

PROSPECTUS, Spring 2016

Ph.D. Programme



TEZPUR UNIVERSITY

(A Central University)

www.tezu.ernet.in

Napaam, Tezpur, Assam 784028

CONTENTS

SECTION ONE	Tezpur University	1-4
	About the University	1
	Facilities and Services	1
	Curriculum	2
	Students' Code of Conduct	4
	Admission Procedure	4
SECTION TWO	Ph.D. Programme	5-10
	Course Work, Course Registration and Attendance Requirements	5
	Categories of Candidates	6
	Admission Test and Selection	7
	Eligibility Criteria for Admission into Ph. D. Programme	8
	Recognized Supervisors and Their Areas of Specializations	9
SECTION THREE	Departmental Profiles	10-48
	Business Administration	10
	Chemical Sciences	12
	Civil Engineering	14
	Commerce***	16
	Computer Science and Engineering	17
	Cultural Studies	19
	Education***	21
	Electronics and Communication Engineering	23
	Energy	26
	English and Foreign Languages	28
	Environmental Science	30
	Food Engineering and Technology	32
	Hindi***	34
	Mass Communication and Journalism***	35
	Mathematical Sciences	37
	Mechanical Engineering	39
	Molecular Biology and Biotechnology	42
	Physics	44
	Social Work***	46
	Sociology	47
SECTION THREE	Annexures	49-53
	I Prescribed format for Sponsorship / No Objection Certificate	49
	II Fee Structure for Ph.D. Programme	50
	III Important Dates	51
	IV Prescribed format for OBC-NCL Certificate	52
	V Contact Details	53

*** These Departments will not admit new Ph.D. students in Spring-2016.

NOTE : This Brochure does not create a binding contract between the University and the students. Various provisions mentioned in the Brochure are subject to change. University regulation, circular and/or notification issued at a later date are liable to supersede the provisions mentioned in this Brochure.

SECTION ONE

TEZPUR UNIVERSITY

ABOUT THE UNIVERSITY

Tezpur University was established on January 21, 1994 by an Act of Parliament of India, *The Tezpur University Act, 1993 (Act No. 45)*, as a non-affiliating and residential Central University. The University is located at Napaam, about 15 km east of Tezpur town in the Sonitpur District of Assam. The sprawling, serene and green University Campus of about 262 acres provides the best of atmosphere including modern infrastructure conducive for learning and dedicated research. The academic programmes offered in the University have a distinct focus on science, technology and humanities, reflecting the objective of the University. At present, the University offers Doctor of Philosophy programme in 19 disciplines, Masters programme in 24 disciplines, Post-Graduate Diploma in 3 disciplines, B.Tech. in 6 disciplines, Certificate programme in 3 disciplines, Integrated M.Sc. in 4 disciplines, Integrated B.Sc.B.Ed. in 3 disciplines, Integrated M.A. in 1 discipline, Integrated B.A.B.Ed. in 1 discipline, Integrated M.Com., Diploma and Advanced Diploma in 1 discipline each. The University offers Add-on courses on Yoga too.

During the last twenty one years of its existence, the University has engaged itself in the process of capacity building, both in terms of infrastructure and human resource development. The University has mounted tremendous efforts in developing it into a modern university incorporating all elements from the contemporary scientific and socio-cultural milieu.

The University has already developed a number of state-of-the-art laboratories, computing facilities, internet connectivity, a dedicated power supply system and a relatively small but rich library having connectivity to several digital libraries. While students' accommodation is provided in 13 well-designed hostels, several residential quarters have been built for accommodating teachers and non-teaching staff. Other basic amenities like dedicated power supply with DG backup, central water supply, campus security, guest house, canteen, gymnasium, outdoor and indoor sports facilities, post office, banks with ATMs, schools, etc. are also available to cater to the various needs of the university community.

Being a Central University, the University is privileged to receive funds from the Ministry of Human Resource Development, Government of India, through the University Grants Commission. Assistance has also been received from the Non-Lapsable Central Pool of Resources of the Government of India. Faculty members of different academic Departments have been able to earn a large number of research projects worth crores of rupees from different sources. The University promotes industry-academy alliance and the existence of a few prestigious industry sponsored projects in the University bear testimony to this.

FACILITIES AND SERVICES

The University offers 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, journals and e-resources. It holds 67891 books, 7884 back volumes, active subscription to 650 print and electronic journals and 3 online Databases. The UGC-Infonet Consortia of INFLIBNET Centre is providing access to about 9081 (including 525 on perpetual basis) e-journals and 11 online Databases. The DelCon DBT e-library Consortium has also provided access to 926 e-journals. The library holds 1981 CD/VCDs. The Library subscribes an institutional membership of Developing Library Network (DELNET) and The American Library. Library users can access book, theses, journal database, e-journals database and other e-resources from any terminal within the University campus. The Library is fully computerized with the Libsys software, which is an integrated multi-user library management system.

Computing Facilities

The University started using computers from its very inception both in its academic and administrative activities. The University has elaborate computing facilities accessible to the students. There are two clusters of modern state-of-the-art Computer Centre situated appropriately within the campus for use by the students and research scholars in addition to the Departmental computer laboratories. Apart from a large number of PCs and several servers, all connected to the high speed campus LAN, the Centre also has a 4-processor SGI ALTIX-350 server. The campus LAN is connected to the Internet through 1-Gbps National Knowledge Network (NKN) optical fiber link. It also has a 2-Mbps leased line for Internet as a backup link. The campus is connected with wi-fi network too.

Sophisticated Analytical Instrumentation Centre (SAIC)

The University established the Sophisticated Analytical Instrumentation Centre (SAIC) to cater the need of various sophisticated equipment for advanced research. A number of sophisticated equipment, like, TEM, SEM, Single Crystal XRD, NMR, etc. are installed in SAIC. The centre also extends these facilities to other educational institutions and industries within the North East Region of India and beyond to improve and promote research of different disciplines.

Hostel Accommodation

The University has separate hostels for boys and girls adequate to accommodate all students and research scholars. In total there are 8 women's and 5 men's hostels comprising of more than 3300 capacity. The University also has a married research scholar hostel capable of accommodating more than 30 research scholars.

Scholarships

Tezpur University also offers an Institutional fellowship to Ph.D. students having consistently good academic career.

Health Services

The University has a Health Centre to provide basic medical services with its own medical and paramedical staff. The Health Centre is manned by three full-time highly qualified physicians. Besides, specialist doctors, like radiologist, gynecologist and psychologist regularly visit the University in a weekly basis. The students are also provided with the benefit of health insurance scheme. The newly admitted students below the age of 35 years will be covered under the health insurance scheme.

Games and Sports

The University provides opportunities for students to excel in various departments of sports. The University has basketball, badminton, volleyball and tennis courts, cricket and football grounds with playing facilities under flood light, and a well-equipped multi gymnasium. The University has recently added facilities for Archery with training facility.

Tezpur University Alumni Association (TUAA)

TUAA was formed in the year 2000 to create a network of the alumni of the University. The Association aims to build an active network among the alumni of the University.

Academic Calendar

The University strictly adheres to a well-planned academic calendar specifying the schedule of academic activities. All events including the examinations are held strictly according to this calendar. Prospective students are advised to go through the current calendar to get acquainted with the academic events of the University. The academic calendar for the year 2016 is available in the URL- http://www.tezu.ernet.in/academic/calendar_2016.pdf

CURRICULUM

Each academic programme is designed to provide enough flexibility in the choice of courses for the students. The courses across the Departments have been designed in such a way that multiple teaching pedagogies could be incorporated easily for delivering the syllabus. 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. Students will be required to register some inter disciplinary courses as per their choice under the Choice Base Credit Transfer (CBCT) mechanism.

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.

Evaluation system

The students are evaluated following relative grading system which is basically internal. In order to make sure that the students do not have to rely on any one or two major examinations for evaluation the University follows a continuous and comprehensive evaluation system, where the tests and assignments are spread across the entire semester. A relative Letter Grade is awarded on the basis of continuous internal assessment through class tests, assignments, seminars, term tests etc.

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 Grade represents a Grade Point as tabulated below. The letter grades O to P are considered as *Pass grades* and *F* is considered as *Fail* grade. The grading systems likely to be adopted by the university is given below:

Letter Grade	Grade Point	Description
O	10	Outstanding
A+	9	Excellent
A	8	Very Good
B+	7	Good
B	6	Above average
C	5	Average
P	4	Pass
F	0	Fail
Ab	0	Absent

In addition there are other grades followed by the University 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 (conforming to the relevant provision in the Regulations for Academic Matters) 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 components.
W	Course withdrawn / Shortage of attendance	Letter grade assigned if (i) a student withdraws from a course after the last date for withdrawal of course and (ii) deficient of required attendance.
X	Extended Project	Letter grade assigned in case a project work remains incomplete and the work is extended to the following semester.
S	Satisfactory	Letter grade assigned for successful completion of a Foundation/ Audit Course.
U	Unsatisfactory	Letter grade assigned for being unsuccessful in a Foundation/ Audit Course.

Course registration and attendance

The student shall register for the course /project/ research work(s) for a particular semester by filling-in the registration card. A course adviser appointed by the Head of the Department (HoD) shall assist the student in the selection of the courses for the semester. The registration card duly signed by the student and countersigned by the course adviser and the HoD shall be submitted to the Controller of Examinations. One copy of the form shall be made available to the Dean of Students' Welfare, Head of the Department and the student concerned.

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.

Tezpur University is Ragging Free University. 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. Candidates are advised to visit the website: www.ugc.ac.in or www.tezu.ernet.in for UGC Regulations on curbing the menace of ragging in Higher Educational Institutions, 2009.

ADMISSION PROCEDURE

Interested eligible candidates may APPLY ONLINE through the University Website by paying a fee of Rs. 250/- for SC, ST and PWD candidates and Rs. 500/- for other categories of candidates. Additional bank charge may apply.

The candidates are required to fill-in the application form online in the University website **www.tezu.ernet.in**. Candidates should read and follow the instructions (that are available on the website) carefully while filling in the relevant columns of the online application form. Payment is to be made online using either credit card, or debit card, or net-banking. The transaction detail is to be printed and preserved for later reference.

SECTION TWO

Ph.D. PROGRAMME

Ph.D. PROGRAMME

The following departments will admit new Ph.D. students in Spring-2016.

1. Business Administration
2. Chemical Sciences
3. Civil Engineering
4. Computer Science and Engineering
5. Cultural Studies
6. Electronics and Communication Engineering
7. Energy
8. English and Foreign Languages
9. Environmental Science
10. Food Engineering and Technology
11. Mathematical Sciences
12. Mechanical Engineering
13. Molecular Biology and Biotechnology
14. Physics
15. Sociology

Some important information regarding the Ph.D. programme of the University are highlighted below. Detail regulations currently in force may be perused in the document “Ph.D. Rules and Regulations” available in the University website under the link Academic Regulations.

COURSE WORK, COURSE REGISTRATION AND ATTENDANCE REQUIREMENT

Course Work

A student admitted to the Ph.D. programme shall be required to complete specified course work prior to the submission of Plan of Research as per the recommendation of the Departmental Research Committee (DRC)/ Centre’s Research Committee (CRC). Currently the scholars are required to complete a total of 16 credits (1 credit generally consists of one hour lecture/ tutorials or two hours of practical in a week). As a step initiated by the University towards implementation of Choice Based Credit Transfer (CBCT) system out of the stipulated credit requirement 4 credits should be from another Department. The course work should be completed 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 (Cumulative Grade Point Average) of 6.0 or more. During the course work, students shall report at the Department/Centre regularly and attend classes or do assigned tasks.

Course Registration

The courses opted by the students in a particular semester are to be registered on the specified date(s). For newly admitted students, registration of courses shall take place during 18-19 January 2016 along with the admission formalities.

Attendance requirement

All students including Ph.D. scholars must attend every lecture, tutorial and practical classes of the course registered by him/her. However, to account for late registration, sickness or other such contingencies, the attendance requirement will be a minimum 90% of the classes. Students with deficiency in attendance in a course will not be allowed to appear in the Term-end examination and will be assigned W 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 scheduled date.

Monitoring the progress of research

During the period of research work scholars shall be in touch with their supervisors and give at least one seminar in each semester on experiments/ field work/ library work completed during the Semester. Except 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 of the supervisors.

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. Scanned copy of the Sponsorship / No Objection Certificate from the employer in the prescribed format given in **Annexure I** will be required to upload while submitting the application form.
- 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 nearby 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 have to fulfil the stipulated requirements for Ph.D. admission.

The fee structure for Ph.D. programme is given in **Annexure II**.

***The University encourages full time scholars and as such the applicants shall be admitted as Part-time scholars only in exceptional cases.**

ADMISSION TEST AND SELECTION

The names of the shortlisted candidates who are eligible for appearing in the Admission Test will be published in the University website along with the specific selection procedure followed by the Department. The list shall be published within a reasonable time ahead of the test date(s). No separate call letters or Admit Cards shall be sent to the shortlisted candidates. The test dates are given in the **Annexure III**.

Final selection of candidates will strictly be done on merit based on performance in the Admission Test followed by personal interview.

The Departments follow individual selection procedure and as such the candidates may consult the Department and its website for specific information on selection tests etc.

Eligibility Criteria for Admission into Ph.D. Programme

School	Department	Qualification
Engineering	Civil Engineering	M.E./M.Tech. /M.Sc.(Engg.) in Civil Engg. or allied areas or M.Sc. in relevant discipline with minimum 70% marks in aggregate or equivalent CGPA. B.E. / B.Tech with 80% marks in aggregate or equivalent CGPA with a valid GATE Score .
	Computer Science and Engineering	M.Tech. in Computer Science/ I.T./ Electronics MCA M.Sc. in Computer Science/ I.T. B.E./B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE Score.
	Electronics and Communication Engineering	M.E. / M.Tech. / M.Sc. Engg. / M.S. 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. B.E. / B.Tech. with 80% marks in aggregate or equivalent CGPA with valid GATE score.
	Food Engineering and Technology	M.Sc. / M.Tech. / M.E. in Food Technology/Food Processing Technology/ Food Science and Technology / Food and Nutrition / Microbiology / Food Microbiology / Biochemistry / Chemistry / Biotechnology/ Food Engineering/ Applied Microbiology/ Dairy Engineering/ Food Biotechnology Engineering. B.E. / B.Tech. with an aggregate of at least 80% marks or equivalent CGPA.
	Mechanical Engineering	M.E. / M.Tech. / M.Sc. (Engg.) in Mechanical Engg. or allied areas. B.E. / B.Tech with 80% marks in aggregate or equivalent CGPA with a valid GATE Score.
	Energy	M.Sc. / M.E. / M.Tech. degree in Energy Technology/ Energy Management/Energy related Engineering and Technology/ Physics/ Chemistry/Agriculture Allied subjects.
Humanities and Social Sciences	Cultural Studies	M.A. in any of the disciplines in Humanities or Social Sciences with a uniformly good academic career. Candidates with UGC JRF, UGC NET or NE SET will be given preference
	English and Foreign Languages	M.A. in English (specialization may be in Literature, English Language Teaching or Linguistics) M.A. in Linguistics
	Sociology	Post –Graduation in Sociology / Cultural Studies / Anthropology (with specialization in Social Anthropology) / Economics / History / Political Science / Philosophy / Mass Communication / English / Law / Management/ Social Work.

