



TEZPUR UNIVERSITY



PROSPECTUS

Autumn 2019

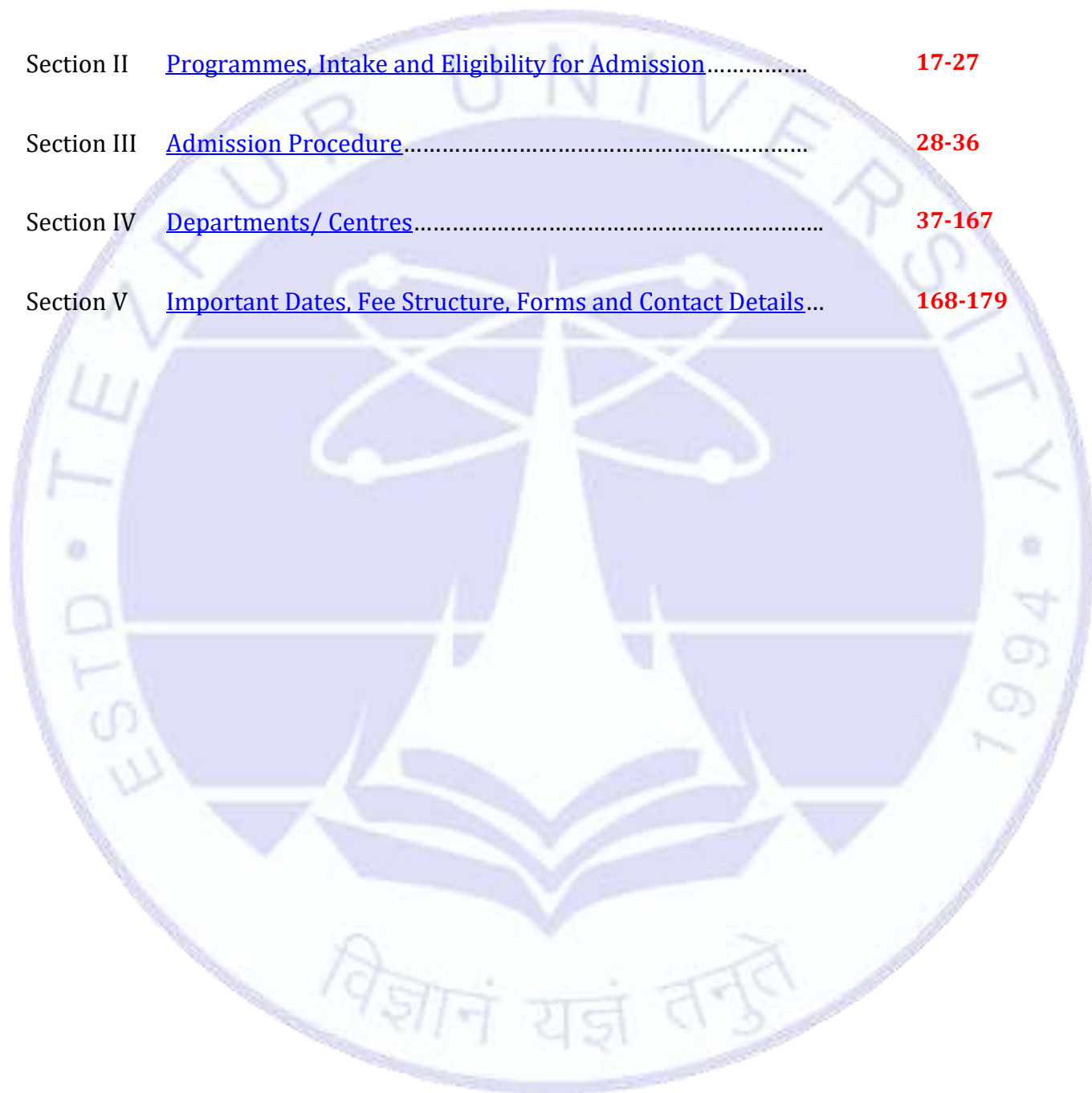
Tezpur University

Napaam, Sonitpur

Assam, INDIA 784028

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The logo of Tezpur University is a circular emblem. The outer ring contains the text 'ESTD • TEZPUR UNIVERSITY' at the top and '1991' at the bottom. The inner circle features a stylized atomic symbol with three elliptical orbits and a central nucleus. Below the emblem, the motto 'विज्ञानं यज्ञं तनुते' is written in Devanagari script.

SECTION- I

General Information about the University

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GENERAL INFORMATION ABOUT THE UNIVERSITY

1.1 :Introduction

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 serene and green University Campus of about 262 acres provides an excellent ambience including modern infrastructure conducive for learning and dedicated research. The academic programmes, offered in the University, have a distinct focus on Science, Technology, Management, Humanities, and Social Sciences, reflecting the objectives of the University. At present, the University offers a number of Programmes of Under-Graduate Degree/Diploma/Certificate, Integrated Programmes, Post-Graduate Degree/Diploma and Doctor of Philosophy Degree in various Disciplines. The University offers Add-on courses on Yoga and Violin too.

