

PROSPECTUS 2010

for

Doctor of Philosophy



TEZPUR UNIVERSITY

(A Central University)

www.tezu.ernet.in

Napaam, Tezpur, Assam 784 028, India

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SECTION ONE
THE UNIVERSITY

ABOUT THE UNIVERSITY

Tezpur University was established on 21st January, 1994 as a non-affiliating, unitary type residential institute of higher education. 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 inter-disciplinary academic programme with transparent and scientific evaluation system and 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 such as Management Sciences; Science & Technology; Energy, Environment & Natural Resources; Humanities & Social Sciences and School of Engineering. Faculty, research scholars and students are attracted from premier institutes across the country to fulfill its national character by providing modern academic ambience for achieving excellence.

Apart from fulfilling the traditional role of the University, that is, to create and disseminate new knowledge in diverse fields, it has been striving to keep pace with the developments that are taking place in a rapidly changing world. Accordingly its systems are modernized as per contemporary requirements through relative grading with transparent and scientific evaluation system and curriculum modernization by 'Cafeteria' approach.

Since its inception the University has been trying to provide its facilities for carrying out meaningful and socially relevant research. All the Departments and various faculty members are thus awarded prestigious research projects from funding agencies like ONGC, DST, DBT, DAE, UGC, AICTE, MS & PI, ICSSR, DRDO, CSIR, ISRO, NSC, MNCE, World Bank etc. and highly coveted National and International Fellowships.

FACILITIES AND SERVICES

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 facilitate access to other libraries. Most of the necessary books are available. Besides the Central Library, the Departments also have their Departmental Libraries. The catalogue of books and journals is available for users for online access on the campus network.

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. There are also 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/VISTA, 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 adequate 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, DST, CSIR other State Governments, etc. Institutional fellowship and UGC meritorious fellowship are available to a limited number of students .

Health Services

The University has a Health Centre to provide basic medical services with its own medical and paramedical staff.

Games and Sports

The University provides opportunities for students to excel in various departments of sports. The University has basketball, volley ball and tennis courts, cricket and football grounds with playing facilities under flood light and a well equipped multi-gymnasium.

Tezpur University Alumni Association (TUAA)

TUAA was formed in 2000 to create a network of the alumni of the University. The web-site 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 work, 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 teaching pedagogy to help the 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 the compulsory (core) courses for each of the programmes, the students also have the option to choose courses of their own interest from the elective courses.

In framing the courses, care has been 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 programme.

Evaluation System

Continuous and internal, relative grading is followed.

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

A Letter Grade signifies the level of standard of qualitative/quantitative academic achievement, which a student attains 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 Grade	Status	Remarks/Context
I	Incomplete	Letter grade 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).
W	Withdraw	Letter grade assigned if a student withdraws from a course after the last date for withdrawal of course.

Course work, course registration and attendance

A student admitted to the Ph.D. programme shall be required to complete specified course work prior to the submission of the Plan of Research as per the recommendation of the Departmental Research Committee (DRC) / Central Research Committee (CRC). The DRC/CRC shall suggest course work of a minimum of six credits (eight credits for those with a B.Tech. degree) and a maximum of twelve credits (sixteen credits for those with a B.Tech. degree) on the areas of research

and/or areas related to that of research to be carried out by the students within the first two semesters. However, employed part time candidates shall be given the option of carrying out the course work during any two of the first three semesters.

In order to continue research a candidate must secure a CGPA of 6.

During course work students shall report at the Department/Centre regularly and attend classes or do assigned tasks. The percentage of attendance during course work shall be 75 for all categories of students.

Abridged Academic Calendar 2010 (Tentative)

JANUARY 18	Commencement of classes for spring semester
MARCH 19-27	Mid term tests
MAY 17-30	Spring semester end term examinations
JULY 30	Counselling and course registration for new entrants
AUGUST 02	Commencement of classes for autumn semester
OCTOBER 1-11	Mid term tests
DECEMBER 1-13	Autumn semester end term examinations

NOTE: Detailed academic calendar will be made available in the University website 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 in the students of the University 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 the University.