School	Department	Qualification
Management Sciences	Business Administration	M.B.A. M.Com. M.A. / M.Sc. in Economics M.A. in Psychology/ Sociology/Social Work/Cultural Studies MCA M.T.M. / M.T.A. FCA/ FCS/ FICWA
Sciences	Chemical Sciences	M.Sc. in all branches of Chemical Science/ Physics/Nanoscience/ Material Science/ Biotechnology/ Biochemistry/ Bioinformatics/ Environmental Science. M.E./M.Tech. in allied subjects (Chemical Engineering/ Polymer Technology/ Material Sciences/ Environmental Engineering etc.); B.Tech. in Chemical Engineering/ Polymer Technology/ Material Sciences/ Environmental Engineering, etc. with 80% marks in aggregate or equivalent grade.
	Mathematical Sciences	M.A. / M.Sc. in Mathematics/ Statistics/ Physics/ Computational Seismology/ Economics with requisite background in Mathematics.
	Molecular Biology and Biotechnology	Masters in any branches of Life Sciences/ Physical Sciences/ Chemical Sciences/ Mathematical Sciences/ Agricultural Sciences / Veterinary or Engineering Sciences / Medical Sciences or in any allied field. B. Tech./ B. E. degree with 80% marks in CGPA (with GATE score > 90.00 percentile) in Chemical Engineering/ Chemical Sciences/ Bioinformatics or any allied field. MBBT or BVSc. degree with at least 60% marks or equivalent CGPA. Apart from the above, candidates having consistently good academic record will be preferred.
	Physics	M.Sc. in Physics/ Electronics/ Geophysics/ Material Science/ Applied Mathematics/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Science. M.Phil., M.Tech. in Solid State Material/ Material Science/ Electronics/Energy/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Sciences. B.Tech. in Engineering Physics with 80% marks in aggregate or equivalent CGPA.
	Environmental Science	Masters in any Science/ Applied Science / Engineering discipline with at least 55% marks or equivalent CGPA. At Bachelor's level the candidate must have attended Science / Technology programme.

Relaxation in requisite qualifications for SC/ST candidates shall be followed as per Central Govt. Rules. Reservation of seats for SC/ST/ OBC (NCL), Kashmiri Migrant and Person with Disability (PWD) candidates shall also be as per Central Govt. Rules. The prescribed format of OBC (NCL) certificate is given in **Annexure IV**. A candidate with at least 40% permanent disabilities shall be considered under the PWD category.

Recognised Supervisors and their areas of specialization

The names of available supervisors and their areas of research interests have been indicated in the Departmental Profiles in **Section Three**. For detail information, candidates may contact the Department (**Annexure V**) or browse through the specific faculty's webpage available in www.tezu.ernet.in.

SECTION THREE

DEPARTMENTAL PROFILES

BUSINESS ADMINISTRATION (Year of Establishment: 1995)

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 PG Diploma in Tourism Management which may be upgraded to Master's degree on Tourism and Travel Management. The Department is rated A3 by AIMA in the year 2012. The department is awarded 3rd Asia's Best B-school award for its innovation in teaching methodology in 2012, rated A+ by Business India, rated A by Discovery Education Media for 2012-13 and recipient of "Best Business School Award" in the category of placement (NE Region) awarded by Bureaucracy Today. The department was conferred with "A" category by Business Chronicle B-School Survey and placed among the top 10 B-School in the Eastern Region. The Department is a recipient of research grant under the UGC-SAP (DRS-I).

Programmes offered

1. P.G Diploma in Tourism Management
2. Master of Business Administration (MBA)
3. Ph.D.

Faculty and Areas of Interest

Professors	
Mrinmoy Kumar Sarma,* Ph.D. (TU)	<i>Service Marketing</i>
Chandana Goswami,* Ph.D. (GU)	<i>Financial Management, General Management</i>
Subhrangshu Sekhar Sarkar,* Ph.D. (TU)- Dean-SoMS	<i>Accounting, Taxation, Social Development Issues</i>
Debabrata Das,* Ph.D. (RGU)-HoD	<i>Financial Management, Financial Markets and Development Finance</i>
Chandan Goswami,* Ph.D. (TU)	<i>Marketing and Promotional Strategies, Consumer Behaviour, Tourism</i>
Papori Baruah,* Ph.D. (TU)	<i>Change Management and Human Resource Management, Organiza- tion Behaviour, Rural Development</i>
Associate Professors	
Tridib Ranjan Sarma,* Ph.D. (TU)	<i>Systems Management, Operations, Project Management, Tourism</i>
Anjan Bhuyan,* Ph.D. (TU)	<i>Economics, Tourism Management, Entrepreneurship, Business Ethics</i>
Arup Roy,* Ph. D. (TU)	<i>Microfinance, Stock Market, Financial Derivatives</i>
Assistant Professors	
Heera Barpujary, Ph.D. (TU)	<i>Knowledge Management, E -Commerce, Web Technology</i>
Kakali Mahanta, Ph.D. (DU)	<i>Human Resource Management, Employee Engagement, Work Life Balance</i>
Runumi Das, Ph.D. (GU)	<i>Marketing, Rural Marketing</i>
Mridul Dutta, Ph.D. (GU)	<i>Leisure, Intellectual Property Rights, Community Models</i>

*** Recognized Supervisor**

LEGENDS: TU-Tezpur University, GU-Gauhati University, SoMS-School of Management Sciences, RGU-Rajiv Gandhi University, Itanagar, DU-Dibrugarh University, HoD-Head of the Department

Facilities

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

Research Activities

No. of papers published in the year 2014-2015: 35

No. of ongoing research projects: 05

No. of current Ph.D. scholars: 26

Selected Publications

1. Das, D. and Dutta, P. Cost of microfinance borrowing: An empirical study on clients perspectives, *The Microfinance Review*, VII(1), 41—57, 2015.
2. Das, D., Tiwari, R. and Debnath, J. Non-core assets and disclosure requirements, *The IUP Journal of Accounting Research & Audit Practices*, 14(3), 29—37, 2015.
3. Dutta, P. and Das, D. Indian MFI at crossroads: sustainability perspective, *Corporate Governance: The International Journal of Business in Society (Emerald)*, 14(5), 728—748, 2014.
4. Goswami, C. and Begum, R. Business economics of street vending, *Journal of Research, Extension and Development*, 3(1), 41—43, 2014.
5. Roy, A. The Dynamics of SHG Business model and women empowerment: A study on the scheduled caste women in the Sonitpur district of Assam, *Pacific Business Review International*, 7(1), 47—56, 2014

For more information one can visit the departmental website <http://www.tezu.ernet.in/dba/new/>

CHEMICAL SCIENCES (Year of Establishment: 1997)

The Department was established in the year 1997 with the objectives of providing a broad based training to the students in various disciplines related to Chemical Sciences and reach out to the society. The Department is offering M.Sc. programme in Chemistry, Integrated M.Sc. in Chemistry, Integrated B.Sc. B.Ed. in Chemistry, M.Tech. in Polymer Science & Technology and Ph.D. programme in Chemistry. The faculty members are actively involved in advanced research programmes in the areas of catalysis, polymers, nanocomposites, drug delivery, bioinorganic chemistry, surfactant systems, water purification technique, synthetic organic chemistry, theoretical chemistry and green chemistry. The Department has received financial assistance under UGC-SAP and DST-FIST special grants for strengthening teaching, research and training.

Programmes offered

1. Integrated B.Sc. B.Ed. in Chemistry (Major- Chemistry)
2. Integrated M.Sc. in Chemistry
3. M.Sc. in Chemistry
4. M. Tech. in Polymer Science and Technology
5. Ph. D.

Faculty and Areas of Interest

Professors

M. Lakshmi Kantam, Ph.D. (KU)	<i>Homogeneous/ Heterogeneous Catalysis</i>
Swapan Kumar Dolui,* Ph.D. (IITKgp)	<i>Fibre Reinforced Plastic, Self Reinforced Plastic, Water Based Coating and Adhesive, Diffusion of Small Molecule Through Plastic</i>
Nashreen Islam,* Ph.D. (NEHU)	<i>Synthetic Inorganic Chemistry and Biomimetic Chemistry of Transition Metals, Catalysis</i>
Tarun Kumar Maji,* Ph.D. (CU)	<i>Grafting of Fibres, Rubber Processing, Reaction Engineering, Emulsion Polymer, Textile Finishing</i>
Robin Kumar Dutta,* Ph.D. (NEHU)	<i>Surfactants and Micelles, Water Purification</i>
Niranjan Karak,* Ph.D. (IITKgp)	<i>Synthesis of Advanced Polymers, Polymer Nanocomposites and Nanomaterials</i>
Ramesh Chandra Deka,* Ph.D. (NCL)-HoD	<i>Theoretical Chemistry, Catalysis and Drug Design</i>
Ashim Jyoti Thakur,* Ph.D. (NEIST)	<i>Heterocyclic Chemistry, Organic Synthesis and Molecular Container Chemistry</i>
Ashwini Kumar Phukan,* Ph.D. (UoHyd)	<i>Theoretical Inorganic and Organometallic Chemistry</i>

Associate Professor

Ruli Borah,* Ph.D. (NEIST)	<i>Synthesis of Bioactive Molecule, Development of Green Methodologies for Organic Transformation</i>
----------------------------	---

Assistant Professors

Panchanan Puzari,* Ph.D. (IITG)	<i>Physical Chemistry, Biosensor</i>
Kusum Kumar Bania,\$ Ph.D. (TU)	<i>Heterogeneous Catalysis</i>
Pankaj Bharali,* Ph.D. (IICT)	<i>Inorganic Materials, Catalysis, Adsorption</i>
Nayanmoni Gogoi,* Ph.D. (IITB)	<i>Molecular Magnet, Functional Metal Organic Framework</i>
Bipul Sarma,* Ph.D. (UoHyd)	<i>Solid State Chemistry, Supramolecular Chemistry and Crystallography</i>
Sajal Kumar Das,* Ph.D. (CDRI & JNU)	<i>Synthetic Organic Chemistry</i>
Utpal Bora,* Ph.D. (NEIST)	<i>Synthetic Organic Chemistry</i>
Sanjeev Pran Mahanta, Ph.D. (UoHyd) Ad-hoc	<i>Physical Chemistry, Molecular Engineering and Molecular Recognition</i>

DST Inspire Faculty

Sanjay Pratihar,\$ Ph.D. (IITKgp)	<i>Inorganic Chemistry, Organometallic Chemistry</i>
-----------------------------------	--

*Recognized Supervisor; \$ Recognized Associate Supervisor

LEGENDS: **KU**-Kurukshetra University, Haryana, **IITKgp**-Indian Institute of Technology Kharagpur, **NEHU**-North Eastern Hill University, Shillong, **CU**-Calcutta University, **NCL**- National Chemical Laboratory, Pune, **NEIST**-North East Institute of Science and Technology, Jorhat, **UoHyd**-University of Hyderabad, **IITG**-Indian Institute of Technology Guwahati, **TU**-Tezpur University, **IICT**-Indian Institute of Chemical Technology, Hyderabad, **IITB**-Indian Institute of Technology Bombay, **CDRI**-Central Drug Research Institute, Lucknow, **JNU**-Jawaharlal Nehru University, New Delhi, **HoD**-Head of the Department.

Facilities

In addition to the laboratory facilities required for post graduate level studies in Chemical Sciences, the Department is equipped with sophisticated instrumentation facilities, like FT-IR spectrophotometer, NMR, 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, 400 MHz Nuclear Magnetic Resonance spectrophotometer, GC-MS, ICP-AES, GPC, HPLC, GC etc.

Award

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

Research Activities

No. of papers published in the year 2014-2015: 139

No. of ongoing research projects : 17

No. of current Ph.D. scholars : 64

Selected Publications

1. Barua, S., Gogoi, B., Aidew, L. Buragohain, A. K., Chattopadhyay, P. and Karak, N, Sustainable Resource based Hyperbranched Epoxy Nanocomposite as an Infection Resistant, Biodegradable, Implantable Muscle Scaffold, *ACS Sustainable Chemistry & Engineering*, 3, 1136—1144, 2015.
2. Borthakur, B. and Phukan, A. K. Moving toward Ylide-Stabilized Carbenes, *Chemistry—A European Journal*, 21 (32), 11603—11609, 2015.
3. Bharali, D., Devi, R., Bharali, P. and Deka, R. C. Synthesis of high surface area mixed metal oxide from the NiMgAl LDH precursor for nitro-aldol condensation reaction, *New Journal of Chemistry*, 39, 172—178, 2015.
4. Gogoi, S., Borah, H., Dutta, R. R. and Puzari, P. Evaluation of diffusion coefficient of Thiocholine in enzyme loaded polypyrrole composite film through different methods and electrode polarization, *Journal of Physical Chemistry B*, 119(13), 4749—4757, 2015.
5. Gogoi, S. R., Boruah, J. J., Sengupta, G., Saikia, G., Ahmed, K., Bania, K. K. and Islam, N. S. Peroxonioibium(V)-catalyzed selective oxidation of sulfides with hydrogen peroxide in water: a sustainable approach, *Catalysis Science & Technology*, 5, 595—610, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dcs>

CIVIL ENGINEERING (Year of Establishment: 2009)

The Department of Civil Engineering of the Tezpur University was established in the year 2009 under the School of Engineering for offering B. Tech. Degree. Ph.D. programme was initiated in winter, 2010. The Department aims to provide quality education, research and professional experiences that enable our graduates to become leaders in their professional careers, to pursue excellence in research and to serve the profession, community and nation, and to be competitive in the international scene.

Programmes offered

1. B. Tech. in Civil Engineering
2. Ph. D.

Faculty and Areas of Interest

Associate Professor

Utpal Kumar Das,* Ph.D. (GU)	<i>Geotechnical Engineering</i>
------------------------------	---------------------------------

Assistant Professors

Ankurjyoti Saikia., Ph.D. (TU)	<i>Geotechnical Engineering</i>
Kamal Uddin Ahamad,* Ph.D. (IITG)	<i>Environmental Engineering</i>
Briti Sundar Sil,* Ph.D. (NIT) (On lien)	<i>Water Resources Engineering</i>
Binanda Khungur Narzary, M. Tech. (IITG)	<i>Transportation Engineering</i>
Debaraj Bailung Sonowal, M. Tech. (IITR)	<i>Structural Engineering</i>
Shailen Deka, Ph.D. (IITG)- HoD (i/c)	<i>Geotechnical Engineering</i>
Jayanta Deori Bharali, M.Tech. (IITG)	<i>Transportation Engineering</i>
Abhishek Das, M. Tech. (IISc)-Ad-hoc	<i>Structural Engineering</i>
Rituraj Buragohain, M. Tech. (IITG)-Ad-hoc	<i>Water Resources Engineering</i>
Arunav Chakraborty, M. Tech. (AEC)-Ad-hoc	<i>Geotechnical Engineering</i>

* Recognized Supervisor

LEGENDS: GU-Gauhati University, TU-Tezpur University, IITG-Indian Institute of Technology Guwahati, NIT-National Institute of Technology, Silchar, IITR-Indian Institute of Technology Roorkee, IISc-Indian Institute of Science, Bangalore, AEC-Assam Engineering College, Guwahati, HoD-Head of the Department.

