. liver cells

5. The deficiency of the following Vitamin causes reproduction failure in animals
 - a. Vitamin A
 - b. Vitamin B
 - c. Vitamin D
 - d. Vitamin E

PART B

Answer the followings

MM: 20

Q1. Describe in brief the TCA cycle?

Q2. What is the difference in the sugars of DNA and RNA?

Department of Physics M.Sc. in Physics

Entrance test has two parts, Part A and Part B of 50 marks each and is of a total duration of 2 hours.

Part A consists of 50 objective type questions of one mark each and is of one-hour duration.

Part B consists of short descriptive type questions to examine the conceptual clarity and reasoning ability of the candidate. The candidate is required to attempt any 5 questions of 10 marks each out of about 10 given questions.

PART - A

- If the other parameters are same, the range of a projectile is maximum when its angle of projection is
a) 90° b) 60° c) 45° and d) 30°
- Hamiltonian formalism is easier to handle than Lagrangian formalism because Hamiltonian formalism involves
a) first order differential equations
b) generalized momentum instead of generalized co-ordinates
c) only cartesian co-ordinates
d) no time derivatives
- An electric potential field is produced by joint charges 1 mC and 4 mC located at (-2, 1, 5) and (1, 3, -1) respectively. The energy stored in the field is
a) 2.57 mJ, b) 5.14 mJ, c) 0.28 mJ and d) 20.56 mJ
- Which of the following potentials does not satisfy the Laplace's equation ?
a) $V = 2x + 5$
b) $V = 10xy$
c) $V = 2x^2y + 5x + 2$
d) $V = 3y + 10$
- The expression which explains the nonexistence of magnetic monopoles is
a) $\nabla \times \mathbf{E} = -\partial \mathbf{B} / \partial t$
b) $\nabla \cdot \mathbf{B} = 0$
c) $\nabla \times \mathbf{B} = \mu_0 \mathbf{J}$
d) $\nabla \cdot \mathbf{J} + \partial \rho / \partial t = 0$

PART - B

- Starting from the Lagrangian equation, prove that the equation of motion a simple pendulum is
$$\theta + \frac{g}{l} \sin \theta = 0$$
where θ , g and l are angular displacement, acceleration due to gravity and length of the string respectively.
- Find the energy released, if two ${}^1_1\text{H}^2$ nuclei can fuse together to form ${}^2_2\text{He}^4$ nucleus where the binding energies per nucleon of ${}^1_1\text{H}^2$ and ${}^2_2\text{He}^4$ are 1.1 MeV and 7.0 MeV respectively.
- The electrostatic potential due to a certain charge distribution is given by the expression :
 $V(x, y, z) = -(x^2yz + xy^2z + xyz^2)$ volts
Calculate the electric field and charge density and point (2, 1, 3)
- A half wave rectifier uses load resistor $R_L = 8k\Omega$ and shunt filter capacitor of $12\mu\text{F}$. The sinusoidal input voltage is $20\sin 2\pi 50t$. The angle of conduction is 40° . Assuming the rectifier to be ideal ($R_f = 0$, $R_p = \infty$) calculate :
 - dc load current I_{dc}
 - dc output voltage V_{dc}
 - ripple voltage V_R
 - ripple factor γ ($\cos 40^\circ = 0.7660$)

Department of Physics
M.Sc. in Nano Science and Technology

Full Marks: 100

Time: 2 hrs.

Entrance test has two parts, Part A and Part B of 50 marks each. Total duration is two hrs.

Part A consists of 50 objective type questions of one mark each. Duration is one hour.

Part B consists of short descriptive type questions to examine the conceptual clarity and reasoning ability of the candidate. The candidate is required to attempt any five questions of 10 marks each out of about ten given questions.

Typical questions for Part A and Part B are given below:

PART – A

1. A field \vec{A} is irrotational if
 - a) $\text{grad } \vec{A} = 0$
 - b) $\text{div } \vec{A} = 0$
 - c) $\text{Curl } \vec{A} = 0$
 - d) None of the above
2. The relation between two current amplification factors of a transistor is
 - a) $\beta = \alpha/(1+\alpha)$
 - b) $\beta = (1-\alpha)/\alpha$
 - c) $\beta = \alpha/(1-\alpha)$
 - d) $\beta = (1+\alpha)/\alpha$