During the last twenty four 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 with DG backup and a rich library having connectivity to several digital libraries. While students' accommodation is provided in 15 well-designed hostels (including transit hostels), sufficient number of residential quarters is available for the accommodation of teaching and non-teaching staff. Other basic amenities like central water supply, campus security, guest house, canteen, gymnasium, outdoor and indoor sports facilities, post office, banks with ATMs, schools, swimming pool etc., are also available to cater to the needs of the University community.

Being a Central University, it is privileged to receive funds from the Ministry of Human Resource Development, Government of India, through the University Grants Commission. Faculty members of different academic Departments have been able to receive a large number of research grants amounting to crores of rupees from different funding agencies/organizations. The University promotes industry-academy alliance. The existence of prestigious industry sponsored projects in the University bears testimony to this.

1.2: Awards/Accolades

The University, established in the year 1994, and already completed glorious 25 years has succeeded in achieving a number of prestigious accolades and awards. The National Assessment and Accreditation Council (NAAC), an autonomous Institution of UGC, accredited the University with 'A' Grade for the next five years. The University was accorded the *Visitor's Best University Award* for the year 2016 by the President of India. The University was also ranked 30th among India's top 100 Universities in an assessment conducted by the Ministry of Human Resource Development (MHRD), Govt. of India, through the National Institutional Ranking Framework (NIRF) in 2017. Further, the University is placed in the top 601-800 Universities in the World University Rankings conducted by the Times Higher Education (THE) in 2017. The QS (Quacquarelli Symonds) BRICS University Rankings 2018 which feature 300 top Universities from

Brazil, Russia, India, China and South Africa (BRICS) placed Tezpur University in 146th rank. Tezpur University secured 100th rank in Times Higher Education (THE) Asia University Rankings 2018. The University has also featured in the 20th position in the list of top 20 world's best small universities by Times Higher Education in 2018.

1.3: Facilities and Services

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

Central Library

Central Library is the focal point of all user community of Tezpur University. The Library caters to the educational and research needs of the academic community and its resources are consulted by scholars from all over the country. Central Library has started functioning since 1994. At present, the library holds about 91209 books, 10,000+ journals (print + online), online databases, CDs and 9661 back volumes of journals.

Library is a member of e-ShodhSindhu Consortium, DeLCON consortium and DELNET. Library users can access book database, journal database, e-journals, institutional repository, electronic thesis & dissertations and other e-resources from any terminal within the University campus. Library provides reading facility for 365 days in the year.

The library is continuously striving at to adopt the best practices in all endeavours of its activities. The library is fully computerized with the help of Libsys software & KOHA -open source software that supports all in-house operations of the Library.

Computing Facilities

The University started using computers from its very inception both in its academic and administrative activities. The University has state-of-the-art central computing facilities, in addition to Departmental computer laboratories. Apart from a large number of PCs and servers, the University also has a High Performance Computing Centre (PARAM-TEZ) consisting of 12 TF HPC system with 50TB storage capacity and 3 C-DAC's indigenously built PARAM Shavak having computing capacity of around 3 TF each. All computing facilities are in a high speed campus LAN, which is connected to the Internet through 1-Gbps National Knowledge Network (NKN) optical fiber link. Apart from this, the whole campus is Wi-Fi enabled.

Sophisticated Analytical Instrumentation Centre (SAIC)

The University established the Sophisticated Analytical Instrumentation Centre (SAIC) to cater to the need of various sophisticated equipment for advance 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 in different disciplines.

Centre for Innovation Incubation and Entrepreneurship (CIIE)

The Centre for Innovation Incubation and Entrepreneurship (CIIE) promotes specialized knowledge in the field of entrepreneurship development, innovation and creative ideas. The Centre strives to identify and

motivate talented youths to implement new ideas for the fulfillment of the larger societal objectives. The CIIE also maintains an exhibition hall, called TUNOVATION that showcases various innovations made by students and faculty members as part of their projects/ research works. It also displays collection of cultural antiques of the North East Region including musical instruments, masks and terracotta.

Health Services

The University has a Health Centre to provide health care services to students, faculty members, staff and their families with its own medical and paramedical staff. As of now, the Health Centre has over 5000 beneficiaries, including the people working at the University construction sites. It offers OPD services. One Medical Officer is always available for 24 hours on emergency duty. The cases requiring hospitalization are referred to the referral hospitals at Tezpur. Ambulance service is available round the clock. A stock of common medicines including lifesaving drugs are maintained and supplied free of cost. Routine laboratory investigations are also done free of cost.

Advanced equipment, such as Auto analyser (fully automatic), Hormone Analyser (Mini-Vidas), Ultrasound scanning, ECG and X-ray, required for laboratory investigations are made available at the Health Centre for the benefit of the University community. A set of appliances for person with disability are kept separately.

The University has engaged Specialists of different disciplines (Pediatrics, Obstetrics and Gynecology), who visit the Health Centre on different days of the week on regular basis for the benefit of the University community. Psychiatrist from LGBRIMH also visits the University regularly for offering counseling on stress related problems. One Sonologist visits the Health Centre once a week for ultrasound scanning. One Physiotherapist visits twice a week for physiotherapy related treatment. Besides, annual health checkup for employees, fogging in the campus, pulse polio immunization camps and blood donation camps are organized in the campus as per the directive of the University/Government.