Facilities

The Department has the following Laboratory facilities

1. Computational Laboratories

- Matlab and Simulink R2011b
- Sap 2000
- Plaxis 2D
- ETABS version 9
- Civil FEM for Ansys, version 12.1
- AutoCAD

2. Core Departmental Laboratories

- Geotechnical Lab
- Environmental Engg Lab
- Surveying Lab
- Structural Lab
- Water Resources Lab
- Transportation Lab

Research Activities

No. of papers published in the year 2014-2015 : 04

No. of current Ph.D. scholars : 02

Selected Publications

1. Ahamad, K. U., Sonowal, D. B., Kumar, V., Nikhil, N. and Medhi, N. Study on the impact of pre-sedimentation and consequently optimization of alum dose in water treatment process, *Water Practice & Technology*, 9(3), 417—429, 2014.
2. Deka, S., Dash, S. K. and Sreedeeep, S. Strength of lime-treated fly ash using bentonite, *Geotechnical Engineering Journal (Journal of the South East Asian Geotechnical Society & Association of Geotechnical Societies of South East Asia)*, 46(3), 2015.
3. Saikia, A. and Das, U. K., Analysis and design of open trench barriers in screening steady state surface, *Earthquake Engineering and Engineering Vibration*, 13(3), 545—554, 2014.
4. Saikia, A. Numerical study on screening of surface waves using a pair of softer backfilled trenches, *Solid Dynamics and Earthquake Engineering*, 65, 206—213, 2014.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dcivil>

COMMERCE (Year of Establishment: 2013)

The Department of Commerce was established in the year 2013 under the School of Management Sciences. The Department offers the Integrated M. Com. Programme. The programme is designed to provide the basis for developing the skills necessary to face the challenges of job market.

Programme offered

Integrated Master of Commerce (Int. M. Com.)

(This programme has option of lateral exit on successful completion of six semesters with B. Com (Hons) degree and lateral entry in the Seventh Semester (subject to fulfillment of eligibility criteria) for the M. Com. Degree. Admission into the Autumn Semester 2016 is only for the B. Com (Hons) module. Admission into the M. Com module will begin from Autumn Semester 2017)

Faculty and Areas of Interest

Professor

Subhrangshu Sekhar Sarkar,* Ph.D. (TU)- *Accounting, Taxation, Social Development Issues*
HoD (i/c) and Dean-SoMS

Assistant Professors

Reshma Kumari Tiwari, Ph.D (GU) *Accounting, Financial Inclusion and Microfinance*

Rishabh Goswami, M. Com, (GU) *Accounting and Finance*

* Recognized Supervisor

LEGENDS: TU-Tezpur University, SoMS-School of Management Sciences, GU-Gauhati University, HoD-Head of the Department.

Facilities

ICT equipped classrooms and E-Coaching facility to enable students to pursue Professional courses, Personalised attention due to small batch size, Project based, immersion oriented classroom teaching pedagogy.

Research Activities

No. of paper published in the year 2014-2015: 03

Selected Publications

1. Tiwari, R. K. Fraud examination: investigators perspective, *Kangleipak Business Review*, VIII, 106—113, 2014.
2. Tiwari, R. K. Innovative learning pedagogy in business schools, *International Journal of Research In Commerce, Economics & Management*, 4(8), 44—47, 2014.
3. Tiwari, R. K., Das, D. and Debnath, J. Non-core assets and disclosure requirements, *The IUP Journal of Accounting Research & Audit Practices*, XIV(3), 29—37, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dcom>

COMPUTER SCIENCE AND ENGINEERING (Year of Establishment: 1994)

The Department of Computer Science and Engineering is one of the oldest Departments of the University. The Department has been recently recognized as a Centre of Excellence in Machine Learning and Big Data Analytics by MHRD, Government of India under FAST. The Department is also recognized by UGC under UGC's Special Assistance Programme (SAP DRS Phase II). During 2005-2009 the Department received support from the Department of Science and Technology (DST), Govt. of India under its FIST- programme. The Department has been carrying out active research in the fields of computational theory, computer networks, network security, mobile computing, soft computing and data mining, natural language processing, workflow management, qualitative spatial reasoning, web services, rehabilitation robotics, pattern recognition, bio informatics, image processing algorithms, computational geometry, machine learning and remote sensing image analysis.

Programmes offered

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

Faculty and Areas of Interest

Professors	
Malay Ananda Dutta,* Ph.D. (IITK)	<i>Optimization, Computational Theory</i>
Dilip Kumar Saikia,* Ph.D. (IITKgp) -On lien as Director, NIT, Meghalaya	<i>Networks, Mobile Computing</i>
Dhruba Kumar Bhattacharyya,* Ph.D. (TU), Dean-SoE	<i>Data Mining, Network Security, Bio-informatics</i>
Smriti Kumar Sinha,* Ph.D. (TU)	<i>Workflow Automation, Web Theory</i>
Shyamanta Moni Hazarika,* Ph.D. (Leeds) -HoD	<i>Knowledge Representation and Reasoning, Rehabilitation Robotics</i>
Utpal Sharma,* Ph.D. (TU)	<i>Natural Language Processing</i>
Nityananda Sarma,* Ph.D. (IITG)	<i>Wireless Networks and Mobile Computing</i>
Associate Professors	
Sarat Saharia,* Ph.D. (TU)	<i>Pattern Recognition</i>
Bhogeswar Borah,* Ph.D. (TU)	<i>Data Mining, Image Processing</i>
Bhabesh Nath,* Ph.D. (TU)	<i>Data Mining</i>
Siddhartha Sankar Satapathy,\$ Ph.D. (TU)	<i>Computational Biology and Bioinformatics, Wireless Sensor Network</i>
Assistant Professors	
Sarangthem Ibotombi Singh, MCA (MU)	<i>Service Oriented Systems, Trust and Reputation</i>
Loitongbam Basantakumar Singh, M. Tech. (TU)	<i>Object Recognition, Trust and Reputation</i>
Rosy Sarmah,* Ph.D. (TU)	<i>Data Mining, Bioinformatics, Image Processing</i>
Sanjib Kumar Deka, M. Tech. (TU)	<i>Cognitive Radio Network, Operating System</i>
Debojit Boro, M. Tech. (TU)	<i>Network Security</i>
Arindam Karmakar, Ph.D. (ISI)	<i>Algorithms, Computational Geometry</i>
Sanghamitra Nath, M. Tech. (TU)	<i>Speech Processing</i>
Swarnajyoti Patra,* Ph.D. (JU)	<i>Pattern Recognition, Machine Learning, Remote Sensing, Image Analysis</i>
Zubin Bhuyan, M. Tech. (TU)	<i>Knowledge Representation and Reasoning</i>
Shobhanjana Kalita, M. Tech. (TU)	<i>Knowledge Representation and Reasoning</i>

* Recognized Supervisor; \$ Recognized Associate Supervisor

LEGENDS: IITK-Indian Institute of Technology Kanpur, IITKgp-Indian Institute of Technology Kharagpur, NIT-National Institute of Technology, TU-Tezpur University, SoE-School of Engineering, Leeds-University of Leeds, England, IITG-Indian Institute of Technology Guwahati, MU-Manipur University, ISI-Indian Statistical Institute, Kolkata, JU-Jadavpur University, Kolkata, HoD-Head of the Department

Facilities

The Department has several state-of-the-art computer laboratories, viz :

- * Basic Programming Laboratories
- * Software Engineering Laboratory
- * Hardware Laboratory
- * Mobile Computing Laboratory

The Department houses the following Research / Special Computing Facilities :

- * Network Security Laboratory
- * Biomimetic and Cognitive Robotics Laboratory
- * Natural Language Processing Laboratory
- * Cognitive Radio Network Laboratory
- * Network Laboratory
- * Malware Research Laboratory

Departmental Library

The Department has a library with a collection of more than 1400 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, are accessible to the Department.

Research Activities

No. of papers published in the year 2014-2015: 35

No. of ongoing research projects: 06

No. of current Ph.D. scholars: 47

Selected Publications

1. Bhuyan, M. H., Bhattacharyya, D. K. and Kalita, J. K. An empirical evaluation of information metrics for low-rate and high-rate DDoS attack detection, *Pattern Recognition Letters*, 51, 1—7, 2015.
2. Das, D., Sharma, S. and Bhattacharyya, D. K. Detection of cross-site scripting attack under multiple scenarios, *The Computer Journal*, 58(4), 808—822, 2015.
3. Hussain, I., Ahmed, Z. I., Sarma, N. and Saikia, D. K. A QoS-aware dynamic bandwidth allocation scheme for multi-hop WiFi-based long distance networks, *EURASIP Journal on Wireless Communications and Networking*, 160, 2015.
4. Kakoty, N. M., Saikia, A. and Hazarika, S. M. Exploring a family of wavelet transforms for EMG based grasp recognition, *Journal of Signal Image and Video Processing*, 9(3), 553—559, 2015.
5. Satapathy, S. S., Powdel, B. R., Dutta, M., Buragohain, A. K. and Ray, S. K. Selection on GGU and CGU codons in the high expression genes in bacteria, *Journal of Molecular Evolution*, 78, 13—23, 2014.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dcompssc>

CULTURAL STUDIES (Year of Establishment: 1995)

Established in 1995, the Department of Cultural Studies is one of the few Departments in the country devoted exclusively to the academic pursuit of Cultural Studies. Cultural Studies has evolved into a vibrant interdisciplinary approach in the understanding of society, culture and expressive forms associated with human behaviour across a wide range of disciplinary engagements. India is fast emerging as an important location where methods evolved in Cultural Studies are used to interrogate disciplinary approaches in an attempt to promote an understanding of various issues like ethnicity, migration, national and nationalistic assertion, gender and society, media generated cultural forms, environment and development and emerging lifestyle patterns. The Department of Cultural Studies at Tezpur University mediates global concerns and theoretical approaches of the discipline with issues that are of local importance and promotes an understanding of the rich cultural heritage and the ingrained plural nature of the region, the folk and oral inheritance and ethnic and cultural assertions amongst others. The department is supported by UGC-SAP (DRS-I).

Programmes offered

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

Faculty and Areas of Interest

Professors

Pradip Jyoti Mahanta,* Ph.D. (GU), Dean-HSS	<i>Cultural History, Old Assamese Literature, Performing Arts</i>
Sunil Kumar Dutta,* Ph.D. (VB)	<i>Folklore Studies, Assamese Language and Culture</i>
Debarshi Prasad Nath,* Ph.D. (RGU)-HoD	<i>Gender Studies, Comparative Literature, Translation, Critical Theory</i>

Assistant Professors

Madhurima Goswami,# Ph.D. (TU)	<i>Sanskrit Poetics, Indian Classical Performing Arts</i>
Parasmoni Dutta,* Ph.D. (TU)	<i>Heritage Studies, Folklore Studies, New Museology</i>
Juri Gogoi Konwar,* Ph.D. (DU)	<i>Medical Anthropology, Anthropology of Food and Costume</i>
Jayanta Vishnu Das, Ph.D. (TU)	<i>Cultural Communication, Development Communication, Epistemology of Communication Studies</i>
Mandakini Baruah, Ph.D. (TU)	<i>Gender Studies, Folklore Studies, Paremiology</i>
Hashik, N.K, Ph.D. (UoHyd)	<i>Performance Studies, Community Studies, Research Methodology</i>

*Recognized Supervisor; #Recognized Co-Supervisor

LEGENDS: *GU*-Gauhati University, *HSS*-Humanities and Social Sciences, *VB*-Visva Bharati, *Santiniketan*, *RGU*-Rajiv Gandhi University, *Itanagar*, *TU*-Tezpur University, *DU*-Dibrugarh University, *UoHyd*-University of Hyderabad, *HoD*-Head of the Department.

Facilities

The Department has a well equipped seminar cum conference hall with projection facilities and audio-visual teaching aids and an archival centre cum edit suite. The student support infrastructure also includes the Pratibha Kath Hazarika Memorial Library and a cultural museum.

Research Activities

No. of papers published in the year 2014-15: 17

No. of ongoing research projects: 02

No. of current Ph.D. scholars: 23

Selected Publications

1. Baruah, M. The narrative construction of masculinity in Assamese folktales with reference to Lakshminath Bezbarua's Burhi Air Sadhu in North-East India, in *The Paradym of Historical, Socio-Economic and Cultural Interaction*, G. Pathak (Ed.), Jnananda Prakashan, New Delhi, 19—25, 2014.
2. Das, J. V. Documentaries as protests: Voices of unrest from Manipur, in *Media and Women: Emerging Perspectives*, G. P. Pandey (Ed.), Sunrise Publications, New Delhi, 2014.
3. Konwar, J. G. and Swargiari, D. Conflicting idea of 'Victim' and 'Perpetrator' in witch-hunting: A case study in the state of Assam, India, *International Journal of Humanities and Social Studies*, 3(5), 132—139, 2015.
4. Nath, D. P. Inequality of languages and the question of choice in translation, *Translation Today*, 9(1), 56—67, 2015.
5. Nath, D. P. and Liyanage, D. Intertextuality and localization in Srilankan advertisements: A contemporary analysis with special reference to telecommunication TV commercials, *Critical Arts*, 29(3), 367—381, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dtcf>

EDUCATION (Year of Establishment: 2014)

The Department of Education of the Tezpur University was established in the year 2014 under the School of Humanities and Social Science. The first program offered by the Department of Education is Integrated B.Sc. B.Ed. and B.A. B.Ed. Programmes. These Four-Year Integrated programmes aim at producing prospective teachers with sound knowledge of the content, pedagogy and skills needed for the society. The department has also started postgraduate and doctoral programmes in Education from autumn semester, 2015.

Programmes offered

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

Faculty and Areas of Interest

Associate Professor

Anjali Sharma, Ph.D. (DBRAU)-HoD	<i>Educational Administration, Planning & Financing, Curriculum Development, Special Education</i>
----------------------------------	--

Assistant Professor

Yeasmin Sultana, Ph.D. (AU)	<i>Language Education & Research Methodology</i>
R.D. Padmavathy, M.Ed. (PU)	<i>Mathematics Education, Educational Psychology, Educational Technology, e-content Development, Research Methodology & Statistics in Education, Guidance and Counselling, Environmental Education</i>
Hitesh Sharma, Ph.D. (DAV)	<i>Method of teaching physical science and biological science Educational Psychology, ICT in Education, Educational Administration, Guidance and counselling, Early Childhood Education</i>
Sashapra Chakrawarty, M.Ed. (RIE)	<i>Biological Science, Educational Psychology, Teacher Education, Elementary Education, Special Education, Guidance and counselling</i>
Dr. Pratima Pallai, Ph.D. (LU)	<i>Social science teaching, ICT in Education, Guidance and Counselling, Measurement and Evaluation, Educational Psychology</i>

LEGENDS: **DBRAU**-Dr. B. R. Ambedkar University, Uttar Pradesh, **AU**-Assam University, Silchar, **PU**-Pondicherry University, **DAV**-Devi Ahilya Vishwavidyalaya, Indore, **RIE**-Regional Institute of Education, Bhubaneswar, **LU**-Lucknow University, **HoD**-Head of the Department

Facilities

The teaching support infrastructure includes a psychological Laboratory and Education Technology Laboratory, science and mathematics resource centre, art and craft resource centre.