Partial List of Recruiters of Tezpur University Students

- Avon International
- DRDO
- Apex Technologies Pvt. Ltd.
- B & A Limited
- Canara Bank
- Down Town Hospital Ltd.
- IOC Ltd.
- Jubilant Organosys
- NEDFi
- Aircel
- Airtel
- Amar Asom
- American Express
- Arunachal University
- Asian Paints
- Girijananda C. Engg. College
- GNRC
- Godrej & Boyce Manufac. Co. Ltd
- Godrej Pacific Ltd.
- Govt. Art College
- Guwahati Refinery
- HCL
- HDFC Bank
- Hyundai
- IBM
- ICAR
- ICICI Bank
- IDBI Bank
- IFB
- IIT, Guwahati
- NIIT
- North Lakhimpur College
- Oil India Limited
- ONGC
- ORACLE
- Pandu College
- Bongaigaon College
- Pradan
- PTI
- Rajiv Gandhi University
- RIMS, Dibrugarh
- St. Anthony's College.
- SaS'ken
- Satyam Computers
- Assam Engineering College

- Balsara Hygiene Ltd.
- Bardhaman Knitting
- BEL
- Bell Ceramics.
- Berger Paints
- Business Standard
- Cabsford, Guwahati
- Ceistream Technologies
- CII, Chandigarh
- Coca-Cola
- Colgate-palmolive
- Creative Crest
- Deskal
- Disha, New Delhi
- Dr. Reddy's Laboratories
- Dymanics Orbit, Gurgaon
- Dyna Roof
- E-TV, Hyderabad
- Force Computers
- Gauhati University
- GenPact
- i-Process Services(I) Pvt. Ltd.
- ISRO
- ITC Limited
- Ivista Solutions Ltd.
- J. B. College
- Jamia Millia Islamia
- Johnson & Nicholson
- Kokrajhar College
- LG Electronics Ltd.
- Look East Channel, Guwahati
- Lucent Technology
- Mac Lubricants
- Mahindra & Mahindra
- Milk Marketing Federation Ltd.
- MOL India Ltd.
- Monsanto
- NDTV, New Delhi
- NE TV
- NEEPCO.
- Nestle
- Net Decisions
- NewsLive, Guwahati
- NF Railways
- SEITCO Ltd.
- SIEMEN'S Technology
- SMIT
- SMIT, Sikkim
- Smith Kline Beecham (Horlicks)
- Spice Jet
- SRD Nutrients
- SUZLON, Pune
- T&I Limited
- TATA AIG
- TATA Infotech
- Tata Tea Ltd.
- Techpacindia Ltd.
- TERI, New Delhi
- Tezpur University
- The Gujarat Co-operative
- Toyota
- Vaisnavi Communication .
- Vethelpline India. Com
- Vinay Cements
- Wipro
- Wipro GE
- Wipro Infotech

STUDENTS DISCIPLINE

Students' must strictly follow the discipline as prescribe in the Regulations on Maintenance of Discipline of the University. Violation of any clause by any student will be subjected to disciplinary action as per the regulations.

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

IMPORTANT INFORMATION

Course registration

The Courses opted by the students in a particular semester are required to be registered on the specified date(s). For newly admitted students, registration of courses is done at the time of admission itself.

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 or before the notified dates. No student is allowed to get himself/herself admitted after the scheduled date.

Monitoring the Progress of Research

During the period of research work all categories of the students shall be in touch with their supervisors and give at least one seminar in each semester on experiments / field work / library work done. Except for Part-time students, other categories of students shall be generally available in the department / centre unless they are engaged in experiments / field work / library work elsewhere with prior permission to the supervisors.

Academic Session

Academic session of the University shall be started 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 website (www.tezu.ernet.in).

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

SECTION TWO
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 offered

1. PG Diploma in Tourism Management

(This is a Modular programme. A student can opt for a certificate after successful completion of the first semester ; Likely to be upgraded to MTM)

2. Master of Business Administration (MBA)

3. Master of Business Administration, Part-time (MBA), (3 years, 6 semesters)

4. Ph. D.

Faculty

Professor

Khanka, S. S., Ph. D. (Kumaun University)*

Sarma, M. K., Ph. D. (Tezpur University)

Goswami, C., Ph. D. (Gauhati University), HoD

Associate Professor

Sarkar, S. S., Ph. D. (Tezpur University)*

Goswami, C., Ph. D. (Tezpur University)

Baruah, P., Ph. D (Tezpur University)

Assistant Professor

Sarma, T. R., MBA (Gauhati University)

Barpujary, H., MCA (Tezpur University)

Roy, A., MBA (Tezpur University)

Prakash, G., MMS (Allahabad University)*

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

Nos. of papers published in the year 2009 (upto September): 02

Nos. 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 (2009) 57-67.
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.