All the students of the University are provided mediclaim coverage for their hospitalized expenditure. A nominal fee for payment of the premium is charged at the time of admission. The mediclaim policy for the students will be effective from the last week of August although the admission process begins quite early.

Student Accommodation

The University provides separate **Hostel** accommodation for men and women students and research scholars, **having more than 3700 capacity**. The University also has a married research scholar's hostel with capacity of accommodating more than 30 married research scholars. **However, hostel seats will be allotted on merit basis as per availability. All the students admitted in the first semester are not expected to get Hostel Accommodation.**

Scholarships

Students of Tezpur University can avail various scholarships offered by Govt. Organizations/ Agencies, such as:

1. Institutional fellowship for meritorious Ph.D. students.
2. UGC Merit Scholarship for SC/ST students pursuing PG level professional courses.
3. PG Indira Gandhi Scholarship for single girl child.

4. UGC Merit scholarship for University rank holders.
5. Ishan Uday scholarship for the students (from NE States) of UG courses.
6. Inspire Scholarship.
7. Post Matric Scholarship for SC,ST and OBC students under different schemes of the Govt.
8. Merit cum-Means Based scholarship for professional and Technical courses (from Ministry of Minority Affairs).
9. Post Matric Scholarship from the Director of Welfare of Tea and Ex-tea garden.
10. AICTE scholarship for the GATE qualified students of M. Tech.
11. DBT scholarship.
12. NEC scholarship from Director of Technical Education.
13. Post Matric scholarship for students belonging to Minority communities.
14. Scholarship for differently abled students from National Handicapped Finance and Development Corporation and many more.

Students admitted on the basis of GATE score to the M Tech courses in (i) Bioelectronics, (ii) Electronics Design and Technology, (iii) Energy Technology, (iv) Food Engineering and Technology, (v) Information Technology, (vi) Mechanical Engineering, and (vii) Civil Engineering are eligible to avail the AICTE's PG Scholarship for GATE Score holders directly from the AICTE as per norms. As per the records of recent past, there is a waiting time for the release of the first instalment of the Scholarship, due to the time taken for official procedures which is beyond the control of the University.

Culture & Sports

The University provides opportunities for students to excel in various cultural and sports activities. The University has basketball, badminton, volleyball and tennis courts; cricket and football grounds with flood light facilities. The University has a well-equipped multi gymnasium and training facilities for Archery. The University also encourages students to participate in various zonal, national and international levels cultural, literary and sports competitions organized by Association of Indian Universities (AIU), New Delhi.

Tezpur University Student Council (TUSC)

The University has a vibrant student council for the welfare of the students. The members of the councils are elected annually by students through secret ballots.

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 pool of resources for the student community in coordination with the well placed alumni.

Academic Calendar

The University adheres to a well-planned calendar specifying the schedule of academic activities. All events including examinations are held according to that 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 2019 is available in the University webpage.

1.4: Training and Placement Cell

Helping and guiding students in shaping their career as per their aspirations has become an integral part of higher education today. In order to exclusively take care of these aspects, the University has a *Training and Placement Cell* which acts as the interface between the recruiting organizations and the University students. It facilitates recruitment events on-campus as well as off-campus as required. It also organizes various pre-placement grooming programmes to enhance the employability of the targeted students of the University. They are also made aware of the corporate social responsibilities that serve catalyst to holistic growth.

The graduated students of the University have already created a niche in various leading MNCs, PSUs and government departments through their high professionalism and intellectual ability, coupled with honesty and commitment.

The organizations that have recruited graduates of the University in the recent past include:

Private Sector Organizations– Aircel, Accenture, AGC Networks, Airtel (Bharti Telecom), American Embassy (New Delhi), Aricent, Asia Carbon Limited, Asian Paints, Axis Bank, Azim Premji Foundation, Berger Paints, Broadcom Corporation, Café Coffee Day, Calcom Cement, Catalyst Management Services, Channelply, Channel Look-East, Chembiteek Life Science, CG foods, Cipla Ltd., CNN-IBN, Colgate-Palmolive, Dabur India, Delphi, Diamond Fabcare (New Delhi), Disha (New Delhi), DSCL, Dyna Roof, ETV-Ramoji Film City, Genpact, GE Health Care, GLAXO-Smithline, Godrej and Boyce Manuf. Co. Ltd., Hindustan Coca-cola Ltd, Hindustan Lever Ltd., Housing Dev. Finance Co. (HDFC), Huawei Technologies, IBM, ICI Paints, ICICI Bank, Indian Express, Infosys, Intel, ITC Ltd., Jindal Steel and Power Ltd., Jungle Travels India, Jenson and Nicholson, Kotak Life, Mahindra Finance, LG Soft, L&T Infotech, Look East Channel, Nagaland Fruit and Veg. Prod. Unit, NDTV, Nestle India Ltd., NE Chronicle, NE TV, Newslive, Nokia, OCWEN, Oracle, Pantaloons, Perkin Elmer (India) Pvt Ltd., Philips, PRADAN, Press Trust of India, Q-Tech Nano Systems, Reliance, Reverie Language Technologies, RIMS, Samsung, SBI Life, SeSTA, Shalimar Paints, Shriram Transport Finance Company Ltd., Siemens Technology, Software AG, Sony India, SRD Nutrients (Mangaldoi), Star Cement, Sunrise Biscuits (Britannia), Symphony, Syntel, Tata Consultancy Service, TATA-ELEXI, TCI Tech Mahindra, The Shillong Times, Unisys Global Services, Vodafone, Wipro, WSP, XL Dynamics, Yes Bank, Zaloni Technologies, etc.