Research Activities

No. of paper published in the year 2014-15: 28
No. of current Ph.D. scholars: 01

Selected Publications

1. Chakrawarty, S. Effect of intervention programme on development of awareness on environmental pollution, *International Journal of Advanced Research*, 3(5), 1410—1419, 2015.
2. Padmavathy, R. D. Error as an opportunity tool: to enhance statistics and probability knowledge among high school students, *International Journal of Scientific Research*, 4(5), 3—4, 2015.
3. Pallai, P. A. Qualitative study on effectiveness of different modes of teacher orientation programme, *Education India Journal: A Quarterly Refereed Journal of Dialogues on Education*, 4(3), 25—27, 2015.
4. Sharma, A. Role of media in transforming society, *University News: A Weekly Journal of Higher Education*, 53(38), 11—16, 2015.
5. Sharma, H. Influence of personality and multimedia on achievement of B.Ed. students of Madhya Pradesh, *Education India Journal: A Quarterly Refereed Journal of Dialogues on Education*, 4(3), 210—220, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dedu>

ELECTRONICS AND COMMUNICATION ENGINEERING

(Year of Establishment: 1997)

The Department of Electronics and Communication Engineering with an M. Tech. programme in Electronics Design and Technology in 1997. The department has subsequently introduced another M. Tech. programme in Bioelectronics under the ‘Teaching and Research in Interdisciplinary and Emerging Areas’ scheme of the University Grants Commission. The department expanded its academic activities to undergraduate programmes, first with a B. Tech. programme in Electronics and Communication Engineering in 2006 followed by another B. Tech. programme in Electrical Engineering in 2014. The department also has an ongoing three year diploma programme in Advanced Diploma in Healthcare Informatics and Management under the career oriented scheme of the University Grants Commission. In addition, the department offers Ph.D. programme in different areas including Signal & Image Processing, Bioelectronics, Biosensors, Microwave Engineering, Communication Engineering and Microelectronics. At present, the department has a student strength of about 400 which is likely to increase to 600 in the next four years.

The department is supported by DST-FIST, DeitY - MIT and UGC-SAP (DRS-I).

Programmes offered

1. Advanced Diploma in Healthcare Informatics and Management.
2. B. Tech. in Electronics and Communication Engineering
3. B. Tech in Electrical Engineering
4. M. Tech. in Electronics Design and Technology
5. M. Tech. in Bioelectronics
6. Ph. D.

Faculty and Areas of Interest

Professors

Manabendra Bhuyan,* Ph.D. (GU)	<i>Sensor Design, Image Processing, Machine Vision</i>
Partha Pratim Sahu,* Ph.D. (JU)	<i>Optical Networks and its Components, Wireless Communication</i>
Jiten Chandra Dutta,* Ph.D. (JU)	<i>Bio-electronics, Biosensors, Neurobioengineering</i>
Satyajib Bhattacharyya,* Ph.D. (DU)-HoD	<i>Microwave Antennas</i>

Associate Professors

Santanu Sharma,* Ph.D. (TU)	<i>MOSFET, Bioelectronic Device-ISFET, Vehicular Electronics</i>
Soumik Roy,* Ph.D. (TU)	<i>Neuroengineering.</i>
Bhabesh Deka,* Ph.D. (IITG)	<i>Image Processing, Computer Vision, Compressive Sensing MRI</i>
Vijay Kumar Nath,* Ph.D. (IITG)	<i>Signal and Image Processing</i>
Nayan Moni Kakoty, Ph.D. (TU)	<i>Robotics</i>

Assistant Professors

Riku Chutia, M. Tech. (TU)	<i>E-nose</i>
Deepika Hazarika, M. Tech. (IITG)	<i>Signal Processing</i>
Ratul Kumar Baruah, M. Tech. (TU)	<i>VLSI</i>
Biplob Mondal, Ph.D. (JU)	<i>VLSI and MEMS Devices</i>
Durlav Sonowal, M. Tech. (TU)	<i>Sensors</i>
Ananya Bonjyotsna, M. Tech. (TU)	<i>Signal Processing</i>
Priyanka Kakoty, M. Tech. (TU)	<i>Intelligent Instrumentation</i>
Angshuman Sharma, ME (AEC) -Ad-hoc	<i>Power System Engineering</i>
Barnam Jyoti Saharia, M.Tech. (NIT)-Ad-hoc	<i>Power Electronics and Devices</i>
Munish Manas, M. Tech. (BV) - Ad-hoc	<i>Power System Engineering</i>

* Recognized Supervisor

LEGENDS: GU-Gauhati University, JU-Jadavpur University, Kolkata, DU- Delhi University, TU-Tezpur University, IITG-Indian Institute of Technology Guwahati, AEC-Assam Engineering College, Guwahati, NIT-National Institute of Technology, Agartala, BV-Bharati Vidyapeeth, Pune, HoD-

Facilities

Basic Electrical Engineering Laboratory: It is equipped with DC Motor-Generator sets, 30 Power factor Trainer Kits, Series Motor Panel Kits, Synchronous Panel Motors, Shunt Motors, various trainer kits and measuring instruments. Experiments on Basic Electrical Engineering are conducted in this lab.

Basic Electronics Laboratory: It is equipped with a number of analog trainer kits, digital trainer kits, DSOs, CROs, function generators, etc. Experiments on Switching Circuit and Digital Logic (SCDL), Biomedical Electronics (BE), Analog Electronics Devices & Circuits (AEDC), Integrated Circuits (IC), Electronic Devices and Circuits (EDC), Design of Digital Systems (DDS) are conducted in this lab.

Design and Prototyping Laboratory (Workshop): It is equipped with following machines: Lathe machine, drilling machine, milling machine, grinding machine, welding machine, bending machine, spot welding, wood planer, miter saw, hand grinder, power hack-saw, etc. Experiments on Physical and Industrial Design of Electronic Systems (PIDE) are conducted in this lab for M. Tech. students. This lab is also used for many hardware related project works of B. Tech. and M. Tech. programmes.

DSP Laboratory: It is equipped with (i) Software - MATLAB, CCS for DSP, LabView, etc. (ii) Hardware - DSP and FPGA Boards, PCs. Experiments on digital signal processing applications are conducted in this lab.

Computer Vision and Image Processing Laboratory: It is equipped with PCs, digital camera, embedded FPGA Software and Hardware, MATLAB, OpenCV for computer vision and image processing experiments.

Instrumentation Laboratory: It is equipped with temperature transducers – thermocouple, IC sensors, ti- channel temperature indicators, Load cell indicator, humidity sensor, sensor interfacing to PC, industrial type remote transmitter, PC based stepper motor, Servo motor driver, etc. it also includes CRO, Function Generator, various trainer kits and measuring instruments. This lab is under MODROB, AICTE.

Bioelectronics Laboratory: It is related with Robotics, vision development with LabView, E-nose, Insectronics, Device Simulator and a number of computers.

Neuroengineering Laboratory: It is equipped with a power lab system which includes instruments having capabilities of measuring and processing of ECG, EMG, EEG. It has a number of computers, sensors, Robotics setups and various motors.

Optical Fibre Laboratory: It is equipped with He-Ne Laser (630nm), fibre optic connectorization kit, optical fibre communication single channel, single phase lockin amplifier, optical bread-board, etc. This lab is under MODROB, AICTE.

HIM Laboratory: It is equipped with computers for the students of Advanced Diploma in Healthcare Informatics and Management (ADHIM) programme under UGC's career oriented scheme.

Micro fabrication/MEMS Facility: Established in 2014, focuses on research and education in the broad area of Microelectronics and Nano Technology covering topics such as MEMS devices, materials, Bio Sensor, Chemical and Gas Sensor etc. Faculty, Research Scholars, M.Tech and B.Tech Students and Students/Research Scholar from other Institutes are engaged in the facility. The Facility has a state-of-the-art Clean Room (Class 1000 and Class 10000) to enable the development of cutting edge technologies for various applications.

Major equipment are: RIE (Reactive Ion Etching), PECVD (Plasma Enhanced Chemical Vapour Deposition), Photolithography, Vacuum coating unit (Thermal evaporation and E-Beam Technology), Oxidation Furnace, Laminar Air Flow Unit, Spin coating unit, Prism Coupler Water De-ionizer etc.

Research Laboratories : In addition to the above facilities, there are a number of laboratories exclusively for research scholars. These are

- 1) Power Electronics Laboratory (Vehicular Electronics),
- 2) Microwave Engineering Laboratory,
- 3) Wireless Communication Engineering Laboratory,
- 4) E-nose Laboratory,
- 5) Computer Vision and Image Processing Laboratory.

Research Activities

No. of papers published in the year 2014-2015: 63

No. of ongoing research projects: 09

No. of current Ph. D scholars: 29

1. Deka, K. M. and Roy, S. Glutamate gated spiking Neuron Model, *Annals of Neurosciences*, 21(1), 14—18, 2014.
2. Deka, B. and Datta, S. A practical under-sampling pattern for compressed sensing MRI, *Advances in Communication and Computing, Lecture Notes in Electrical Engineering*, 347, 115—125, 2015.
3. Gogoi, J. P., Bhattacharyya, N. S. and Bhattacharyya, S. Single layer microwave absorber based on expanded graphite-novolac phenolic resin composite for X-band applications, *Composites Part B: Engineering* 58, 518—523, 2015.
4. Nath, V. K., Hazarika, D. and Mahanta, A. Lapped transform based image denoising with the generalised Gaussian prior, *International Journal of Computational Vision and Robotics*, 4(1/2), 55—74, 2014.
5. Sarma, K. C. D. and Sharma, S. An approach for complete 2-D analytical potential modelling of fully depleted symmetric double gate junction less transistor, *Journal of Computational Electronics*, 14(3), 717—725, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/delect>

ENERGY (Year of Establishment: 1996)

Department of Energy started in 1996, with an aim to produce manpower pool in the field of energy, develop new and efficient energy technologies, R & D and extension activities in diverse areas of energy. The department offers a two-year (four semesters) AICTE approved M. Tech. programme in Energy Technology, One year Post Graduate Diploma in Renewable Energy and Energy Management (under distance education mode) and Ph. D. in energy related areas. The thrust areas of research are Biomass energy, Solar energy, Energy-Environment interface, Energy Conservation and Management, Energy Efficiency, Climate Responsive Buildings, Hydrogen Energy, Fuel Cell and Rural Hybrid Energy. Apart from the teaching and research, the department also organizes training programmes, workshops and seminars in the relevant areas of energy. The department has received research support under Indo-UKIERI research collaboration. The Department has undertaken three International Collaborative research projects viz. i) Indo-UK ii) Indo-European and iii) Indo-Finland with National partners in the field of bioenergy. Research Scholars in the Department received Nehru-Fulbright Fellowship in 2013, CIMO fellowship at Abo Akademi University, Finland in 2013, ISCA young Scientist Award, Indo-French Sandwich Ph.D. Fellowship, Swarna Jayanti Puraskar for the best paper of National Academy of Science, India, 2010.

Programmes offered

1. Post Graduate Diploma in Renewable Energy and Energy Management (Distance mode)
2. M. Tech. in Energy Technology
3. Ph. D.

Faculty and Areas of Interest

Professors

Dhanapati Deka,* Ph.D. (TU) - HoD	<i>Biofuels, Biomass Assessment, Bioenergy and Environment</i>
Debendra Chandra Baruah,* Ph.D. (PAU), DSW	<i>Biomass Energy, Energy Management and Mathematical Modeling and Farm Mechanisation</i>

Associate Professor

Rupam Katakati,* Ph.D. (TU)	<i>Energy and Environment, Biomass Energy</i>
-----------------------------	---

Assistant Professors

Sadhan Mahapatra, M.Tech. (JU)	<i>Biomass Gasification, Climate Responsive Buildings, Decentralized Energy Options, Energy Conservation</i>
Pradyumna Kumar Choudhury, M.Tech. (TU)	<i>Energy Conservation and Management, Integration of Renewable Energy Systems</i>
Biraj Kumar Kakati,* Ph.D. (IITG)	<i>Fuel Cell, Hydrogen Technology and Redox Flow Battery</i>
Nabin Sarmah,* Ph.D. (HWU)	<i>Solar Energy, Photovoltaic, Energy Systems</i>
Bibha Boro, M.Tech. (TU)	<i>Electrical Engineering</i>

*Recognized Supervisor

LEGENDS: TU-Tezpur University, PAU-Punjab Agriculture University, DSW-Dean, Student's Welfare, JU-Jadavpur University, Kolkata, IITG-Indian Institute of Technology Guwahati, HWU-Heriot Watt University, United Kingdom, HoD-Head of the Department.

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, 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 and related areas are available for the students. A number of national and international journals related to different areas of energy are also being subscribed by Central Library of the University.

Scholarship

Ministry of New and Renewable Energy (MNRE), Government of India offers fellowship for M. Tech. and Ph. D. students 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. ONGC has also offered scholarship to M. Tech. students of the Department.

Research Activities

No. of papers published in referred journals in 2014 - 2015: 44

No. of ongoing research projects: 06

No. of current Ph.D scholars: 20

Selected Publications

1. Hiloidhari, M. and Baruah, D. C. GIS mapping of rice straw residue for bioenergy purpose in a rural area of Assam, India, *Biomass and Bioenergy*, 71, 125—133, 2014.
2. Kakati, B. K. and Kucernak, A. R. J. Gas phase recovery of hydrogen sulfide contaminated polymer electrolyte membrane fuel cells, *Journal of Power Sources*, 252, 317—326, 2014.
3. Konwar, L. J., Mäki-Arvela, P., Begum, P., Kumar, N., Thakur, A. J., Mikkola, J-P., Deka, R. and Deka, D. Shape selectivity and acidity effects in glycerol acetylation with acetic anhydride: Selective synthesis of triacetin over Y-zeolite and sulfonated mesoporous carbons, *Journal of Catalysis*, 329, 237—247, 2015.
4. Micheli, L., Sarmah, N., Luo, X., Reddy, K. S. and Mallick, T. K. Design, development and analysis of a densely packed 500× concentrating photovoltaic cell assembly on insulated metal substrate, *International Journal of Photoenergy*, Article ID 341032, 18 pp., 2015.
5. Saikia, R., Chutia, R. S., Katak, R. and Pant, K. K. Perennial grass (*Arundo donax*L.) as a feedstock for thermo-chemical conversion to energy and materials, *Bioresource Technology*, 188, 265—272, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dner>

ENGLISH AND FOREIGN LANGUAGES (Year of Establishment: 1994)

The Department was established in 1994 with aims to provide instruction and carry out research in American Literature, English Language Teaching, English Literature, Indian Writing in English, Linguistics, New Literature in English and Women's Writing in English. The Department of English and Foreign Language is a UGC-SAP Department

Programmes offered

1. One Year Certificate Course in Chinese
2. Certificate Course in Language Documentation and Revitalization (One Semester). (Admission for this programme not through TUEE)
3. Integrated B.A.B.Ed. in English (Major-English)
4. Integrated M.A. in English
5. M.A. in English
6. M.A. in Linguistics and Language Technology
7. M. A. in Linguistics and Endangered Language (Modular). (Students on this programme will have the choice to exit after successful completion of the first two semesters and receive a PG Diploma in Linguistics and Endangered Languages, or continue for another two semesters for an MA in Linguistics and Endangered Languages.)
8. Ph. D.