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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 offers M. Sc. programme in Applied Chemistry with specialization in Polymer Science, Medicinal Chemistry and Catalysis. The programme provides students with a wide choice of elective 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, nanocomposite materials, bioinorganic chemistry, surfactant systems, synthetic organic chemistry, theoretical chemistry and environmental chemistry.

Programmes offered

1. Integrated M. Sc. in Chemistry
2. M. Sc. in Applied Chemistry with specialization in Polymer Science, Medicinal Chemistry and Catalysis.
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, Kolkata)
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)
Puzari, P., Ph. D. (IIT, Guwahati)
Bania, K.K., M.Sc. (Gauhati University)

Facilities

In addition to the laboratory facilities required for post graduate level applied chemistry, the Department is equipped with sophisticated instrumentation facilities, like FTIR, CHN Analyzer, Thermal Analyzer, UV-Visible Spectrophotometer, Universal Testing Machine (UTM), Atomic Absorption Spectrophotometer, Polarizing Microscope, Computational facilities etc. Besides these, the University has central instrumentation facilities of Scanning Electron Microscope and 400 MHz 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

Nos. of papers published in the year 2009 (upto September): 39

Nos. of ongoing research projects: 18

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 (2009) 16070-16076.
3. R. Konwarh, N. Karak, S. K. Rai and A.K. Mukherjee, Polymer-assisted iron oxide magnetic nanoparticle immobilized keratinase, *Nanotechnology*, 20 (2009) 225107-225114.

Other relevant information

The Department has proposed to start M. Tech. in Polymer Science and Technology and M.Sc. in Chemistry from academic session 2010. The Department has received financial assistance under UGC-SAP and DST-FIST special grants for strengthening teaching, research and training.

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 offered

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)
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)

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

Nos. of papers published in the year 2009 (upto September): 06

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 (2009) 310-328.
2. 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)

CIVIL ENGINEERING

The Department of Civil Engineering has started from 2009 and soon going to be well equipped with good laboratory facility, faculty members and staff like other engineering departments.

Programmes offered

1. B. Tech. in Civil Engineering

Faculty

Assistant Professor

Saikia, A., M. Tech. (IIT Kharagpur)

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 North East.

Programmes offered

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

Faculty

Professor

Dutta, S. K., Ph. D. (Viswa-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)

Facilities

Departmental Library

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

Nos. of papers published in the year 2009 (upto September): 01

Select publication

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

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 bio-sensor 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 offered

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)

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.

Departmental Library:

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

Research Activity

Nos. of papers published in the year 2009 (upto September): 07

Nos. of ongoing research projects :

Select publications

1. P.P.Sahu, Variable optical attenuator using thermo-optic two mode interference device with fast response time, *Appl. Optics*, 48 (2009) 4213-4218.
2. P.P. Sahu, and M. Singh, Multichannel direct sequence spread spectrum signaling using code phase shift keying, *Computer and Electrical Engineering*, 35 (2009) 218-226.
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 (2009) 1313-1321.

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 Bio-mass Energy, Solar Energy, Wind Energy, Hydro Energy and Energy Management.

Programmes offered

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 Gas Chromatograph, 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, Dual Fuel Engine, Vacuum Distillation Apparatus, Microhydel test set-up, Research Radiometer, Solar thermal collector test set-up, Solar Dryer 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.

Research Activity

Nos. of papers published in the year 2009 (upto September): 03

Nos. of ongoing research projects: 04

Select publications

1. S. Paul, J. P. Saikia, S.K. Samdarshi, B.K. Konwar, Investigation of antioxidant property of iron oxide particles by 1'-1'diphenylpicryl....., *J. Mag. and Mag. Mater.* (In press, 2009).
2. B.C. Kusre, D.C.Baruah, P.K. Bordoloi, and S.C. Patra, Assessment of hydropower potential using GIS and hydrological modeling technique in Kopili River basin in Assam (India), *Appl. Energy*, (In press, 2009).
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.* (In press, 2009).