Public Sector Units – Allahabad Bank, Bank of Maharashtra, Bharat Sansar Nigam Ltd. (BSNL), Bongaigaon Refineries and Petrochemicals, Brahmaputra Cracker and Polymer Ltd., Centre for Science and Environment (Delhi), DRDO, Export-Import Bank of India, Food Corporation of India, Food Safety and Standards Authority, Gas Authority of India Limited (GAIL), ICAR, Indian Army, Indian Oil Corporation Ltd. (IOCL), Industrial Development Bank of India, Intelligence Bureau, ISRO, NRHM, Govt. of Assam, National Thermal Power Corporation, Numaligarh Refinery Limited (NRL), Oil India Limited (OIL), ONGC, Powergrid Corporation of India, Reserve Bank of India, State Bank of India, United Bank of India, etc.

Institutions of Higher Learning – Assam Don Bosco University, Assam Engineering College, Assam University, Banaras Hindu University, Jadavpur University, Bareilly Engineering College, Bielefeld University

(Germany), Central Institute of Post-Harvest Engg. and Tech., Dibrugarh Polytechnic, Dibrugarh University, Edinburgh University England, Epitome College (Diphu), Galgotia Institute of Technology (Noida), Gauhati University, Girijananda Choudhury Institute of M&T, Hyderabad University, IISC Bangalore, IIT Delhi, IIT Guwahati, IIT Kharagpur, IMPRS (Halle, Germany), Indian Academy of Science (Bangalore), Institute of Genomics and Integrative Biology, J.B. College (Jorhat), JNU (New Delhi), Jorhat Engineering College, Konkuk University (Korea), M.S University of Baroda, National Institute of Cholera and Enteric Diseases, National Centre for Genome Research, NCL (Pune), NIT Silchar, North Eastern Hill University (Shillong), Royal Group of Institutions, Sikkim Manipal Institute of Technology, Silchar Polytechnic, Sognag University (Korea), Sona College of Technology (Salem), St. Anthony's College (Shillong), University College of Cork (Ireland), Rajiv Gandhi University, University of Pune, etc.

1.5: List of Academic Programmes

UG Degree/Integrated/Diploma/Certificate Programmes

| Sl. No. | Programme | Department/Centre | School |
|---------|---|---|--------------------------------|
| 1 | B.Tech [§] . in Civil Engineering | Civil Engineering | Engineering |
| 2 | B.Tech ^{#§} . in Computer Science and Engineering | Computer Science and Engineering | |
| 3 | B.Tech. in Electrical Engineering | Electrical Engineering | |
| 4 | B.Tech ^{#§} . in Electronics and Communication Engineering | Electronics and Communication Engineering | |
| 5 | B.Tech [#] . in Food Engineering and Technology | Food Engineering and Technology | |
| 6 | B.Tech ^{#§} . in Mechanical Engineering | Mechanical Engineering | |
| 7 | Lateral Entry to 2nd year of B.Tech | Civil Engineering | Engineering |
| | | Computer Science and Engineering | |
| | | Electrical Engineering | |
| | | Electronics and Communication Engineering | |
| | | Food Engineering and Technology | |
| | | Mechanical Engineering | |
| 8 | B.Ed. | Education | Humanities and Social Sciences |

| | | | |
|----|--|-------------------------------------|--------------------------------|
| 9 | Certificate in Chinese | English and Foreign Languages | Humanities and Social Sciences |
| 10 | Integrated dual B.A. & M.A. in English | English and Foreign Languages | |
| 11 | Integrated dual B. Com. & M.Com. | Commerce | Management Sciences |
| 12 | Integrated B. Sc. B.Ed. Chemistry | Chemical Sciences | Sciences |
| 13 | Integrated dual B. Sc. & M.Sc. in Chemistry | | |
| 14 | Integrated B.Sc.B.Ed. in Mathematics | Mathematical Sciences | |
| 15 | Integrated dual B. Sc. & M.Sc. in Mathematics | | |
| 16 | Integrated dual B. Sc. & M.Sc. in Life Science | Molecular Biology and Biotechnology | |
| 17 | Integrated B.Sc. B.Ed. in Physics | Physics | |
| 18 | Integrated dual B. Sc. & M.Sc. in Physics | | |