Faulty and Areas of Interest

Professors

Madan Mohan Sarma,* Ph.D. (DU)	<i>Applied Linguistics, Literature in English, ELT</i>
Bijay Kumar Danta,* Ph.D. (JU)	<i>American Literature, Critical Theory, Fiction Studies</i>
Farheena Danta,* Ph.D. (DU)	<i>American Literature, Cultural Studies, Modernist Poetics</i>
Prasanta Kumar Das,* Ph.D. (GU)-HoD	<i>American Literature, Indian Writing in English</i>
Madhumita Barbora,* Ph.D. (TU)	<i>Linguistics (Syntax, Psycholinguistics), Field Linguistics, Documentation</i>
Gautam Kumar Borah,* Ph.D. (NTNU)	<i>Linguistics, Cognitive Semantics, Philosophy of Language</i>
Debasish Mohapatra,* Ph.D. (EFLU, Hyderabad)	<i>Curriculum Development, Materials Production, Language Policy</i>
Sravani Biswas,* Ph.D. (NEHU)	<i>Critical Theory, Indian Writing in English</i>
Hemjyoti Medhi, Ph.D. (DU^)	<i>Gender and Literature, New Literatures in English, Indian Vernacular Literature</i>
Rathijit Chakraborty, M.Phil. (Chinese), (JNU)	<i>Chinese Language and Literature</i>
Reetamoni Narzari, M.A. (NEHU)	<i>Women's Writing, Commonwealth Literature, Indian Writing in English</i>
Pallavi Jha, Ph.D. (UoHyd)	<i>Children's Literature, Popular Culture and Literature, Postcolonial Writing</i>
Sanjib Sahoo,* Ph.D. (TU)	<i>Indian Writing in English, Ecocriticism, Travel Writing</i>
Bashabi Gogoi, M. Phil. (EFLU, Shillong)	<i>Critical Theory, Indian Writing in English</i>
Arup Kumar Nath,\$ Ph.D. (JNU)	<i>Language Typology, Morphology, Language Endangerment, Multilingualism, Sociolinguistics</i>
Bipasha Patgiri, M.Phil. (JNU)	<i>Phonology (Prosody, Dialectology, Language Typology and Syntax)</i>
Esther Daimari, M. Phil. (GU)	<i>South Asian Literature</i>
Pramod Kumar, Ph.D. (JNU)	<i>Language Description and Documentation, Endangered Languages and Lesser known Languages, Language, Typology, Field Linguistics, General Linguistics</i>

Nigshen Zingjarwon, M.Phil (Chinese) (JNU)	<i>Chinese Language and Literature</i>
Bidyum Medhi, M.Phil (German) (JNU)	<i>German Language and Literature</i>
Abhisek Sarkar, M.Phil. (CU)	<i>Cognitive Linguistics, Computational Linguistics, Construction Grammar, Pragmatics</i>

*** Recognized Supervisor; \$ Recognized Associate Supervisor**

LEGENDS: **DU**-Dibrugarh University, **UU**-Utkal University, Odisha, **GU**-Gauhati University, **TU**-Tezpur University, **NTNU**-Norwegian University of Science and Technology, Norway, **NEHU**- North Eastern Hill University, Shillong, **EFLU**- English and Foreign Language University, **DU**[^]-Delhi University, **JNU**- Jawaharlal Nehru University, New Delhi, **UoHyd**-University of Hyderabad, **CU**-Calcutta University, **HoD**-Head of the Department.

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) 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 number of Video CDs on library texts.

The Department has a small Computer Laboratory for the use of students and research scholars.

Research Activities

No. of papers published in the year 2014-2015: 15

No. of ongoing projects : 02

No. of current Ph.D. scholars: 33

Selected Publications

1. Barbora, M. *Bugun Nyo Thau: Bugun Reader (A collection of Bugun folk tales, stories, proverbs, song, rituals and lexical items)*, EBH Publishers (India), 2015.
2. Borah, G. K. *The Fox or Mr Fox? (On Particularization of the Bare Noun)*, *Journal of Modern Languages*, 24, 62—70, 2014.
3. Medhi, H. Diversity and Questions of Alliance, in *Gender and Diversity: India, Canada and Beyond*, M. Lal, M. E. Sharma, D. Narula and A. Basra (eds.), Rawat Publishers, Jaipur, 24—259. 2015.
4. Mohapatra, D. Higher Education: Global Challenge and Local Response, in *English Language Teaching in the Twenty First Century: Issues and Challenges*, T. Karunakaran (ed.), Kumaran Book House, Colombo, Sri Lanka., 129—137, 2014.
5. Sarkar, A. Speaking for the Mute: A Note on Translation and Endangerment, in *Studies in Literature and Translation*, S. K. Mishra and A. K. Mishra (eds.), Lakshmi Publication, New Delhi, 14—25, 2014.

For more information one can visit the departmental website <http://www.tezu.ernet.in/deng>

ENVIRONMENTAL SCIENCE (Year of Establishment: 2004)

Initially established as a centre for Environmental Science in 2003, the centre was converted to the Department of Environmental Science in 2004, 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. Areas of research include Environmental pollution, Greenhouse gas emission, Riverine hazards, Climate, Geomorphology, Atmospheric processes, Vulnerability & Adaption, Hydrogeochemistry, Vermicomposting, Pollution remediation and Biodiversity conservation.

Programmes offered

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

Faculty and Areas of Interest

Professors

Kushal Kumar Baruah,* Ph.D. (PAU)	<i>Environmental Plant Physiology and Biochemistry</i>
Kali Prasad Sarma,* Ph.D. (NEHU)	<i>Water and Soil Pollution, Hydro-geochemistry, Remediation of Toxic Substances</i>

Associate Professors

Raja Rafiqul Hoque,* Ph.D. (JNU)	<i>Air Pollution and Environmental Monitoring and Assessment</i>
Apurba Kumar Das,* Ph.D. (JNU)-HoD	<i>Geomorphology, Regional Climate</i>

Assistant Professors

Ashalata Devi,* Ph.D. (NEHU)	<i>Forest Ecology, Wildlife and Biodiversity Conservation</i>
Nirmali Gogoi,* Ph.D. (DU)	<i>Stress Physiology and Biochemistry</i>
Satya Sundar Bhattacharya,* Ph.D. (VB)	<i>Vermiculture, Plant Nutrition and Soil Fertility Management</i>
Manish Kumar,* Ph.D. (UT)	<i>Hydro-geochemistry, Groundwater Modeling, Contaminant Transport, Heavy Metal Speciation, Isotope Fingerprinting, Soil and Water Pollution</i>
Sumi Handique, M.Sc. (JNU)	<i>Geochemistry</i>
Amit Prakash,* Ph.D. (JNU)	<i>Atmospheric Processes; Air and Noise Pollution Monitoring and Modelling Environmental System Modelling, Urban Climate</i>
Sudip Mitra,* Ph.D. (IARI)	<i>Environmental Science - Environmental Chemistry</i>

* Recognized Supervisor

LEGENDS: PAU-Punjab Agricultural University, NEHU-North Eastern Hill University, Shillong, JNU-Jawaharlal Nehru University, New Delhi, DU-Dibrugarh University, VB-Visva Bharati, Santiniketan, UT-The University of Tokyo, IARI-Indian Agricultural Research Institute, New Delhi, HoD-Head of the Department.

Facilities

The Department has a sophisticated instrumentation laboratory to facilitate research and other academic activities. The laboratory has equipment, like ICP-OES, Laser Leaf Area Meter with Root Measurement Attachment, Light Meter, Portable Photosynthesis Systems, Gas Chromatographs, Ion Chromatograph, TOC Analyzer, Continuous Air Pollution Monitoring Station, UV-Visible Spectrophotometer, Ion meter, Repairable dust sampler and Flame Photometer, GIS laboratory and Plant Culture House.

Research Activities

No. of papers published in the year 2014-15: 57

No. of ongoing research projects: 18

No. of current Ph.D. scholars: 54

Selected Publications

1. Baroowa, B., Gogoi, N., Paul, S. and Baruah, K.K. Response of leaf water status, stomatal characteristics, photosynthesis and yield in black gram and green gram genotypes to soil water deficit, *Functional Plant Biology*, 42(10), 1010—1018, 2015.
2. Das, P., Sarma, K. P. and Kumar, M. Understanding of chemical speciation of lead, zinc and copper in vertical profile of the sediments of the Brahmaputra river, Assam, India, *Asian Journal of Water, Environment and Pollution*, 12(1), 21—28, 2015.
3. Dutta, G. and Devi, A. Phenology and population structure of six tree species in tropical forest of Assam, northeast India, *Tropical Ecology*, 56(3), 393—399, 2015.
4. Hussain, K. and Hoque, R. R. Seasonal attributes of urban soil PAHs of the Brahmaputra Valley, *Chemosphere*, 119, 794—802, 2015.
5. Punia, M., Nain, S., Kumar, A., Singh, B. P., Prakash, A., Kumar, K. and Jain, V. K. Analysis of temperature variability over north-west part of India for the period 1970—2000, *Natural Hazards*, 75(1), 935—952, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/denvsc>

FOOD ENGINEERING AND TECHNOLOGY

(Year of Establishment: 2006)

The Department was established in the year 2006 with the name of Department of Food Processing Technology for imparting Post Graduate education in the area of food processing and engineering. With the introduction of B.Tech. programme in Food Engineering and Technology (FET) in the year 2010, it was renamed as the Department of Food Engineering and Technology. The vision of the Department is to create trained and skilled human resources to cater to the needs of the rapidly growing food processing sectors in India. The programmes offered at the Department aim at imparting the students both with skills and knowledge to succeed as entrepreneurs and professionals. The students are exposed to the rigors of working environment of food processing industries through training and visits as a part of their course work.

The Department has the support of the Ministry of Food Processing Industries (MoFPI), Govt. of India, under HRD grant for establishing laboratories to conduct PG and UG courses in Food Engineering and Technology, and for establishing a Quality Control Laboratory. The Department of Science and Technology (DST), Govt. of India has granted support to strengthen the Post Graduate teaching and Research under its FIST programme. Department is already recommended to be covered under UGC-SAP (DRS-I). AICTE has supported running AICTE approved courses at the department through the scheme of AICTE NEQIP GATE qualified M.Tech students receive PG Scholarship of MHRD. One of the bright B. Tech students is considered for fellowship under GE Foundation's Scholar leader programme.

Research activities at the Department are supported by various sponsoring agencies like MoFPI, DST, DBT, UGC, and DRDO etc. Various projects carried out at the Department aims at developing effective and low cost technologies for the society. Some developed food products have also been patented by the faculties. Workshops and seminars are organized regularly in the Department for knowledge sharing among peers as well as for motivating local youths to start their own enterprises.

Programmes offered

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

Faculty and Areas of Interest

Professors

Charu Lata Mahanta,* Ph.D. (CFTRI) *Rice Science and Technology, Product Development and Food Quality*

Sankar Chandra Deka,* Ph.D. (HAU) *Food Biochemistry and Food Quality, Fermented Foods*

Associate Professors

Manuj Kumar Hazarika,* Ph.D. (IITKgp)-
HoD *Food Process Modeling, Product Technology Development, Transport Processes in Food Engineering*

Brijesh Srivastava,* Ph.D. (IITKgp) *Process and Food Engineering, Fruits and Vegetable Processing and Machineries, Drying and Dehydration, Unit Operations in Food Engineering*

Nandan Sit, Ph.D. (TU) *Food Engineering, Biochemical Engineering, Oils and Fats, Food and Biotechnology*

Assistant Professors

Poonam Mishra, Ph.D. (TU) *Food Technology*

Laxmikant S. Badwaik, Ph.D. (TU) *Food Engineering and Technology, Fermentation Technology, Cereals and Pulses Technology, Fruits and Vegetables Technology, Food Packaging, Food Safety and Laws*

Dibyakanta Seth, M. Tech. (IITKgp) *Dairy and Food Engineering, Dairy Technology, Unit Operations in Food Engineering, Emerging Trends in Food Process Engineering*

Raj Kumar Duary,* Ph.D. (NDRI)	<i>Isolation and Establishment of Probiotic Organism, Probiotic Food Formulation and Development, Fermentation, Human Cell Culturing</i>
Kshirod Kumar Dash,# Ph.D. (IITKgp)	<i>Food Process Modeling, Transfer process in Engineering, Optimization in Food Engineering</i>
Amit Baran Das, M.S. (IITKgp)	<i>Food Process Modeling, Optimization in Food Engineering, Product Technology Development</i>

*** Recognized Supervisor; #Recognized Co-Supervisor**

LEGENDS: **CFTRI**-Central Food Technological Research Institute, Mysore, **HAU**-Haryana Agricultural University, Hisar, **IITKgp**-Indian Institute of Technology, Kharagpur, **TU**-Tezpur University, **NDRI**- National Dairy Research Institute, Haryana, **HoD**- Head of the Department.

Facilities

The Department is well equipped with processing and analytical equipments and is in the process of procuring many more equipments to make the state of the art facilities. Great emphasis is laid on practical for processing of foods and for analyzing their quality. List of some major equipments available with department are as follows: HPLC, Texture Analyser, Hunter Lab Color Spectrophotometer, Rapid Visco Analyser, UV-Vis Spectrophotometer, Binocular Microscope, Deep Freezer, BOD Incubator, Rotary Vacuum Evaporator, Photoflurometer, Biohazard Safety Cabinet, Lab. Scale Spray Drier, Tray Drier, Drum Drier, Fluidized Bed Drier, Baking Oven, Canning Unit, Food Processing Equipments, Packaging Equipments, Hammer Mill, Ball mill, Laboratory Pasteurizer, Paddy Huller, Paddy Sheller, Laminar Flow, Fruit Crasher, etc.

Research Activities

No. of papers published in the year 2014-15: 50

No. of ongoing research projects: 11

No. of current Ph.D. scholars: 25

Selected Publications

1. Das, P. M., Dutta, G., Barthakur, A. and Mahanta, C. L. Tackling correlated responses during process optimization of rapeseed meal protein extraction, *Food Chemistry*, 170, 62—73, 2015.
2. Dutta, H., Mahanta, C. L., Singh, V., Das, B. B. and Rahman, N. Physical, physicochemical and nutritional characteristics of Bhoja chaul, a traditional ready-to-eat dry heat parboiled rice product processed by an improvised laboratory soaking technique. *Food Chemistry*, 191(5), 152—162, 2015.
3. Khawas, P., Dash, K. K., Das, A. J. and Deka, S. C. Modeling and optimization of the process parameters in vacuum drying of culinary banana (Musa ABB) slices by application of artificial neural network and genetic algorithm. *Drying Technology*, DOI : 10.1080/07373937.2015.1060605, 2015.
4. Rafiq, A., Chowdhary, J., Hazarika, M. K. and Makroo, H. A. Temperature dependence on hydration kinetic model parameters during rehydration of parboiled rice, *Journal of Food Science and Technology*, DOI 10.1007/s13197-015-1790-7, 2015.
5. Sit, N., Deka, S. C. and Misra, S. Optimization of starch isolation from taro using combination of enzymes and comparison of properties of starches isolated by enzymatic and conventional methods. *Journal of Food Science and Technology*, 52(7), 4324—4332, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dfpt>

HINDI (Year of Establishment: 2010)

The Department of Hindi, which was established in January, 2010, offers a Ph.D. programme (in Hindi Literature/ language), M.A. Programme in Hindi, Post Graduate Diploma Programme in Translation (Hindi), CBCT and Modern Indian Language (MIL) for integrated B.A.B.Ed. programme. The Department also offers a Certificate Course in Official Hindi (Level-1) to the employees of the University in order to help them to develop their skill and self-confidence in speaking and writing in Hindi Language.

Programmes offered

1. Post Graduate Diploma in Translation (Hindi)
2. M.A. in Hindi
3. Ph.D.

Faculty and Areas of Interest

Professor	
Ananta Kumar Nath,* Ph.D. (MU)	<i>Medieval Poetry, Folkloristic, Comparative Literature</i>
Associate Professor	
Suryakanta Tripathi,* Ph.D. (BHU)-HoD	<i>Applied Linguistics, Indian Poetics and Folkloristic</i>
Assistant Professors	
Anushabda,* Ph.D. (DU)	<i>Poetry, Poetics, Media and Linguistics</i>
Anju Lata, Ph.D (TU)	<i>Fiction</i>

* Recognized Supervisor

LEGENDS: **MU**-Manipur University, **BHU**-Banaras Hindu University, Uttar Pradesh, **DU**-Delhi University, **TU**-Tezpur University, **HoD**-Head of the Department.