ENGLISH AND FOREIGN LANGUAGES

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

Programmes offered

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), HoD
Danta, B. K., Ph. D. (Utkal University)
Danta, F., Ph.D. (Dibrugarh University)

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. (Viswa-Bharati)*
Chakraborty, R., M. Phil. (JNU)
Narzary, R., M. A. (NEHU, Shillong)
Jha, M. K., M.A. (JNU)

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

Nos. of papers published in the year 2009 (upto September): 05

Nos. of ongoing research projects: 03

*On lien

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, remediation of toxic substances, green house gas emission, geomorphology, and riverine hazards.

Programmes offered

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

Faculty

Professor

Baruah, K. K., Ph. D. (Punjab Agricultural University, Ludhiana)

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 facility to facilitate research and other academic activities. The laboratories shall 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

Nos. of papers published in the year 2009 (upto September): 06

Nos. 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 (2009).
2. K.P.Sarma, and B.Talukdar, sedimental characteristics and concentration of heavy metals in water sediments of the effluent discharging waterbody of nagaon paper mill, Assam, *Asian J. Water and Environ. Pollutn.* (In press, 2009)

FOOD PROCESSING TECHNOLOGY

The Department of Food Processing Technology, Tezpur University was established in 2006 and offers M. Tech. programme in Food Processing Technology. The M. Tech. syllabus is structured to fulfill two main objectives; firstly, to generate manpower that is trained and educated in all spheres of food processing relevant to the rapidly growing food industries and secondly, to equip the graduates with skills and knowledge to succeed as entrepreneurs. The current research activities in the Department includes food quality, food product development, food biochemistry and food microbiology.

Programmes offered

1. M. Tech. in Food Processing Technology
2. Ph. D.

Faculty

Professor

Mahanta, C. L., Ph. D. (CFTRI, Mysore), HoD

Deka, S. C., Ph. D. (Haryana Agricultural University, Hissar)

Assistant Professor

Sit, N., M. Tech. (G. B. Pant University of Agriculture & Technology, Uttarkhand)

Facilities

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

Research Activity

Nos. of ongoing research projects: 01

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 offered

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)

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.

The 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

No. of papers published in the year 2009 (upto September): 18

Nos. 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 subtili* DM-03 in Solid-state fermentation and exploration of feasibility for inclusion of α -amylase in laundry detergent formulations, *Biochem. Engg. J.*, 43, 149 (2009).
2. N. D. Baruah, B. C. Berndt, and H. H. Chan, Ramanujan's series for $1/\pi$: a survey, *Am. Math. Monthly*, 116, 467 (2009).
3. B.Deka, and R.K.Sinha, Finite element methods for semilinear elliptic and parabolic interface problems, *Appl. Numer. Math.* 59, 1870 (2009).

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.

Programme offered

1. M. A. in Mass Communication and Journalism
2. Post Graduate Diploma in Community Communication (part time)

Faculty

Associate Professor

- Anbarasan, P., M. Phil. (JNU)
Arul Selvan, K. S., Ph. D. (Manipal)*

Assistant Professor

- Chakraborty, J., MMC (Silchar), HoD
Pegu, U. K., MMC (Silchar)
Kabi, Kh., MA (Communication) (Chennai)
Nagaraju, A., MA (Communication) (Chennai)*

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.

Visiting Faculty

The Department invites scholars and professionals from different parts of the country for extra inputs on knowledge and skills.

* On lien

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 offered

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. (BITS, 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 offered

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)
Mukherjee, A. K., Ph.D. (Burdwan University); HoD
Buragohain, A. K., Ph. D. (Imperial College, London)*

Associate Professor

Baruah, S., Ph.D. (PGIMER, Chandigarh)

Assistant Professor

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

Departmental Library

Apart from basic and advanced text books in the Departmental library, additional books,

* On lien

collection of latest references books, number of foreign and national journals as well as Electronic journals are available 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

Total nos. of papers published in the year 2009 (upto September): 15

Total nos. 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 (2009) 6391-6397.
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 (2009) 853-859.
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 (2009) 2642–2645.