#NBA accredited as Tier -I Programme

§AICTE Approved

PG Degree/Diploma Programmes

| Sl. No. | Programme | Department /Centre | School |
|---------|--|---|-------------|
| 19 | Master of Computer Application (M.C.A.) [§] | Computer Science and Engineering | Engineering |
| 20 | M.Tech [§] . in Information Technology | | |
| 21 | M.Tech. in Computer Science & Engineering | | |
| 22 | M. Tech. in Civil Engineering | Civil Engineering | |
| 23 | M.Tech [§] . in Bioelectronics | Electronics and Communication Engineering | |
| 24 | M.Tech [§] . in Electronics Design and Technology | | |
| 25 | M. Tech [§] . in Energy Technology | Energy | |
| 26 | M.Tech [§] . in Food Engineering and Technology | Food Engineering and Technology | |
| 27 | M.Tech [§] . in Mechanical Engineering | Mechanical Engineering | |

| | | | |
|----|--|---|--------------------------------|
| 28 | M.A. in Cultural Studies | Cultural Studies | Humanities and Social Sciences |
| 29 | M.A. in Education | Education | |
| 30 | M.A. in English | English and Foreign Languages | |
| 31 | M.A. in Linguistics and Language Technology | | |
| 32 | M.A. in Hindi | Hindi | |
| 33 | Post Graduate Diploma in Translation (Hindi) | | |
| 34 | Master of Laws (L.L.M) | Law | |
| 35 | M.A. in Mass Communication and Journalism | Mass Communication and Journalism | |
| 36 | M.A. in Communication for Development | | |
| 37 | M.A. in Social Work | Social Work | |
| 38 | M.A. in Sociology | Sociology | |
| 39 | P.G. Diploma in Child Rights and Governance | Centre for Inclusive Development | |
| 40 | P.G. Diploma in Women's Studies | Chandraprabha Saikiani Centre for Women's Studies | |
| 41 | M.B.A.* | Business Administration | |
| 42 | Master of Tourism and Travel Management | | |
| 43 | Certificate in NCCMP# (Part Time) | | |
| 44 | M.Com | Commerce | |
| 45 | M.Sc. in Chemistry | Chemical Sciences | Sciences |
| 46 | M.Sc. in Environmental Science | Environmental Science | |
| 47 | M.Sc. in Mathematics | Mathematical Sciences | |
| 48 | M.Sc. in Molecular Biology and Biotechnology | Molecular Biology and Biotechnology | |
| 49 | M.Sc. in Physics | Physics | |

*Admission to M.B.A. is made on the basis of basis of CAT/ MAT/XAT/ATMA/GMAT/CMAT score.

§AICTE Approved. # Admission not through TUEE.

Ph.D. Programmes

| Sl. No. | Programme | Department /Centre | School |
|---------|---|---|--|
| 50 | Ph.D. in Civil Engineering | Civil Engineering | Engineering |
| 51 | Ph.D. in Computer Science and Engineering | Computer Science and Engineering | |
| 52 | Ph.D. in Electronics and Communication Technology | Electronics and Communication Engineering | |
| 53 | Ph.D. in Energy | Energy | |
| 54 | Ph.D. in Food Engineering and Technology | Food Engineering and Technology | |
| 55 | Ph.D. in Mechanical Engineering | Mechanical Engineering | |
| 56 | Ph.D. in Cultural Studies | Cultural Studies | Humanities and Social Sciences Humanities and Social Sciences |
| 57 | Ph.D. in Education | Education | |
| 58 | Ph.D. in English and Foreign Languages | English and Foreign Languages | |
| 59 | Ph.D. in Hindi | Hindi | |
| 60 | Ph.D. in Mass Communication and Journalism | Mass Communication and Journalism | |
| 61 | Ph.D. in Sociology | Sociology | |
| 62 | Ph.D. in Social Work | Social Work | |
| 63 | Ph.D. in Assamese Studies | Centre for Assamese Studies | Management Sciences |
| 64 | Ph.D. in Business Administration | Business Administration | |
| 65 | Ph.D. in Chemical Sciences | Chemical Sciences | |
| 66 | Ph.D. in Environmental Science | Environmental Science | |
| 67 | Ph.D. in Mathematical Sciences | Mathematical Sciences | |
| 68 | Ph.D. in Molecular Biology and Biotechnology | Molecular Biology and Biotechnology | |
| 69 | Ph.D. in Physics | Physics | |

Centre for Open and Distance Learning (CODL)

| SN | Programme* | Department | School |
|----|--|-----------------------------------|--------------------------------|
| 70 | P.G. Diploma in Renewable Energy and Energy Management | Energy | Engineering |
| 71 | M.A. in Mass Communication | Mass Communication and Journalism | Humanities and Social Sciences |
| 72 | P.G. Diploma in Human Resource Management | Business Administration | Management Sciences |
| 73 | P.G. Diploma in Environmental and Disaster Management | 1. Environmental Science | Sciences |
| | | 2. Centre for Disaster Management | Management Sciences |

* Admission is made through the Centre for Open and Distance Learning.

1.6: Curricula

Each academic programme of the University is comprised of a set of Courses, some of which are core and others are elective. There are two types of elective courses - (1) Discipline specific electives (DSE) offered by the Department which are specific to the programme; and (2) Generic or open electives which are to be chosen by the students of other Departments. Flexibility is there for students to opt for elective Courses on their own choices from a pool of courses. The University follows the choice based system of UGC for all programmes except for engineering which follows AICTE model. The Courses across the Departments are designed in such a way that multiple teaching pedagogies can be incorporated in delivering the contents of a Course.

The medium of instruction and examination at all the levels in the University is English, except for courses on languages such as Hindi, Assamese, Chinese, German, etc. In framing the courses, care is taken so that students 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 from real life problems. Group Discussion is also used as a teaching pedagogy to increase the analytical capability and creativity of the students.