Facilities

The Department has a small Departmental library.

Research Activities

No. of papers published in the year 2014-15 : 07

No. of current Ph.D. scholars: 10

Selected Publications

1. Nath, A. K., *Sandesh Rasak* (A book in Assamese), Bandhav, Guwahati, 2013.
2. Tripathi, S. K. *Lok ka Awalokan*, Arya Prakashan, Gandhi Nagar, New Delhi, 2013.
3. Tripathi, S. K. Shaili Vichar: Hindi Ke Sandarbha Mein, *Ananya*, 8, 48—53, December, 2014.
4. Tripathi, S. K., *Ganesh Chauth*, Vishwavidyalaya Prakashan, Varanasi, 2015.
5. Tripathi, S. K. Yugin Yatharth ka nirmal darpan: Bilesur bakariha, *Samvad*, 10, 257—262, April, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dhindi>

MASS COMMUNICATION AND JOURNALISM (Year of Establishment: 2001)

The Department established in 2001, is engaged in teaching and research in Media and Communication studies. It has been undertaking research in tune with emerging trends in media and communication locally and globally. The thrust areas of the Department are Social Communication, New Media and Audience Studies with laying emphasis on critical understanding of theory and practice. Students as part of their academic curriculum, regularly produce laboratory journals, audio programmes, web designs, brochures, TV news bulletin, corporate videos, documentary films and traditional communication programmes like puppet shows and street plays on a regular basis.

Programmes offered

1. M. A. in Mass Communication and Journalism
2. Ph. D.

Faculty and Areas of Interest

Associate Professors

Abhijit Bora,* Ph.D. (GU)- HoD	<i>Print Journalism, Community Radio, Development Communication, Analytical Journalism, Media Studies, Specialized Reporting, Science Communication</i>
Perumal Anbarasan, Ph.D. (JNU)	<i>Media Studies, Cultural and Subaltern Studies, International Communication, Film Studies</i>

Assistant Professors

Joya Chakraborty,* Ph.D. (UoHyd)	<i>ICT for Development, Development Communication, Women and Media; Traditional Media</i>
Uttam Kumar Pegu,# Ph.D. (JMI)	<i>ICT Implications on Society, Science Communication, Film Studies, Media Analysis</i>
Bala Lakhendra,# Ph.D. (TU)	<i>Radio, Youth and Rural Development, Traditional Media, Public Relation and Development Communication, Coastal Environment</i>
A Nagaraj, Ph.D. (TU)	<i>Electronic Media Production, Documentary Filmmaking, Television Production and Advertising</i>
Anjuman Borah, M.A. (TU)	<i>Development Communication, Television and Traditional Media</i>
Perosh Jimmy Daimari, M.A. (TU)	<i>Film Studies, Development Communication</i>
Kapou Malakar, M. A. (JMI)	<i>New Media for Development, Multimedia Journalism, Political Communication, Online Journalism, Media Studies, Film Studies</i>

***Recognized Supervisor # Recognized Co-supervisor**

LEGENDS: **GU**-Gauhati University, **JNU**-Jawaharlal Nehru University, New Delhi, **UoHyd**-University of Hyderabad, **JMI**-Jamia Millia Islamia, New Delhi, **TU**-Tezpur University, **HoD**-Head of the Department.

Facilities

The Department has a spacious exclusive three-story building and is endowed with specialized high-end equipments for print, TV, Radio and web journalism. These include industry grade HD 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 very good screening room with a 100-seat capacity is available for screening and discussion.

Research Activities

No. of papers published in the year 2014-15 : 10

No. of current Ph.D. scholars: 14

Selected Publications

1. Bora, A. India at 21st century: resurgent media versus freedom of expression, in *Transparency in public affairs: The role of the press* (Souvenir of the Press Council of India on National Press Day, Nov. 16), 41—43, 2014.
2. Anbarasan, P. and Ratnamala, V. Images of violence in northeast India and national press: a case study of Bodos and Bengali speaking Muslims ethnic conflict, *Contemporary Discourse*, 6(1), 5—17, 2015.
3. Pegu, U. The paradox of sustainable development: understanding the socio-cultural impact of dam-induced development in northeast India, *Hilarian Ray*, 3, 31—35, 2015.
4. Chakraborty, J., Borah, A. and Hazarika, M. From fractures to frames: conflict reporting in newspapers of Assam, *Global Media Journal*, 6(1), 2015.
5. Bora, A. Sampratik Sangbad Madhyam: Chapa Tatha Vaidyutin (Present Day Journalism : Print versus Electronic), *Gariyoshi*, XXII(12), 8—10, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dmass>

MATHEMATICAL SCIENCES (Year of Establishment: 1994)

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 Probability distributions, Optimization theories, Number theory (Algebraic and Analytic), Operator theory, Fuzzy topology, Finite element method, Algebraic graph theory, Algebra (Group Theory and Ring Theory) etc. The Department is currently supported by the UGC under its SAP (DRS-I) scheme and DST-FIST grant .

Programmes offered

1. Integrated B.Sc.B.Ed. in Mathematics (Major - Mathematics)
2. Integrated M.Sc. in Mathematics
3. M.Sc. in Mathematics
4. Ph.D.

Faculty and Areas of Interest

Professors

Munindra Borah,* Ph.D. (GU)	<i>Discrete Distribution, Combinational Optimization, Genetic Algorithms, Numerical Analysis</i>
Nayandeep Deep Baruah,* Ph.D. (TU)	<i>Number Theory, Ramanujan's Mathematics</i>
Debajit Hazarika,* Ph.D. (JMI)	<i>General Topology, Fuzzy Sets and Applications</i>
Munmun Hazarika,* Ph.D. (TU)	<i>Functional Analysis, Operator Theory</i>
Milan Nath,* Ph.D. (IITG)	<i>Ordinary Graph Spectra, Inverse Eigen Value Problem</i>

Associate Professors

Bhim Prasad Sarmah., Ph.D. (GU)- HoD	<i>High Energy Astrophysics, Relativity</i>
Bhupen Deka,* Ph.D. (IITG) (on lien)	<i>Numerical Functional Analysis</i>
Santanu Dutta,* Ph.D. (TU)	<i>Statistics (Non-parametric)</i>
Dhiren Kumar Basnet,* Ph.D. (DU)	<i>Algebra</i>
Shuvam Sen,* Ph.D. (IITG)	<i>Computational Fluid Dynamics</i>

Assistant Professors

Rajib Haloi,* Ph.D. (IITK)	<i>Abstract Differential Equations</i>
Bipul Kumar Sarmah, Ph.D. (TU)	<i>Theory of Partitions, Ramanujan's Mathematics</i>
Rajat Kanti Nath,* Ph.D. (NEHU)	<i>Theory of Finite Groups</i>
Debajit Kalita,* Ph.D. (IITG)	<i>Algebraic Graph Theory</i>
Deepjyoti Goswami, Ph.D. (IITB)	<i>Finite Element Method</i>
Somnath Paul, Ph.D. (TU)-Ad-hoc	<i>Spectral Graph Theory</i>
Surya Sekhar Bose, M.Sc. (AU)-Ad-hoc	<i>Spectral Graph Theory</i>
Pankaj Kumar Das, M.Sc. (DU [^])	<i>Coding Theory</i>

* Recognized Supervisor

LEGENDS: *GU*-Gauhati University, *TU*-Tezpur University, *JMI*-Jamia Millia Islamia, New Delhi, *IITG*-Indian Institute of Technology Guwahati, *DU*-Dibrugarh University, *IITK*-Indian Institute of Technology Kanpur, *NEHU*- North Eastern Hill University, Shillong, *IITB*-Indian Institute of Technology Bombay, *AU*-Anna University, Chennai, *DU[^]*-Delhi University, **HoD**-Head of the Department.

Facilities

The Department has a computer laboratory established with financial assistance from the DST and UGC. Various Mathematical software are available in the laboratory. The laboratory is fully networked and it is linked with the Central Computer Center via LAN with access to the INTERNET. One Systems Analyst and one Technical Assistant look after the computational and networking facilities of the department. The laboratory is being fully upgraded under DST-FIST grant.

Research Activities

No. of papers published in the year 2014-2015: 34

No. of ongoing research projects: 03

No. of current Ph.D. scholars: 21

Selected Publications

1. Baruah, N. D. and Sarmah, B. K. Generalized Frobenius partitions with 6 colors, *The Ramanujan Journal*, 38, 361—382, 2015.
2. Dutta, S. Local smoothing for kernel distribution function estimation. *Communications in Statistics- Simulation and Computation*, 44(4), 878—891, 2015.
3. Kalita, D. Properties of first eigenvectors and first eigenvalues of nonsingular weighted directed graphs. *Electronic Journal Linear Algebra*, 30, 227—242, 2015.
4. Nath, M. and Paul, S. On the spectra of graphs with edge-pockets, *Linear and Multilinear Algebra*, 63, 509—522, 2015.
5. Sen, S. and Kalita, J. C. A 4OEC scheme for the biharmonic steady Navier-Stokes equations in non-rectangular domains. *Computer Physics Communication*, 196, 113—133, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dmaths>

MECHANICAL ENGINEERING (Year of Establishment: 2006)

The Department of Mechanical Engineering was established in the year 2006 under the School of Engineering for offering B. Tech degree in Mechanical Engineering. Subsequently, M.Tech and Ph.D. programmes were started in the year 2013. The vision of the department is to emerge as a centre of excellence producing quality engineers and conducting cutting-edge research.

Programmes offered

1. B. Tech in Mechanical Engineering
2. M. Tech in Mechanical Engineering (Specialization: Applied Mechanics)
3. Ph.D.

Faculty and Areas of Interest

Associate Professors

Dilip Datta,* Ph.D.(IITK)	<i>Design, Optimization and Operational Research</i>
Tapan Kumar Gogoi,* Ph.D. (TU)- HoD	<i>Thermal, Energy and Environment Engineering</i>
Partha Pratim Dutta, Ph.D. (TU)	<i>Energy and Thermal Engineering</i>

Assistant Professors

Paragmoni Kalita, M. Tech. (BHU)	<i>Computational Fluid Dynamics , High speed flows</i>
Polash Pratim Dutta, ME (BIT)	<i>CAD, Laser Forming, Mechatronics, Soft Computing</i>
Sushen Kirtania, M. Tech (IITG)	<i>Composite Materials, Carbon Nanotubes, Carbon Nanotubes Based Composites, Finite Element Method, Fracture Mechanics</i>
Prabin Haloi, ME (GU)	<i>Fluid and Thermal Engineering</i>
Sanjib Banerjee,* Ph. D. (IITG)	<i>Materials and Manufacturing</i>
Monoj Bardalai, ME(GU)	<i>Thermal Engineering, Renewal Energy Conversion</i>
Satadru Kashyap, M.Sc. (Engg.) (UA)	<i>Manufacturing and Materials Science</i>
Zahnupriya Kalita, ME (AIT)	<i>Mechatronics</i>
Rakesh Bhadra, ME (BESUS)	<i>Manufacturing, Production Engineering</i>
Barnali Chowdhury, ME (AEC)	<i>Thermal Engineering</i>
Anup Paul, Ph.D. (IITM)	<i>Fluid and Thermal Engineering, Laser Mediated Hyperthermia Treatment, Bio-heat Transfer</i>

*Recognized Supervisor

LEGENDS: **IITK**-Indian Institute of Technology Kanpur, **TU**-Tezpur University, **BHU**-Banaras Hindu University, Uttar Pradesh, **BIT**- Birla Institute of Technology, Jharkhand, **IITG**-Indian Institute of Technology Guwahati, **GU**-Gauhati University, **UA**-University of Alberta, Canada, **AIT**- Asian Institute of Technology, Bangkok, **BESUS**-Bengal Engineering and Science University , West Bengal, **AEC**- Assam Engineering College, Guwahati, **IITM**- Indian Institute of Technology Madras, **HoD**- Head of the Department.

Facilities

CAD Laboratory

This laboratory is equipped with computers having server based installed software such as ANSYS -FLUENT combo, FLUENT 6.3 teaching version and Pro-E Wildfire 3.0 version. At present the laboratory has two servers and 25 computers for use of both students and academic staff.

Fluid Mechanics Laboratory

This laboratory is equipped with hydraulic bench, discharge through orifice apparatus, Bernoulli's apparatus, flow meter apparatus, impact of jet apparatus, discharge over weir and notch attachments, energy losses in pipelines, Reynolds apparatus, and Multi-function measuring instrument (pressure, temperature, velocity, relative humidity, CO, CO₂ concentration) with relevant sensors.

Theory of Machine Laboratory

This laboratory is equipped with universal governor apparatus, static and dynamic balancing equipment, whirling of shaft apparatus, apparatus for influence of inertia upon velocity and acceleration, and gyroscope apparatus.

Strength of Materials Laboratory

This laboratory is equipped with Rockwell hardness tester, Brinell hardness tester, Vickers hardness tester, impact testing machine, universal testing machine with computer interfacing, digital torsion testing machine, rotating fatigue machine, creep machine, thin cylinder testing machine, metallurgical polishing machine and digital LCD microscope.

Material Science Laboratory

This laboratory is equipped with metal melting furnace, metallographic cutting machine, metallographic sample mounting machine, metallographic automatic polishing machine, injection molding machine, optical microscope, muffle furnace, and hot air oven.

IC Engine/Automobile Laboratory

This laboratory has three setups - computerized single cylinder 4 stroke diesel engine, diesel smoke-meter, and a petrol car (Model ESTEEM).

Kinematics Laboratory

In this laboratory, there are various types of models of different mechanisms, like shaper model, clutch model, Oldham coupling model, gear drive, belt drive, chain drive, etc.

Turbo-Machinery Laboratory

One centrifugal pump unit and one plunger pump unit with computer interface has been installed in this laboratory. One turbine service unit and a Francis turbine with computer interface have also been installed recently.

Vibration Laboratory

This laboratory has one universal vibration apparatus which can be used for performing thirteen numbers of experiments.

Metrology laboratory

Instruments such as plunger type dial indicator, lever type dial indicator, external micrometer, universal bevel protractor, vernier caliper, sine vice, slip gauge, surface plate, surface roughness tester, digital micrometers of different types of various ranges, depth gauge, filler gauge, pitch gauge, and radius gauge are available in this laboratory.

Thermal and Renewable Energy Laboratory

The equipment available in this laboratory are biodiesel manufacturing unit, bomb calorimeter, viscometer, density meter, flash and fire point apparatus, distillation apparatus, carbon residue apparatus, pour point and cloud point apparatus, copper strip corrosion apparatus, various cut section models (diesel engine, gear box, differential gear, steam engine models, pneumatic cylinder model), fixed bed pyrolysis oil production set-up (under installation), biomass gasifier, 100% producer gas engine generator test rig, gas chromatograph, hot wire anemometer, micro-manometer, fluidized bed dryer, pitot tube, and different energy efficient solar air heater.

Central Workshop

This is a central facility well equipped with CNC lathe machine, CNC milling machine, high speed precision lathe machine, conventional lathe machines, shaping machine, vertical milling machine, horizontal milling machine, universal milling machine, high precision surface grinding machine, universal tool and cutter grinder, radial drilling machine, pillar drilling machine, double ended pedestal grinding machine, slotting machine, arc welding machine, oxyacetylene gas welding setup, TIG welding and MIG welding machine, power hacksaw, sheet bending roller machines, plate bending machine, manual shearing machine, cutting force dynamometer, etc.