PART – B

1. a) Show that a free particle cannot absorb a photon completely.
b) Explain why is Compton effect experimentally not observed for visible light.
2. a) Using a d.c. and a.c. voltmeter to measure the output signal from a filter circuit, we obtain readings of 25 Vd.c. and 1.5 V_{rms}. Calculate the ripple of the filter output voltage.
b) A d.c. voltage supply provides 60 v when the output is unloaded. When connected to a load, the output drops to 56 v. Calculate the values of voltage regulation.
3. a) Calculate the change in entropy when 50 gm of water at 150°C is mixed with 80 gm of water at 40°C. (Specific heat of water 1 cal/gm/°K)
b) Calculate the change in the boiling point of water when the pressure is increased from 1.0 to 1.2 atmospheres. Given: Specific volume of steam 1677 cm³/gm, latent heat of steam = 540 cal/gm, boiling point of water at one atmospheric pressure = 373 °K, 1 atmospheric pressure = 1.0 x 10⁵ N/m².
4. (a) The average velocity of an ideal gas molecule at 27°C is 0.3 m/s. Calculate the average velocity at 927° c.
b) The threshold frequency for a surface is known to be 5 X 10¹⁴ Hz. What is the wavelength of light required to eject a photo electron having a kinetic energy of 5 ev.?
5. a) What are the basic differences between prokaryotes and eukaryotes ?
b) What are the two principal chemical components of chromosomes? Explain how one of these chemical component, act as carriers of genetic information.

Department of Sociology MA in Sociology

Full Marks : 100

Time : 2 hours

The written test consists of the following:

1. 30 Objective type questions on general knowledge
2. Two short essay type questions on issues of socio-economic relevance carrying 10 marks each.
3. Two-essay type questions on sociological themes carrying 25 marks each.

1. Deabbreviate the following:
VAT, AIDS, BTAD

2. Match the following:
i. The Incas i. Venezuela
ii. Hugo Chavez ii. Peru

3. Answer the following:
i. What is the Capital City of Mongolia?
ii. What is the boundary line between India and Pakistan called?

4. Write short notes (within 150 words) :
i. Dowry system ii. Sustainable Development

5. Write essays on the following (within 500 words):
i. Caste System in India
ii. Criminalization of Indian Politics

ANNEXURE- I

IMPORTANT DATES

DATE OF ISSUE OF PROSPECTUS & APPLICATION FORM AND SUBMISSION

Issue of Prospectus

(a) For PG Degree / Diploma / Certificate / Integrated M. Sc.	25 th January – 25 th March, 2010
(b) For Ph.D. Programme (i) Autumn semester, 2010 (ii) Spring semester, 2011	25 th January – 25 th March, 2010 20 th October – 1 st December, 2010 (tentative)
(c) B. Tech. programmes	25 th January – 26 th April, 2010
Last date of receiving filled in Applications	
(a) For P.G. Degree / Diploma / Certificate / Integrated M. Sc.	31 st March, 2010
(b) For Ph.D. Programme (i) Autumn semester, 2010 (ii) Spring semester, 2011	31 st March 2010 6 th December, 2010 (tentative)
(c) B.Tech. programmes	30 th April, 2010
Date of display of the list of eligible candidates for appearing TUEE on www.tezu.ernet.in	
(a) Draft list	20 th April, 2010
(b) Receiving complaints from non-listed applicants *	30 th April, 2010
(c) Final list	10 th May, 2010

* No complaint shall be entertained after the specified date

ANNEXURE- II

SCHEDULE OF ENTRANCE EXAMINATIONS

(A) All P.G. Degree / Diploma / Certificate Programmes / Integrated M.Sc.

Tezpur University Entrance Examination

May 28, 2010 (10 AM to 12 Noon)	May 28, 2010 (2 PM to 4 PM)
M.A. in Cultural Studies M.Sc. in Chemical Sciences M.A./M.Sc. in Mathematics	M.Tech. in Bioelectronics M.Sc. in Nanoscience & Technology Integrated M.Sc.
May 29, 2010 (10 AM to 12 Noon)	May 29, 2010 (2 PM to 4 PM)
Master of Computer Application (MCA) M.Tech. in Energy Technology M.A. in Sociology M.Sc. in Environmental Science	M.Tech. in Electronics Design & Technology M.Tech. in Food Processing Technology M.A. in Mass Communication & Journalism
May 30, 2010 (10 AM to 12 Noon)	May 30, 2010 (2 PM to 4 PM)
M. Tech. in Computational Seismology Certificate in Chinese M.Tech. in Food Processing Technology (Lateral entry) P.G. Diploma in Mobile & Multimedia Communication P.G. Diploma in Tourism Management	M. Tech. in Information Technology M. Sc. in Physics M.A. in English M. Sc. in Molecular Biology & Biotechnology (for NE domicile)

(B) B.Tech. Programme: AIEEE conducted by CBSE, will be held on 25th April, 2010.