1.7: Evaluation System

Students are evaluated through a relative grading system. The University follows a continuous comprehensive evaluation system, under which a student is evaluated through a number of tests and assignments spread over the entire semester. Finally, a Letter Grade is awarded against each Course based on these assessments.

A Letter Grade signifies the level of standard of qualitative/quantitative academic achievement, which a student attains in a particular course/research work. Each of the Letter Grades represents a Grade Point as tabulated 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 |

The letter Grades 'O' to 'P' are qualifying Grades, while 'F' and 'Ab' are disqualifying Grades. The 'Ab' Grade is awarded if a student remains absent in the evaluation components without any valid reason. The students, awarded with the 'F' or 'Ab' Grade in a Course are required to re-register the Course.

Additionally, there are some other Grades followed in University as stated below:

| Letter Grade | Status | Remarks/ Context |
|--------------|------------------|---|
| I | Incomplete | Some evaluation components remain incomplete due to an extraordinary situation faced by the student. This Grade should be converted to any of the regular Grades mentioned above by completing the left out component(s) within the first month of the next semester. |
| X | Extended Project | A project work remains incomplete and it is extended to the next semester. |
| S | Satisfactory | Successful completion of a Foundation/ Audit Course. |
| U | Unsatisfactory | Unsuccessful in completing a Foundation/ Audit Course. |
| W | Withdrawn | (i) The student withdraws the Course after the last date for withdrawal of Courses. (ii) Deficit in attendance. |

1.8: Important Academic Rules

Course Registration

A student needs to register for some courses/research work(s) in each semester through a Registration Card. The course adviser appointed by the Head of a Department/Centre assists the students in

selecting courses for a semester. The Registration Card contains four copies; one each for the Academic Section, Department, Hostel Warden and the student.

Attendance Requirement

All students must attend every lecture, tutorial and practical classes of each course registered by them. To account for late registration, sickness or such other contingencies, the minimum attendance requirement will be 75% of the classes. Students with shortage in attendance in a course will not be allowed to appear in the semester end examination and they will be awarded W (withdrawn) grade in the course.

Renewal of Admission

Every student will renew his/her admission in all the successive semesters on the notified dates. **On specific reasons late renewal of admission and course registration is permitted upto one week period with late fee.**

Requirement for the Award of Degree/Diploma/Certificate

A student shall be required to satisfy the following conditions for the award of Degree/Diploma/Certificate:

- a) To obtain a qualifying Grade in each of the registered Courses.
- b) To earn the minimum credit required for the award of Degree/Diploma/Certificate within the prescribed maximum duration of the programme (maximum credit load allowed per semester is 25).
- c) To secure a minimum CGPA of 4.5.

Termination of Candidature or Withdrawal of Awarded Degree/ Diploma/Certificate

The candidature of a student in a Programme may be terminated at any stage in future. Even an already awarded Degree/Diploma/Certificate may be withdrawn, under various circumstances, such as:

- (a) Failing to complete successfully all the components of the Programme within the maximum period of completion specified for the Programme.
- (b) Establishment of deliberate suppression of any previous fact in the application form or at the time of admission, which may determine the eligibility for admission.
- (c) Production/submission of any false/tempered document at the time of application/admission.
- (d) Serious violation of any clause of the Regulations on Maintenance of Discipline and Hostel Rules prescribed by the University.
- (e) Indulging in ragging inside or outside the University campus. Students are advised to visit www.ugc.ac.in or www.tezu.ernet.in for UGC Regulations on curbing the menace of ragging in Higher Educational Institutions, 2009.
- (f) During the study period in the University, involvement in any criminal/offensive activity, that may be punishable according to the Law of the country.

1.9: Important Rules

- (a) During studentship of the University, students are governed by the disciplinary rules of the University, on and off the campus.
- (b) Motorized vehicles by students are not allowed on the campus. Students are advised to avoid vehicles, rather may use bicycles.

(c) Consumption or possession of any kind of alcoholic beverages/items are strictly prohibited.

(d) There may be penalty for violation of discipline including maintenance of cleanliness, late payment of hostel dues etc.

(e) Participation of the students/boarders in university/hostels' common events, like celebrations, competitions are subject to their willingness and is not mandatory.



The logo of Tezpur University is a circular emblem. The outer ring contains the text "ESTD • TEZPUR UNIVERSITY" at the top and "1979" at the bottom. Inside the ring, there is a stylized atomic symbol with three elliptical orbits. Below the atomic symbol is an open book. At the very bottom of the emblem, there is a Sanskrit motto: "विज्ञानं यज्ञं तनुते".