Research Activities

No. of paper published in the year 2014-2015: 28

No. of ongoing research projects: 04

No. of current Ph.D. scholars: 08

Selected Publications

1. Bardalai, M. and Mahanta, D. K. A review of physical properties of biomass pyrolysis oil, *International Journal of Renewable Energy Research*, 5(1), 278—286, 2015.
2. Gogoi, T. K., Pandey, M. and Das, R. Estimation of operating parameters of a reheat regenerative power cycle using simplex search and differential evolution based inverse methods, *Energy Conversion and Management*, 91, 204—218, 2015.
3. Kirtania S. and Chakraborty, D. Failure analysis of carbon nanotube/epoxy composites having a broken carbon nanotube, *Journal of Reinforced Plastics and Composites*, 34(13), 1639—1647, 2015.
4. Pathak, H., Das, S., Doley, R., and Kashyap, S. Optimization of cutting parameters for AISI H13 Tool steel by Taguchi method and artificial neural network, *International Journal of Materials Forming and Machining Processes*, 2(2), 47—65, 2015.
5. Steiner, M. T. A., Datta, D., Neto, P. J. S., Scarpin, C. T. and Figueeira, J R. Multi-objective optimization in partitioning the healthcare system of Parana State in Brazil, *Science Omega - The International Journal of Management Science*, 52, 53—64, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dmech>

MOLECULAR BIOLOGY AND BIOTECHNOLOGY

(Year of Establishment: 1997)

The Department of Molecular Biology and Biotechnology (MBBT) was established in the year of 1997 with the objectives to create quality human resource and to engage in quality research work in the challenging and frontier area of modern biotechnology. The Department has close linkage with the industry and academic institute of the country.

The current research activities in the Department include molecular genetic analysis of various human diseases/disorders, microbial, environmental and petroleum biotechnology, snake venom biochemistry, enzymology and enzyme technology, medicinal plants, immunology, immune genetics and evolutionary genetics, computational biology, nano biotechnology, plant microbe interactions, cancer genetics and chemoprevention, and molecular virology.

The Department of MBBT is supported by UGC-SAP (DRS-II), DST-FIST and DBT strengthening project. Department also houses Bioinformatics infrastructure facility (DBT-BIF) for computational research and DBT-HUB to impart training on molecular biology to students and faculty members. The Department has ONGC-Centre for Petroleum Biotechnology.

Programmes offered

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

The students admitted to the M.Sc. Programme are eligible for monthly fellowship of Rs. 3000/- only (for detailed information please visit: <http://www.tezu.ernet.in/dmbbt>) by the DBT supported M.Sc. Biotechnology teaching programme.

Faculty and Areas of interest

Professors

Bolin Kumar Konwar,* Ph.D. (IC), On-lien as V.C. of NU	<i>Petroleum Biotechnology, Plant Biotechnology, Genetic Engineering and Metagenomics, Bioenergy</i>
Alak Kumar Buragohain,* Ph.D. (IC) On-lien as V.C. of DU	<i>Drug Discovery from Medicinal Plants, Diatom Nanotechnology, Plant Biotechnology, Evolutionary Genomics, Petroleum Biotechnology</i>
Ashis Kumar Mukherjee,* Ph.D. (BU)	<i>Snake Venom Biochemistry and Microbial Biotechnology</i>
Sashi Baruah,* Ph.D. (PGIMER)	<i>Innate Immunity and Immunogenetics ((Heterogeneity and Evolution of Immune Responses)</i>

Associate Professors

Suvendra Kumar Ray,* Ph. D. (CCMB)- HoD	<i>Molecular Plant -Microbe Interactions, Molecular Evolution</i>
Manabendra Mandal,* Ph.D. (IGIB)	<i>Probiotics and Nutrition, Microbial Biofilm, Bioenergy</i>
Anand Ramteke,* Ph.D. (JNU)	<i>Cancer Genetics and Chemoprevention</i>
Robin Doley,* Ph.D. (TU)	<i>Anti-haemostatic Proteins from Snake Venom and Hematophagus Insect</i>

Assistant Professors

Tapas Medhi,* Ph.D. (IITKgp)	<i>Enzymology and Bioprocess Engineering</i>
Eshan Kalita,* Ph.D. (NIPGR-GU)	<i>Nanobiotechnology and Plant Functional Biology</i>
Surya Prakash G. Ponnampalani,* Ph.D. (LVPEI-UoHyd)	<i>Molecular Genetics and Disease Biology of Various Human Diseases/ Disorders</i>
Anupam Nath Jha,* Ph.D. (IISc)	<i>Computational Biophysics, Bioinformatics</i>
Rupak Mukhopadhyay,* Ph.D. (IACS-JU)	<i>Cellular and Molecular Biology (Sub Areas: Inflammation, Cardiovascular Disease), Microbial Biotechnology</i>
Sougata Saha,* Ph.D. (IISc)	<i>Cellular and Molecular Biology (Protein Arginylation and its Role in Cellular Function, Obesity)</i>
Nima D. Namsa,\$ Ph.D. (IISc)	<i>Molecular Biology of Rotavirus</i>
Suman Dasgupta,* Ph.D. (VB)	<i>Insulin Resistance and Type 2 Diabetes</i>
Mattaparathi V. Satish Kumar,* Ph.D. (IITG)	<i>Computational Biotechnology and Bioinformatics</i>
Jyoti Prasad Saikia, Ph. D (TU)- Ad-hoc	<i>Plant Biotechnology</i>

* Recognized Supervisor; § Recognized Associate Supervisor

LEGENDS: *IC*-Imperial College, London, *NU*-Nagaland University, *DU*-Dibrugarh University, *BU*-Burdwan University, West Bengal, *PGIMER*-Post Graduate Institute of Medical Education and Research, Chandigarh, *CCMB*-Centre for Cellular and Molecular Biology, Hyderabad, *IGIB*-Institute of Genomics and Integrated Biology, Delhi, *JNU*-Jawaharlal Nehru University, New Delhi, *TU*-Tezpur University, *IITKgp*-Indian Institute of Technology Kharagpur, *NIPGR*-National Institute of Plant Genome Research, New Delhi, *GU*-Gauhati University, *LVPEI*-L.V. Prasad Eye Institute, Hyderabad, *UoHyd*-University of Hyderabad, *IISc*-Indian Institute of Science, Bangalore, *IACS*-Indian Association for the Cultivation of Science, Kolkata, *JU*-Jadavpur University, Kolkata, *VB*-Visva Bharati, Santiniketan, *IITG*-Indian Institute of Technology Guwahati, *HoD*-Head of the Department.

Facilities

The Department has several sophisticated instruments like, Automated DNA sequencer, UHPLC, FPLC, HPLC systems, Real Time PCR Bioanalyzer, Spectrofluorimeter, Immunofluorescence Microscope, GC mass spectrometer and Fermenter. Department is equipped with a cold room, animal and plant cell culture facilities, animal experimentation laboratory and Bioinformatics facility. Apart from these individual; faculty research laboratories are well equipped to carry out advance research.

Research Activities

No. of papers published in the year 2014-2015 : 139

No. of ongoing research projects: 22

No. of current Ph.D. scholars: 55

Selected Publications

1. Deka, B., Mandal, M., Kumar, M. V. S., Doley, R., Naglot, A., Baruah, I., Veer, V. and Namsa, N. D. Green synthesis, characterization and antibacterial activity of silver nanoparticles using aqueous leaf extract of *Artemisia annua* L, *International Journal of Nanomedicine*, in press, 2015.
2. Dutta, M. and Kumar, M. V. S. Inhibition of amyloid fibrils formation as well as disassembly of amyloid fibrils in Alzheimer's disease using the poly-ion, single stranded nucleotide sequence: an in silico study, *Journal of Proteins and Proteomics* (Special issue on Biophysics in India), 6(1), 2015.
3. Dutta, A., Saikia, N., Phukan, J., Baruah, M. N. and Baruah, S. Negative regulation of natural killer cell in tumour tissue and peripheral blood of oral squamous cell carcinoma, *Cytokine*, doi:10.1016/j.cyto.2015.09.006, 2015.
4. Majumdar, S., Dutta, S., Das, T., Chattopadhyay, P. and Mukherjee, A. K. Antiplatelet and antithrombotic activity of a fibrin(ogen)olytic protease from *Bacillus cereus* strain FF01, *International Journal of Biological Macromolecules*, 79, 477—489, 2015.
5. Sharma, M., Krishnamurthy, I. J., Kini, R. M. and Doley, R. Unveiling the complexities of *Daboia russelii* venom, a medically important snake of India, by tandem mass spectrometry, *Toxicon*, doi:10.1016/j.toxicon.2015.06.027, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dmbbt>

PHYSICS

(Year of Establishment: 1998)

Department of Physics offers studies in various fields of physics leading to postgraduate and doctoral degree. The research interests of the faculty falls in various areas of condensed matter physics, photonics, high energy physics, microwaves, plasma physics, astrophysics, neutrino physics and nanoscience & technology. The Department is also working in association with other institutes like IUCAA Pune, CMACs Bangalore, IIT Guwahati, CAT Indore, VECC Kolkata, SAMEER Mumbai, University of Southampton UK, Queen's University Belfast, University of Tokyo Japan, Max Planck Institute Germany and others. The Department of Physics is a UGC-SAP, DST-FIST and ISRO supported Department.

The department provides a conducive and rigorous research environment. Course work in the chosen research areas is mandatory for all the doctoral students.

Programmes offered

1. Integrated B.Sc.B.Ed. in Physics (Major-Physics)
2. Integrated M. Sc. in Physics
3. M. Sc. in Physics
4. M. Sc. in Nanoscience and Technology
5. Ph. D.

Faculty and Areas of Interest

Professors	
Rajpal S. Sirohi, Ph.D. (IITD), Bharat Ratna Lokapriya Gopinath Bordoloi Chair Professor	<i>Optics, Optical Instrumentation, Laser Application, Optical Metrology</i>
Amarjyoti Choudhury,*Ph.D. (OU), Pro V.C.	<i>Condensed Matter Physics, Laser Physics, Quantum Electronics, Nano-science</i>
Ashok Kumar,* Ph.D. (IITK)	<i>Condensed Matter Physics, Solid State Ionics</i>
Jayanta Kumar Sarma,* Ph.D. (GU)	<i>Theoretical High Energy Physics, Particle Physics</i>
Nidhi Saxena Bhattacharyya,* Ph.D. (DU^)	<i>Microwave Devices, Antennas and EMI Materials</i>
Nilakshi Das,* Ph.D. (GU)	<i>Plasma Physics</i>
Associate Professors	
Gazi Ameen Ahmed,* Ph.D. (GU)- HoD	<i>Laser Physics, Optoelectronics</i>
Dambarudhar Mohanta,* Ph.D. (TU)	<i>Condensed Matter Physics, Nanoscience</i>
Pritam Deb,* Ph.D. (JU)	<i>Nanoscience and Nano Technology, Physics of Materials</i>
Pralay Kumar Karmakar,* Ph.D. (GU)	<i>Plasma Physics, Astrophysics, Nonlinear Dynamics</i>
Mrinal Kumar Das,* Ph.D. (GU)	<i>Theoretical High Energy Physics, Nuclear Physics</i>
Pabitra Nath,* Ph.D. (GU)	<i>Photonics</i>
Assistant Professors	
Ng K. Francis, Ph.D. (GU)	<i>Particle Physics Phenomenology and Particle Cosmology</i>
Rajib Biswas,# Ph.D. (DU)	<i>Fiber Optic Instrumentation, PCFs; Geophysical Instrumentation</i>
Amit Pathak,* Ph.D. (GU^)	<i>Molecular Astrophysics of Polycyclic Aromatic Hydrocarbons (PAHs), Interstellar Dust (Cosmic Dust), UV Astronomy</i>
Rupjyoti Gogoi,* Ph.D. (GU)	<i>Astrophysics</i>
Debasish Borah,* Ph.D. (IITB)	<i>Theoretical High Energy Physics</i>
Shyamal Kumar Das,* Ph.D. (IISc)	<i>Material Science</i>
Ritupan Sarmah, Ph.D. (IISc) -Ad-hoc	<i>Computational Material Science</i>
DST Inspire Faculty	
Arup Jyoti Choudhury, Ph.D. (GU)	<i>Low Temperature Plasma Processing</i>

***Recognized Supervisor, # Recognized Co-supervisor**

LEGENDS: *IITD*-Indian Institute of Technology Delhi, *OU*-Oxford University, *IITK*-Indian Institute of Technology Kanpur, *GU*-Gauhati University, *DU*[^]-Delhi University, *TU*-Tezpur University, *JU*-Jadavpur University, West Bengal, *DU*[^]-Dibrugarh University, *GU*[^]-Gorakhpur University, Uttar Pradesh, *IITB*-Indian Institute of Technology Bombay, *IISc*-Indian Institute of Science, Bangalore, **HoD**-Head of the Department.

Facilities

The Department has a rich collection of setups 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 a 25 MW pulsed, NdYAG laser, high vacuum coating unit, X-band Microwave Bench, Electrochemical Workstation, LCR HiTester Meter, AFM, PPMS, SEM, XRD, Double Distilled water treatment plant, hot air oven, material developing facilities, semiconductor characterization set-up, UV-VIS spectrophotometer, Millipore water purification system, LB film deposition unit, FT-IR, spectrophotometer, vector network analyzer, spin wave instability characterization system, antenna parameter measurement facility, hydraulic press, CNC Milling Machine and other systems. The Department also has high end computational facility to carry out theoretical and astrophysics research work in addition to a departmental library. The department also offers its facilities to the students of other institutes and other departments within the University.

The research activities in the department is supported by University's Sophisticated Instrument and Analytical Centre (SAIC) and the University Library.

Research Activities

No. of papers published in the year 2014-2015 : 90

No. of ongoing research projects: 18

No. of current Ph.D. scholars: 46

Selected Publications

1. Boruah, R., Mohanta, D., Choudhury, A. and Ahmed, G. A. Inverse surface plasmon resonance based effective hydrogen sensing using nanoscale palladium films, *Optical Materials*, 39, 273—277, 2015.
2. Borah, D. and Dasgupta, A. Galactic center gamma ray excess in a radiative neutrino mass model, *Physics Letters B*, 741, 103—110, 2015.
3. Gogoi, M. and Deb, P. Magneto-fluorescent hybrid of dye and SPION with ordered and radially distributed porous structures, *Applied Surface Science*, 298, 130—136, 2014.
4. Sarma, R., Tripathi, S., Misra, R., Dewangan, G., Pathak, A. and Sarma, J. K. Relationship between X-ray spectral index and X-ray Eddington ratio for Mrk 335 and Ark 364, *Monthly Notices of the Royal Astronomical Society*, 448 (2), 1541—1550, 2015.
5. Upadhyay, J., Kumar, A., Gogoi, B. and Buragohain, A. K. Antibacterial and hemolysis activity of polypyrrole nanotubes decorated with silver nanoparticles by an in-situ reduction process, *Material Science and Engineering C*, 54 (1), 8—13, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dphy>

SOCIAL WORK (Year of Establishment: 2014)

The Department of Social Work was started in 2014 with the following objectives:

To create a just and equal society which ensures freedom from all forms of oppression and exploitation.

To develop human resources for competent and effective professional social work practice, teaching and research with diverse range of individuals, groups and communities by using a framework of social justice and human rights focused on sustainable and participatory development.

To impart education and training in Professional Social Work in order to provide human resources in the fields of social welfare, development, and allied areas.

To help students develop knowledge, skills, attitudes and values appropriate to the practices of social work profession.

To enable students to develop critical thinking and the ability to apply theory to field experience.