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.

PHYSICS

The Department was started in 1998 and aims 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 offered

1. Integrated M. Sc. in Physics
2. M. Sc. in Physics
3. M. Sc. in Nano-Science and 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. (Jamiamilia 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)

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

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

Total nos. of papers published in the year 2009 (upto September): 23

Total nos. of ongoing research projects: 13

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).

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 and global perspective.

Programmes offered

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), HoD

Assistant Professor

Deka, R., Ph.D. (Dibrugarh University)

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

Recognised Supervisors of Tezpur University and their area of specialization

Name & Designation	Area of Specialization
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1. Department of Business Administration

Dr. S. S. Khanka, Professor (On lien)	Human Resource Management
Dr. (Mrs.) C. Goswami, Professor	Finance
Dr. M. K. Sarma, Professor	Services Marketing
Dr. C. Goswami, Associate Professor	Consumer Behaviour and Promotional Strategies
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 methodologies for organic transformation
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 Network and Distributed System
Dr. B. Bora, Associate Professor	Data Mining

Name & Designation	Area of Specialization
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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	Cultural and Literature
Dr. D. P. Nath, Associate Professor	Gender Studies
Dr. P. M. Dutta, Assistant Professor	Heritage Studies

5. Dept. 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
Dr. S. Bhattacharyya, Associate Professor	Microwave Antennas
Dr. J. C. Dutta, Associate Professor	Bio-electronics

6. Department of Energy

Dr. D. Konwer, Professor	Biomass Energy, Fossil Fuels, Energy & Environment, Waste Management.
Dr. S. Somadarshi, 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. Kotoky, Assistant Professor	Energy and Environment, Biomass energy

7. Department of English and Foreign Languages

Dr. M. M. Sarma, Professor	Applied Linguistics, Literatures in English
Dr. B. K. Danta, Professor	American Literature, Critical Theory
Dr. F. Danta, Professor	American Literature, Cultural Study and English Language
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.

Name & Designation	Area of Specialization
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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. (Mrs.) C. L. Mahanta, Professor	Rice Science & Technology, 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. B. Deka, Assistant Professor	Finite Element Method

11. Department of Molecular Biology & Biotechnology

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

Name & Designation	Area of Specialization
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12. Department of Physics

Dr. A. Choudhury, Professor	Condensed Matter Physics, Laser Physics, Quantum Electronics
Dr. A. Kumar, Professor	Condensed Matter Physics, Solid State Ionics
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 and Nanoscience
Dr. P. K. Karmakar, Assistant Professor	Plasma Physics and 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 THREE
ADMISSION PROCEDURE

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.

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 minimum of 55% marks or an equivalent CGPA in the Master's Degree or B.E. / B. Tech. with an aggregate of 80% marks or equivalent CGPA with valid GATE score.

A fellowship in Chartered Accountancy / Company Secretary-ship 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.

Admission Procedure

1. The application form for admission attached to this prospectus duly filled in and completed in all respects must reach the head of the respective department on or before the last date specified for the purpose in **Annexure-I**.
2. Applications of the candidates of the above categories (b), (c) & (d) must be submitted through proper channel.
3. Sponsored candidates should submit the sponsorship certificate from his/her employer in proper format attached to this prospectus.
4. Employed Part time candidates shall have to submit a no objection certificate from their employer stating that the candidates shall be allowed to get themselves admitted to the Ph.D. programme at Tezpur University, if selected. Such candidates shall complete their course work by the end of third semester after obtaining necessary leave in the prescribed format from their employers.
5. Project fellows shall have to submit their application accompanied by a no objection certificate from the principal investigator in the prescribed format attached to this prospectus.

6. Students selected for admission shall have to get admitted within stipulated date by paying all fees as given in **Annexure-I**.