(C) Ph.D. Programme: Written test will be held in the respective departments on 17th June, 2010 at 11.00 AM followed by personal interview (may be continued upto 18th June, 2010).

Note: Personal interview will be held for shortlisted candidates for the programme of M.A. in Mass Communication and Journalism, M. Tech. in Computational Seismology, M. Sc. in MBBT and Master of Tourism and Hospitality Management.

Schedule of Group Discussion / Personal Interview for P.G. Programmes

For programmes other than MBA full time (wherever applicable given above)	Starts on 15 June and may continue to 16 June, 2010
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Declaration of TUEE Results: Fourth Week of June, 2010

ANNEXURE- III

Schedule of Admission – 2010

Programmes	Main List	Waiting List
B.Tech. Programme	15 July 2010 (09:30 AM to 12 Noon)	15 July, 2010 (1 PM to 3PM) Waiting List I 16 July 2010 (09:30 AM to 12 Noon) Waiting List II
M.A. / M.Sc. in Mathematics Integrated M.Sc. in Mathematics M.Tech. in Computational Seismology M.Sc. in Chemical Sciences Integrated M.Sc. in Chemistry M.Tech. in Information Technology	20 July 2010 (09:30 AM to 1 PM)	20 July 2010 (2PM to 4 PM)
P.G. Diploma in Tourism Management Master of Business Administration M.Sc. in Molecular Biology & Biotechnology Integrated M. Sc. in Bioscience & Bioinformatics M.A. in Cultural Studies M.Tech. in Bioelectronics	21 July 2010 (09:30 AM to 1 PM)	21 July 2010 (2PM to 4 PM)
M.A. in Mass Communication & Journalism P.G. Diploma Mobile & Multimedia Communication M.Tech. in Energy Technology M.Tech. in Electronics Design & Technology M.Sc. in Environmental Science M.Sc. in Physics Integrated M.Sc. in Physics	22 July 2010 (09:30 AM to 1 PM)	22 July 2010 (2PM to 4 PM)
M.Sc. in Nanoscience and Technology MCA M.A. in English M.Tech. in Food Processing Technology (including lateral entry) M.A. in Sociology Certificate in Chinese	23 July 2010 (09:30 AM to 1 PM)	23 July 2010 (2PM to 4 PM)
Ph.D. (a) Autumn Semester, 2010	27-28 July 2010 (10 AM to 2 PM)	
(b) Spring Semester, 2011	19-20 January 2011 (10 AM to 3 PM) tentative	

* Reporting time for admission from main list is 09:00 AM and waiting list is 01:30PM.

ANNEXURE- IV

FEE STRUCTURE FOR P.G. DEGREE / B.Tech / DIPLOMA / CERTIFICATE PROGRAMME									
Particulars	Mode	MCA	M.Tech.	M.A.	M.Sc.	M.A. in MCJ	PGDTM	B.Tech.	Certificate in Chinese
Admission	Once on admission	200/-	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Registration	Once on admission	150/-	150/-	150/-	150/-	150/-	150/-	150/-	150/-
Enrolment (from 2nd semester onward)	Per semester	200/-	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Tuition	Per semester	2000/-	2000/-	1000/-	1200/-	5000/-	2000/-	7000/-	500/-
Library	Per semester	300/-	300/-	300/-	300/-	300/-	300/-	300/-	300/-
Students' activity	Per semester	250/-	250/-	250/-	250/-	250/-	250/-	250/-	250/-
Medical	Per semester	200/-	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Convocation	Once on admission	500/-	500/-	500/-	500/-	500/-	500/-	500/-	--
Transport	Per semester	500/-	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Training and Placement	Once on admission	500/-	500/-	500/-	500/-	1500/-*	500/-	500/-	500/-
Identity card	Once on admission	50/-	50/-	50/-	50/-	50/-	50/-	50/-	50/-
Laboratory (including Computer usage)	Per semester	500/-	500/-	200/-	500/-	500/-	200/-	400/-	--
Caution deposit (Library & Laboratory)	Once on admission	1,000/-	1,000/-	1,000/-	1000/-	1,000/-	1,000/-	2,000/-	1,000/-
Hostel Caution deposit	Once on admission	1,000/-	1,000/-	1,000/-	1,000/-	1,000/-	1,000/-	1000/-	--
Provisional Certificate	Once on admission	100/-	100/-	100/-	100/-	100/-	100/-	100/-	100/-
Examination (Theoretical)	Per semester	200/-	200/-	200/-	200/-	200/-	200/-	200/-	200/-
Examination Practical / Dissertation	Per semester	150/-	150/-	150/-	150/-	150/-	150/-	150/-	--
Grade Card	Per semester	50/-	50/-	50/-	50/-	50/-	50/-	50/-	50/-
Charges for consumables	Per semester	-	-	-	-	5,000/-	-	-	-
Outdoor activities	Per semester	-	-	-	-	-	3500/-	-	--
Tezpur University Alumni Association	Once on admission	500/-	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Hostel Admission / re-admission	Per semester (Hostel boarder)	1,500/-	1,500/-	1,500/-	1500/-	1,500/-	1,500/-	1,500/-	--
Hostel Mess Advance (in case of Hostel boarder)	Once on admission	1,500/-	1,500/-	1,500/-	1500/--	1,500/-	1,500/-	1,500/-	--
Infrastructure & amenity	Per semester	500/-	500/-	500/-	500/-	500/-	500/-	500/-	500/-
Fan, Electricity & Water Charges	Per semester	250/-	250/-	250/-	250/-	250/-	250/-	250/-	250/-
Students' Welfare Fund	Per semester	100/-	100/-	100/-	100/-	100/-	100/-	100/-	100/-
Medical Insurance	Per semester	172/-	172/-	172/-	172/-	172/-	172/-	172/-	172/-
Total	on admission	12372/-	12372/-	11072/-	11572/-	21372/-	15572/-	18072/-	5722/-
Total	2nd Semester onward	6872/-	6872/-	5572/-	6072/-	14872/-	10072/-	11772/-	3222/-