SECTION- II

Programmes, Intake & Eligibility Criteria for Admission

2.1 [UG Degree/ Integrated/ Certificate Programmes](#)

2.2 [Post Graduate Degree/ Diploma Programmes](#)

2.3 [Ph. D. Programmes](#)

2.1 UG Degree/ Integrated/ Certificate Programmes

| Sl. No. | Programme Names | Intake | Eligibility |
|---------|--|-----------------|---|
| 1 | B. Tech. in Civil Engineering† | 54(+5) | <p>10+2 or equivalent examination with pass marks in (1) Physics, (2) Mathematics, (3) Language, (4) any subject (Chemistry, Biology, Biotech, Technical vocational subjects), (5) Any other subject and with minimum 60% (55% in case of candidates belonging to reserved category) marks in above subjects taken together.</p> |
| 2 | B. Tech. in Computer Science and Engineering† | 54(+5) | |
| 3 | B. Tech. in Electrical Engineering† | 30(+3) | |
| 4 | B. Tech. in Electronics and Communication Engineering† | 54(+5) | |
| 5 | B. Tech. in Food Engineering and Technology† | 45(+5) | |
| 6 | B. Tech. in Mechanical Engineering† | 54(+5) | |
| 7 | Lateral Entry to 2nd year of B.Tech in Civil Engineering | 3 ^{\$} | <p>Diploma in Civil Engineering from an AICTE approved program. Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level.</p> |
| 8 | Lateral Entry to 2nd year of B.Tech in Computer Science and Engineering | 3 ^{\$} | <p>Diploma in Computer Science and Engineering or Allied subjects and Electronics and Communication Engineering or Allied Subjects Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level.</p> |

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| 9 | Lateral Entry to 2nd year of B.Tech in Electronics and Communication Engineering | 3 ^{\$} | Diploma in Electronics and Communication Engineering or Allied subjects from an AICTE approved program. Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level. |
| 10 | Lateral Entry to 2nd year of B.Tech in Electrical Engineering | 3 ^{\$} | Diploma in Electrical Engineering from an AICTE approved program. Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level. |
| 11 | Lateral Entry to 2nd year of B.Tech in Food Engineering and Technology | 3 ^{\$} | Diploma in Food Engineering and Technology or Allied subjects from an AICTE approved program. Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level. |
| 12 | Lateral Entry to 2nd year of B.Tech in Mechanical Engineering | 3 ^{\$} | Diploma in Mechanical Engineering or Allied subjects from an AICTE approved program. Duration of Diploma must be: (i) 03 years after 10th (Matriculation) in conventional system (ii) 04 years after 10th (Matriculation) in modular system The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level. |
| 13 | B.Ed. | 50(+5) ^{##} | Minimum 55% marks in B.A./B.Sc./B.Tech./B.E. |
| 14 | Certificate in Chinese | 39(+4) | 10+2 with 45% of marks in aggregate. |
| 15 | Integrated dual B.A. & M.A. in English | 20(+2) | First Division in the 10+2 Examinations |

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| 16 | Integrated dual B. Com. & M. Com. | 30(+3) | Minimum 60% aggregate marks in 10+2 Examination |
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There will be 50 % seat each for Humanities and Science Stream.

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| 17 | Integrated B.Sc. B.Ed. (Chemistry Major) | 10(+1) | First division in 10+2 Examination (Science) |
| 18 | Integrated B.Sc. B.Ed. (Mathematics Major) | 10(+1) | |
| 19 | Integrated B.Sc. B.Ed. (Physics Major) | 10(+1) | |
| 20 | Integrated dual B.Sc. & M.Sc. in Chemistry | 20(+2) | Minimum 60% aggregate marks in Physics, Chemistry and Mathematics at 10+2 examination with minimum pass marks in individual subjects and pass mark in English. |
| 21 | Integrated dual B.Sc. & M.Sc. in Mathematics | 20(+2) | Minimum 60% aggregate marks in Mathematics, Physics, Chemistry/Statistics in 10+2 examination with minimum pass marks in individual subjects and pass mark in English. |
| 22 | Integrated dual B.Sc. & M.Sc. in Physics | 20(+2) | Minimum 60% aggregate marks in Mathematics, Physics, Chemistry in 10+2 examination with minimum pass marks in individual subjects and pass mark in English |
| 23 | Integrated dual B.Sc. & M.Sc. in Life Science | 20(+5) | Minimum 60% aggregate marks in Biology, Chemistry, Physics and/or Mathematics subjects in 10+2 examination with minimum pass marks in individual subjects and pass mark in English. |

2.2 Post Graduate Degree/Diploma Programmes

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| 24 | M. A. in Cultural Studies | 46(+5) | Bachelor's Degree in any discipline with at least second class in Major subject. Candidates having no major / honours, must have a minimum of 45% marks |
| 25 | M. A. in Education | 30(+3) | Bachelor's Degree with at least 45% marks |
| 26 | M.A. in English | 50(+5) | Bachelor's degree with at least 45% marks in major/honours in English. Candidates not having major/honours must have at least 50% marks in aggregate as well as in English |