SELECTION PROCEDURE

Selection of candidates will strictly be done on merit based on performance in the Entrance Test followed by personal interview. **Canvassing in any form to obtain a seat will lead to disqualification of the candidate.**

Requisite qualifications for admission into different 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.
	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.
	Physics	M. Sc. in Physics / Electronics / Geophysics / Material Science / Applied Mathematics / Nano Science & Technology. M. Phil., M. Tech in Solid State Material Science / Electronics / Energy.
Engineering	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.
	Electronics & Communication Engineering	M.E. / M. Tech. / M. Sc./ Engg. / MS in Electronics / Communication / Electronics Design / Electrical / Instrumentation / Control / Microwave / Biomedical / Bioelectronics / Bio-Technology / 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. 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 & Technology / Food Processing Technology / Food and Nutrition / Microbiology / Food microbiology / Biochemistry / Chemistry / Biotechnology / Food Engineering/ Applied Microbiology / Dairy Engineering / Food Biotech Engineering

School	Department	Qualification
Humanities & Social Science	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
	English & Foreign Language	M.A. in English (specialization may be in literature, ELT or Linguistics) M.A. in Linguistics
	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	M.B.A. / PGDM M. Com. M.A. / M. Sc. in Economics M.A. in Psychology / Sociology and Anthropology M.C.A 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.

How to Apply

Eligible candidates seeking admission into Ph.D. programme in Tezpur University are required to fill in Tezpur University (TU) application form. TU application form along with the prospectus can be obtained from (i) the designated branches of AXIS BANK (Please refer to: www.tezu.ernet.in) 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 categories from the office of the Controller of Examinations or (iii) by sending a request to the Controller of Examinations, Tezpur University with a demand draft of Rs.310/- for SC/ST categories and Rs.560/- for general categories in favour of The Registrar, Tezpur University, payable at Tezpur, with a self addressed unstamped envelope of 36 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 (in favour of The Registrar, Tezpur University, payable at Tezpur) of Rs. 250/- for SC & ST categories and Rs. 500/- for other categories. Filled in application should reach the respective heads of the departments on or before **1st December, 2009**.

*It may be noted that Tezpur University is located outside the Tezpur town area; some private courier services may not deliver mails to the University in time. **Applications received after the last date will not be considered in any circumstances.***

Please fill the form neatly using capital letters as far as possible. **Before filling in the Form please read the instructions given below.**

Column 1 and 12 to 16: Just tick the appropriate box.

Column 3: Name in Full: The name should be written in CAPITAL LETTERS in full and should conform to the name as given in the last Board/University examination. **Candidates are to note that the name given in the form will appear in the grade sheets and certificates that will be issued to them by the University.**

Column 5: Candidates are to give their personal telephone numbers and correspondence address. If any candidate has no personal telephone number, the candidate is advised to mention a telephone number at which he/she can be contacted.

Column 12: Candidate must tick if he/she belongs to General (Gen) / Scheduled Cast (SC) / Scheduled Tribes (ST) / Other Backward Classes (OBC). Also, if the candidate is Person With Disability (PWD) / Kashmiri Migrant (KM) or belongs to minority communities, this should be indicated accordingly.

Column 17 : Give details of educational qualifications as specified in the table.

Column 23: Declaration to be signed by the candidate: Form received without candidate's signature will be rejected. Ensure that the form is complete. Incomplete forms will not be entertained.

Enclosures

1. SC / ST / OBC certificate / Person With Disability (PWD) certificate (if applicable). Recent (issued not earlier than 6 months) non-Creamy Layer certificate is a must in case of OBC candidate,
2. Sponsorship / No Objection Certificate (if applicable),
3. Bank Draft (if the form is downloaded),
4. Acknowledgement cum Admit card.
5. A self addressed envelope with postal stamp of Rs.5/- for sending admit card.

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

The entrance examination and the personal interview will be held in the respective Departments. No. TA / DA will be paid to the candidates for appearing in the entrance examination and / or interview.

The list of selected candidates for admission, including a waiting list, will be notified in the University Notice Board and on the University website. Successful candidates will also be intimated individually by post.

Admission

The tentative schedule of Course Registration and Admission is given in Annexure - I . Selected candidates get admitted to the concerned programme by paying all fees as per schedule. The candidate's presence at the time of verification of testimonials etc., course registration and hostel admission are essential. The fee structure for admission is given in Annexure - II.