* Includes placement related fee.

ANNEXURE- V

FEE STRUCTURE FOR Ph.D. PROGRAMME			
Particulars	Mode	Ph.D. Full Time	Ph.D. (Part time Sponsored)
Admission	Once on admission	200/-	200/-
Registration	Once on admission	150/-	150/-
Enrolment	Per semester from second semester	200/-	200/-
Tuition	Per semester	1500/-	2000/-
Library	Per semester	300/-	300/-
Students' activity	Per semester	250/-	250/-
Medical	Per semester	200/-	200/-
Convocation	Once on admission	500/-	500/-
Transport	Per semester	500/-	500/-
Identity card	Once on admission	50/-	50/-
Laboratory (including Computer usage)	Per semester	500/-	500/-
Caution deposit (Library & Laboratory)	Once on admission	2,000/-	2000/-
Hostel Caution deposit	Once on admission	1,000/-	1,000/-
Provisional certificate	Once on admission	100/-	100/-
Registration	Once on admission	500/-	500/-
Thesis Evaluation including Viva Voce	At the time submission*	3000/-	4000/-
Revised Thesis Evaluation	At the time of Revise Evaluation*	1000/-	1000/-
Migration	When applied*	100/-	100/-
Course Transfer	When applied*	200/-	200/-
Alumni Association	Once on admission	500/-	500/-
Hostel Admission / re-admission	Per semester in case of Hostel boarder	1,500/-	1,500/-
Hostel Mess Advance	Once on admission (in case of Hostel boarder)	1,500/-	1,500/-
Infrastructure & amenity	Once at the time of admission	500/-	500/-
Fan, Electricity & water Charges	Per semester	250/-	250/-
Students' Welfare Fund	Per semester	100/-	100/-
Total	On admission	16,600/- 12,300/-*	18,100/- 12,800/-*
Total	2 nd Semester onwards	5,300/-	5,800/-

ANNEXURE- VI

FEE STRUCTURE FOR INTEGRATED M.Sc. PROGRAMMES		
Particulars	Mode	Integrated M.Sc.
Admission	Once on admission	200/-
Enrolment	From Second Semester onwards	200/-
Tuition	Per semester	3500/-
Library	Per semester	300/-
Students' activity	Per semester	250/-
Medical	Per semester	200/-
Convocation	Once on admission	500/-
Transport	Per semester	500/-
Identity card	Once on admission	50/-
Registration	Once on admission	150/-
Training and placement	Once on admission	500/-
Laboratory (including computer usage)	Per semester	400/-
Caution deposit (Library & Laboratory)	Once on admission	2500/-
Hostel Caution deposit	Once on admission	1000/-
Provisional Certificate	Once on a admission	100/-
Examination (Theoretical)	Per semester	200/-
Examination (Practical / dissertation)	Per semester	150/-
Grade Card	Per semester	50/-
Alumni Association	Once on admission	500/-
Hostel Admission / re-admission	Per semester in case of Hostel boarder	1500/-
Hostel Mess Advance	Once on admission (in case of Hostel boarder)	1500/-
Infrastructure & amenity	Per Semester	500/-
Fan, Electricity, Water Charges	Per Semester	250/-
Student Welfare Fund	Per Semester	100/-
Medical Insurance	Per Semester	172/-
Total	on admission	15272/-
Total	2 nd Semester onwards	8272/-