To evolve an interdisciplinary perspective to enhance understanding of social problems and development issues.

Programme offered

M.A. in Social Work

Faculty and Areas of Interest

Professors	
Sunil Kumar Dutta,* Ph.D. (VB)- HoD	<i>Folklore Studies, Assamese Language and Culture</i>
Mohammed Abdul Kalam, Ph.D. (UM)	<i>Minorities, Ethnicity, Migrations</i>
Assistant Professors	
Veda Yumnam, M.Phil. (JNU)	<i>Health Systems Research, Epidemiology of HIV / AIDS and Social Determinants of Health</i>
Rajesh Kalarivayil, M.Phil. (JNU)	<i>Biomedical Governance, Innovation Studies, Science and Technology in Rural Development</i>
Apurba Saha, Ph.D. (NIMHANS)	<i>Social Work and Mental Health, Psychosocial Care in Disaster Management, Street Children and Application of Social Work Methods</i>

* Recognized Supervisor

LEGENDS: VB-Visva Bharati, Santiniketan, UM-University of Madras, JNU-Jawaharlal Nehru University, New Delhi, NIMHANS-National Institute of Mental Health and Neurosciences, Bangalore, HoD-Head of the Department.

Research Activities

No. of papers published in the year 2014-15 : 04

Selected Publications

1. Dasgupta, R. and Yumnam, V. Social and behavioural sciences in health, in *Text book of Preventive and Social Medicine*, O.P. Ghai and P. Gupta (eds.), Cbs Publishers and Distributors, 2015.
2. Deuri, S. P. and Saha, A. Adolescent mental health and suicide, in *C.A.R.E: Child and Adolescent's Responsive Education: Manual for Parents, Teachers, and Caregivers*, M. Hazarika and B. M. Suresh (eds.), Pathan Hazarika Charitable Trust, 90—102, 2014.
3. Yumnam, V. and Dasgupta, R. Conceptual issues of conflict as a social determinants of health: explorations from Manipur, in *The Art of the Possible: Understanding and Acting on the Social Determinants of Health in India*, D. Nambiar, A. Mularidharan and P. Ganeshan (eds.), Orient Blackswan, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dsw>

SOCIOLOGY

(Year of Establishment: 2006)

The Department of Sociology of Tezpur University was established in 2006 with a Masters programme. Subsequently, it launched a Ph.D. programme in 2008. The Department is dedicated toward nurturing competent and socially sensitive graduates through rigorous teaching and research activities. The faculty members of the Department have a wide range of interests and expertise and are currently engaged in research in areas such as Development, Education, Environment, Ethnic Conflicts, Governance, Health, Migration, Social Movements, Science Studies, etc. The curriculum lays emphasis on teaching and learning of general concerns of sociology as well as issues of sociological significance in northeastern India which constitute a special focus of the teaching and research of the Department. The students pursuing their Masters in the Department not only have to learn critical approaches and perspectives in the classroom but are also encouraged to participate in short field visits during vacations as part of their mandatory research projects. The Department also makes an effort to expose the students to the prevailing social realities through activities such as outreach programmes, regular film screening, seminars and other programmes in collaboration with other social organizations. The Department is currently supported by UGC-SAP (DRS-I).

Programmes offered

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

Faculty and Areas of Interest

Professors

Mohammed Abdul Kalam, Ph.D. (UM)	<i>Migration, Identity Politics, Ethnicity, Environment and Society</i>
Chandan Kumar Sharma,* Ph.D. (DU^)	<i>Social Development, Culture and Media Studies, Environmental Sociology Nationalism</i>

Associate Professors

Rabin Deka,* Ph.D. (DU)	<i>Sociological Theories, Sociology of Movement, Agrarian Sociology</i>
Kedilezo Kikhi,* Ph.D. (NEHU)-HoD	<i>Research Methodology, Gender and Society, Sociology of Northeast India, Tribal Studies</i>

Assistant Professors

Amiya Kumar Das, Ph.D. (TU)	<i>Sociology of Development, Sociology of Health and Illness, Sociology of Governance</i>
Sumesh, S. S,* Ph.D. (UK)	<i>Research Methods, Social Stigma and Exclusion, Community Health, Environmental Movements</i>
Nirmali Goswami,* Ph.D. (IITK)	<i>Sociology of Education, Identity of Politics, Multiculturalism</i>
Sarmistha Das, M.Phil. (JNU)	<i>Gender Studies, Sociology of North East India</i>
Subhadepta Ray, M.Phil. (DU^)	<i>Sociology of Science and Sociology of India</i>
A. S. Shimreiwung, Ph.D. (JNU)	<i>Sociology of Religion, Environmental Sociology, Sociology of Music</i>

* Recognized Supervisor

LEGENDS: **UM**-University of Madras, **DU^**-Delhi University, **DU**-Dibrugarh University, **NEHU**-North Eastern Hill University, Shillong, **TU**-Tezpur University, **UK**-University of Kerala, **IITK**-Indian Institute of Technology Kanpur, **JNU**-Jawaharlal Nehru University, New Delhi, **HoD**-Head of the Department.

Facilities

The Department has a seminar cum screening hall with projection facilities and audio-visual teaching aids. Selected books and photocopied materials of seminal contributions in sociology are available in the Departmental Library. The Department also has a small Computer Laboratory for the use of students and research scholars.

Research Activities

No. of papers published in the year 2014-15: Journal-10, Book Chapters-14

No. of ongoing research projects: 04

No. of current Ph.D. scholars: 22

Selected Publications

1. Das, A. K. Developing inter-sectoral synergies: re-defining state NGO relations in the field of education, *Jamia Journal of Education*, 1(2), 12—21, 2014.
2. Das, A. K., Nigam and Padhi, R. Undermining Adivasi interests, *Economic and Political Weekly*, 50(1), 22—26, 2015.
3. Goswami, N. Costs, security and discipline: gendering the debate on school choice in India, *Indian Journal of Gender and Society*, 22(2), 159—169, 2015.
4. Kikhi, K. and Choudhury, N. Understanding schizophrenic behaviour from a cultural perspective, *Man and Society*, XII, 83—99, 2015.
5. Kikhi, K. and Ghosh, J. Identity and tribal land alienation in northeast India: A sociological viewpoint on changing land relations with reference to Nagaland, *International Journal of Northeast Indian Cultures*, II(2), 24—32, 2015.

For more information one can visit the departmental website <http://www.tezu.ernet.in/dsoc>

SECTION FOUR
ANNEXURES

ANNEXURE I

Prescribed Format of Sponsorship / No Objection Certificate

(Format for Sponsorship / No Objection Certificate)

(The letter should be typed on the Official Letter-Head of the Sponsoring Organization / Employer / Principal Investigator and signed by the Head of the Institution / Principal Investigator)

To

The Controller of Examinations
Tezpur University

Sub: Sponsorship / No objection Certification of Mr./Ms. _____
For Ph.D. programme at Tezpur University.

Dear Sir / Madam,

Mr./Ms. _____ has been working in this organization/

Project as _____ since _____

This organization has no objection to his / her being admitted to the Ph.D. programme at Tezpur University from the session starting from _____ as a part time / full time candidate.

Mr./Ms. _____ is hereby sponsored for carrying out the Ph.D. Programme (only for sponsored candidate).

The employee will be relieved from his/her duties in the organization to join in the Ph.D. Programme (not applicable to project fellow).

Date: _____ Signature _____

Place: _____ Name _____

Designation _____

Seal of the Sponsoring authority / employer

1. Verified by : Signature Date.....

Name:..... Designation.....

2. Recommended / Not Recommended

Signature:

Name:

Chairperson, Selection Committee

Head, Department of

Date.....

ANNEXURE II

Fee Structure for the Ph.D. Programme

Particular Fee	Mode	Ph.D. Full time	Ph.D. (Part Time/ Spon.)
Admission	Once on admission	500	500
Registration	Once on admission	150	150
Identity card	Once on admission	50	50
Convocation	Once on admission	500	500
Provisional certificate	Once on admission	100	100
Alumni Association	Once on admission	500	500
Caution deposit (Library and Laboratory)	Once on admission	2000	2000
Hostel Caution deposit	Once on admission	3000	3000
Hostel Mess Advance	Once on admission in case of Hostel boarder	1500	1500
Hostel admission/re-admission (Single seater for Ph.D. students)	Per semester in case of Hostel boarder	3000	3000
Enrollment	Per semester <i>(w.e.f. 2nd sem. Onward)</i>	500	500
Tuition	Per semester	1500	2000
Library	Per semester	350	350
Students' activity	Per semester	500	500
Medical	Per Semester	250	250
Transport	Per semester	1000	1000
Laboratory (including computer usage)	Per semester	1000	1000
Research Fee	Per semester	3000	4000
Infrastructure and amenity	Per semester	1000	1000
Fan, Electricity and Water charge	Per semester	300	300
Students' Welfare Fund	Per semester	150	150
Development Fund	Per semester	1500	1500
Thesis Examination Fee	At the time of submission of thesis	5000	5000
Consumable Charge <i>(Additional fee for the students of the Depts. of Chem. Sc., MBBT, Physics, Env. Sc. and FET)</i>	Per semester	2000	2000
** Health Insurance	Per annum <i>(Students above 35 yrs. of age are not covered in this scheme)</i>	406	406

* Candidates admitted to the Ph.D. programme in the Departments of Chemical Sciences, Molecular Biology and Biotechnology, Physics, Environmental Science and Food Engineering and Technology will be required to pay an additional fee of **Rs. 2,000/- (Rupees Two thousands)** per semester on account of consumables .

N.B: SC/ST students are exempted from paying hostel seat rent.

ANNEXURE III
IMPORTANT DATES

1	Online portal opens on	November 6, 2015
2	Online application closes on	December 4, 2015
3	Publication of shortlisted names	December 11, 2015
4	Date of written test and interview	December 17 and 18, 2015
5	Date of admission and course registration	January 18 and 19, 2016

ANNEXURE IV

Prescribed Format of OBCNCL Certificate

FORM OF CERTIFICATE TO BE PRODUCED BY OTHER BACKWARD CLASSES APPLYING FOR APPOINTMENT TO POSTS/ ADMISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER THE GOVERNMENT OF INDIA

This is to certify that Shri/Smt./Kum.....
Son/Daughter of Shri/Smt.....
.....of Village/ TownDistrict/Division.....
in the.....Community which is recognized as a backward class under:

- (i) Resolution No. 12012 / 68 / 93-BCC(C) dated 10 / 09 / 93 published in the Gazette of India Extra ordinary Part I Section I No. 186 dated 13 / 09 / 93.
- (ii) Resolution No. 12012 / 9 / 94-BCC dated 19 / 10 / 94 published in the Gazette of India Extra ordinary Part I Section I No. 163 dated 20 / 10 / 94.
- (iii) Resolution No. 12012 / 7 / 95 BCC dated 24 / 05 / 95 published in the Gazette of India Extra ordinary Part I Section-I No.88 dated 25/05/95.
- (iv) Resolution No. 12012 / 96 / 94-BCC dated 9 / 03 / 96.
- (v) Resolution No. 12012 / 44 / 96 -BCC dated 6 / 12 / 96 published in the Gazette of India Extra ordinary Part I Section I No. 210 dated 11 / 12 / 96.
- (vi) Resolution No. 12012 / 13 / 97-BCC dated 03 / 12 / 97.
- (vii) Resolution No. 12012 / 99 / 94-BCC dated 11 / 12 / 97.
- (viii) Resolution No. 12012 / 68 / 98-BCC dated 27 / 10 / 99.
- (ix) Resolution No. 12012 / 88 / 98-BCC dated 06 / 12 / 99 published in the Gazette of India Extraordinary Part-I Section-I No. 270 dated 06 / 12 / 99.
- (x) Resolution No. 12012 / 36 / 99-BCC dated 04 / 04 / 2000 published in the Gazette of India Extraordinary Part-I Section-I No. 71 dated 04 / 04 / 2000.
- (xi) Resolution No. 12012 / 44 / 99-BCC dated 21 / 09 / 2000 published in the Gazette of India Extraordinary Part-I Section-I No. 210 dated 21 / 09 / 2000.
- (xii) Resolution No. 12015 / 9 / 2000-BCC dated 06 / 09 / 2001.
- (xiii) Resolution No. 12012 / 1 / 2001-BCC dated 19 / 06 / 2003.
- (xiv) Resolution No. 12012 / 4 / 2002-BCC dated 13 / 01 / 2004.
- (xv) Resolution No. 12012 / 9 / 2004-BCC dated 16 / 01 / 2006 published in the Gazette of India Extra ordinary Part I Section I No. 210 dated 16 / 01 / 2006.

Shri/Smt./Kum. and/or his family ordinarily reside (s) in the.District/Division of state. This is also to certify that he/she does not belong to the persons/section (Creamy Layer) mentioned in Column 3 of the Schedules of the Government of India. Department of Personnel & Training O.M.No.36012/22/93-Estt.(SCT) dated 08/09/93 which is modified vide OMNo.36033/3/2004Estt.(Res.) dated 09/03/2004.

Dated:.....

District Magistrate/Deputy Commissioner/Competent Authority

Seal

NOTE :

- (a) The term ordinarily used here will have the same meaning as in Section 20 of Representation of the People Act. 1950.
- (b) The authorities competent to issue Caste Certificates are indicated below:
 - (i) District Magistrate/Additional Magistrate/Collector/Deputy Commissioner/Additional Deputy Commissioner/ Deputy Collector/1stClass Stipendiary Magistrate/Sub Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner (not below the rank of 1stClass Stipendiary Magistrate)
 - (ii) Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.
 - (iii) Revenue Officer not below the rank of Tehsil darand
 - (iv) Sub- Divisional Officer of the area where the candidate and/or his family resides.

ANNEXURE V CONTACT DETAILS

All enquiries about academic programmes and requisite qualification should be directed to the office of the Department concerned.

Department/Office	Office number (03712)	Mobile number * (HoDs)	e-mail
Business Administration	275000	94350-15074	hod_ba@tezu.ernet.in
Chemical Sciences	275050	99571-84354	hod_chem@tezu.ernet.in
Civil Engineering	275950	94354-09732	hod_civil@tezu.ernet.in
Computer Science and Engineering	275100	9435084468	hod_cse@tezu.ernet.in
Cultural Studies	275150	9954449460	hod_cul@tezu.ernet.in
Education	275650	9435355351	hod_edu@tezu.ernet.in
Electronics and Communication Engineering	275250	94353-81270	hod_ece@tezu.ernet.in
Energy	275300	99571-84356	hod_ene@tezu.ernet.in
English and Foreign Languages	275200	99544-49463	hod_efl@tezu.ernet.in
Environmental Science	275600	94354-90582	hod_env@tezu.ernet.in
Food Engineering and Technology	275700	94357-00993	hod_fet@tezu.ernet.in
Hindi	275750	94353-84799	hod_hin@tezu.ernet.in
Mass Communication and Journalism	275450	98640-72390	hod_mcj@tezu.ernet.in
Mathematical Sciences	275500	99571-91528	hod_ms@tezu.ernet.in
Mechanical Engineering	275850	94354-71300	hod_mech@tezu.ernet.in
Molecular Biology and Biotechnology	275400	99544-72151	hod_mbbt@tezu.ernet.in
Physics	275550	94350-14377	hod_phy@tezu.ernet.in
Social Work	275830	9435185424	hod_sw@tezu.ernet.in
Sociology	275800	9954449471	hod_soc@tezu.ernet.in

****Mobile Number should be used during office hours and only in case of emergency.***