Application for Hostel Accommodation

Candidates who wish to apply for hostel accommodation will have to indicate in column 16 of the Admission Form and to apply in the prescribed form for hostel accommodation to be provided at the time of admission.

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. The caution money shall not be refunded if a student leaves the programme without permission and/or does not join and attend any class after admission. Refund of caution money shall be made against application in prescribed form and production of Release Order.

ANNEXURE- I

IMPORTANT DATES

Issue of Prospectus

(a) For PG Degree/ Diploma/ Certificate/ B. Tech. programmes/ Integrated M. Sc.	March 2, 2010 to April 30, 2010 (Tentative)
(b) For Ph.D. Programme (i) Spring Semester, 2010	October 20, 2009 to December 1, 2009
(ii) Autumn Semester, 2010	March 2, 2010 to April 30, 2010 (Tentative)

Last date of submission of Application

(a) For PG Degree/ Diploma/ Certificate/ B.Tech. programmes/ Integrated M.Sc.	30 April, 2010 (Tentative)
(b) For Ph.D. programme (i) Spring Semester, 2010	December 1, 2009
(ii) Autumn Semester, 2010	April 30, 2010 (Tentative)

Schedule of written test and Personal Interview for Ph. D. Programme

Spring Semester, 2010	22– 23 December, 2009
Autumn Semester, 2010	18 – 19 June, 2010 (Tentative)

Schedule of Admission and Course Registration

Spring Semester, 2010	18-19 January 2010 (Tentative)
Autumn Semester, 2010	30 – 31 July, 2010 (Tentative)

ANNEXURE –II**FEE STRUCTURE FOR ADMISSION**

Particulars	Mode	Ph. D. Full Time	Ph. D (Part time / Sponsored)
Fee			
Admission fee	Once on admission	200/-	200/-
Enrolment fee	Per semester form second semester	200/-	200/-
Tuition fee	Per semester	1500/-	2000/-
Library fee	Per semester	300/-	300/-
Students' activity fee	Per semester	250/-	250/-
Medical fee	Per semester	200/-	200/-
Convocation fee	Once on admission	500/-	500/-
Transport fee	Per semester	250/-	250/-
Identity card fee	Once on admission	50/-	50/-
Laboratory fee (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 fee	Once on admission	100/-	100/-
Registration	Once on admission	500/-	500/-
Thesis Evaluation includ- ing Viva Voce	At the time submission	3000/-	4000/-
Revised Thesis Evalua- tion	At the time of Revise Evaluation	1000/-	1000/-
Migration	When applied	100/-	100/-
Course Transfer	When applied	200/-	200/-
Alumni Association fee	Once on admission	500/-	500/-
Hostel Admission/re- admission fees	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 fee	Once at the time of admission	500/-	500/-
Fan, Electricity & water Charges	Per semester	250/-	250/-
Students' Welfare Fund	Per semester	100/-	100/-

CONTACT ADDRESSES

All enquiries about academic programmes and requisite qualification should be directed to Department concerned 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
Business Administration	5000	9957191528	tumba@tezu.ernet.in
Chemical Sciences	5050	9954449466	chem@tezu.ernet.in
Computer Science & Engineering	5100	9957191527	cs@tezu.ernet.in
Controller of Examinations	3140	9954449474	bhuban@tezu.ernet.in
Cultural Studies	5150	9954449460	culture@tezu.ernet.in
Electronics & Communication Engineering	5250	9954449462	electronics@tezu.ernet.in
Energy	5300	9957191529	energy@tezu.ernet.in
English and Foreign Languages	5200	9954449463	efl@tezu.ernet.in
Environmental Science	5600	9954449473	environment@tezu.ernet.in
Food Processing Technology	5700	9954449467	fpt@tezu.ernet.in
Mass Communication and Journalism	5450	9954449472	masscom@tezu.ernet.in
Mathematical Sciences	5500	9954449469	maths@tezu.ernet.in
Mechanical Engineering	5850	9957189386	mech@tezu.ernet.in
Molecular Biology and Biotechnology	5400	9957184351	mbbt@tezu.ernet.in
Physics	5550	9954449470	physics@tezu.ernet.in
Sociology	5800	9954449471	soc@tezu.ernet.in

Website : www.tezu.ernet.in