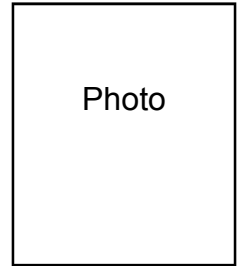
ANNEXURE- VII

FEE STRUCTURE FOR P.G. DIPLOMA IN MOBILE AND MULTI MEDIA COMMUNICATION

Particulars	Mode	PGDMMC
Admission	Once on admission	200/-
Enrollment (from second semester onward)	Per semester	200/-
Tuition	Per semester	2000/-
Library	Per semester	300/-
Students' activity	Per semester	250/-
Medical	Per semester	200/-
Convocation	Once on admission	500/-
Transport	Per semester	500/-
Training and placement	Once on admission	500/-
Placement brochure	Once on admission	500/-
Registration	Once on admission	150/-
Identity card	Once on admission	50/-
Laboratory (including computer usage)	Per semester	500/-
Caution Deposit (Library & Laboratory)	Once on admission	1000/-
Hostel Caution Deposit	Once on admission	1000/-
Provisional certificate	Once on admission	100/-
Examination (Theoretical)	Per semester	200/-
Examination Practical/Dissertation	Per semester	150/-
Grade card	Per semester	50/-
Charges for consumables	Per semester	2000/-
Outdoor activities	Per semester	500/-
Tezpur University Alumni Association	Once on admission	500/-
Hostel admission/re-admission	Once on admission	1500/-
Hostel mess advance (in case of hostel boarder)	Once on admission	1500/-
Infrastructure and amenity	Per semester	500/-
Fan, electricity and water charges	Per semester	250/-
Students' welfare fund	Per semester	100/-
Medical insurance	Per semester	172/-
Total	on admission	15372/-
Total	2nd Semester onward	7872/-

ANNEXURE- VIII

**GOVT. OF ASSAM
OFFICE OF THE DEPUTY COMMISSIONER**



Seal of the issuing
office

Ref Petition No.

Date:.....

PERMANENT RESIDENCE CERTIFICATE

Certified
Son / daughter ofand
of Village / Path / Street.....under Mauza / Circle.....,
under.....Police station is the permanent resident of
..... district in the state of Assam (India).

Seal

Deputy Commissioner

CONTACT ADDRESSES

All enquiries about academic programmes and entrance examination qualifications should be directed to concerned Department offices. Enquiries relating to receipt of applications, entrance examination centre and other matters relating to the entrance examinations should be directed to the Controller of Examinations at 03712-267114.

The EPBAX extension numbers of all the Departments and of the Controller of Examinations are given below. Please dial (03712) 267007,267008,267009 and then the respective extension number.

Department / Office	Extension number	Mobile Number (Head)	e-mail
Controller of Examinations	3140	9954449474	bhuban@tezu.ernet.in
Chemical Sciences	5050	9954449466	chem@tezu.ernet.in
Molecular Biology and Biotechnology	5400	9957184351	mbbt@tezu.ernet.in
Computer Science & Engineering	5100	9957191527	cs@tezu.ernet.in
Physics	5550	9954449470	physics@tezu.ernet.in
Mass Communication and Journalism	5450	9954449472	masscom@tezu.ernet.in
Energy	5300	9957191529	energy@tezu.ernet.in
Electronics & Communication Engineering	5250	9954449462	electronics@tezu.ernet.in
Mathematical Sciences	5500	9954449469	maths@tezu.ernet.in
Cultural Studies	5150	9954449460	culture@tezu.ernet.in
English and Foreign Languages	5200	9954449463	efl@tezu.ernet.in
Environmental Science	5600	9954449473	environment@tezu.ernet.in
Business Administration	5000	9957199528	tumba@tezu.ernet.in
Mechanical Engineering	5850	9957189386	mech@tezu.ernet.in
Food Processing Technology	5701	9954449467	fpt@tezu.ernet.in
Sociology	5800	9954449471	soc@tezu.ernet.in
Civil Engineering	5102	9954449461	dks@tezu.ernet.in

website: www.tezu.ernet.in