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| 27 | M. A. in in Linguistics and Language Technology | 30(+3) | (1)B. A. with honours in Linguistics/English/any allied subject with a minimum of 45% marks, or (2)B.A. with a minimum of 50% of aggregate marks. |
| 28 | M. A. in Hindi | 25(+3) | Bachelor's Degree with Major/ Honours in Hindi from a recognized University or Bachelor's degree with Hindi asan elective subject having at least 50% of marks in aggregate. |
| 29 | P. G. Diploma in Translation (Hindi) | 23(+3) | BA with Hindi Major/ Honours; B. A. with Elective Hindi; B.A/B.Com/B. Sc with Praveen/ Sahityratna. Candidates not having Major/Honours must have at least 50% marks in aggregate. |
| 30 | M. A. in Mass Communication and Journalism | 35(+4) | Bachelor's Degree in any discipline with at least 45% marks in Major/ Honours. Candidates not having Major/ Honours must have at least 50% marks in aggregate. |
| 31 | M. A. in Communication for Development | 12(+1) | Bachelor's Degree in any discipline with at least 45% marks with Major/Honours. Candidates not having Major/Honours must have at least 50% marks in aggregate. |
| 32 | M. A. in Social Work | 15(+2) | Graduate in any discipline with 45% marks in Major. |
| 33 | M. A. in Sociology | 30(+3) | Bachelor's Degree with at least 45% marks in Sociology major/honours or in any subject offered as major/honours. Candidates not having major/honours must have 50% marks in aggregate. |
| 34 | Master of Laws (LL.M.) | 20(+2) | Bachelor's degree in Law with a minimum of 50% marks. |
| 35 | P. G. Diploma in Child Rights and Governance | 20(+2) | Bachelor's Degree in any discipline |
| 36 | P. G. Diploma in Women's Studies | 20(+2) | |

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| 37 | M. Sc. in Chemistry | 20(+2) | Bachelor's degree with major/ honours in Chemistry subject with a minimum of 45% marks and having Physics and Mathematics as subsidiary subjects. |
| 38 | M. Sc. in Environmental Science | 30(+3) | B.Sc. in Physical/Biological/ Earth and Environmental Sciences as major/ honours with minimum of 50% marks. Candidates not having major/honours must have at least 55% marks in aggregate. Or, B.Sc. (Agri.) with at least 6.0 CGPA in 10 point scale or equivalent. Or Bachelor's degree in Engineering /Medicine with 55% marks or equivalent grade points. |
| 39 | M. Sc. in Mathematics | 42(+4) | Bachelor's degree with a minimum of 45% marks in major/honours, either Mathematics or Statistics. Candidates with Statistics major/honours must have Mathematics as subsidiary course with a minimum of 50% marks. Candidates not having major/honours must have 50% marks in aggregate as well as in Mathematics. |
| 40 | M. Sc. in Molecular Biology and Biotechnology* (TUEE = 12, JNU = 26) | 30(+8) | Bachelor's degree in Physical, Biological, Agricultural, Veterinary, Fishery Sciences, Pharmacy, Engineering/ Technology, four years B.S. programme (Physician Assistant course) or Medicine, MBBS or BDS with a minimum 55% marks in major/honours or aggregate. Those who have passed the qualifying examination before 2 years from the date of announcement of admission are not eligible. |
| 41 | M. Sc. in Physics | 30(+3) | B.Sc. with minimum of 50% marks in major/honours in Physics having Mathematics as one of the subsidiary subjects. Candidate not having major/honours must have 55% marks in aggregate and in Physics |
| 42 | Master of Computer Application (MCA) | 45(+5) | Bachelor's degree in any discipline with a minimum of 50% marks in major / honours subject or 55% marks in aggregate for those candidates having no major/honours or 55% marks in aggregate in BCA. Passed in Mathematics at 10+2 Examination. |
| 43 | M.Tech. in Civil Engineering | 9(+1) | B.Tech. in Civil Engineering |
| 44 | M. Tech. in Information Technology | 28(+3) (Through GATE- 18, Through TUEE -10) | B.E./B.Tech./AMIE/AMIETE in CSE/IT/ECE/allied subjects or MCA or its equivalent or M.Sc. in Computer Science/IT/Electronics/ Mathematics / Statistics with a minimum of 55% marks in aggregate. Candidates selected under GATE must possess a valid GATE score in CS. |
| 45 | M. Tech. in Computer Science and Engineering | 10 | B.E./B.Tech./AMIE/AMIETE in Computer Science & Engineering or MCA with minimum of 60% marks in aggregate. |

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| 46 | M. Tech. in Electronics Design and Technology | 28(+3) (Through GATE- 18, Through TUEE -10) | B.E./B.Tech./AMIE/AMIETE in Electronics/ Electrical/ Instrumentation Engineering or M.Sc. in Electronics/Instrumentation/Physics (Electronics as specialization)/ AMIETE with a minimum of 50% marks in aggregate |
| 47 | M. Tech. in Bioelectronics | 15(+2) (Through GATE- 12, Through TUEE - 03) | B.E./B.Tech. in Electronics and Communication Engineering/ Instrumentation/ Chemical Engineering/ Computer Science and Engineering/Electrical Engineering/Biomedical Engineering/ Bioengineering/Neuro Engineering/ Genetic Engineering/ Biotechnology or M.Sc. in Biotechnology/ Biochemistry /Chemistry/Polymer Science/Physics/ Electronics/ Nano Science and Technology/ Instrumentation or MBBS with at least 50% marks in aggregate |
| 48 | M. Tech. in Energy Technology | 28(+3) (Through GATE- 18, Through TUEE -10) | B.E./ B.Tech. / AMIE in Mechanical /Electrical / Electronics / Instrumentation / Chemical /Agricultural Engineering / Energy Engineering or M.Sc. in Physics/ Chemistry with a minimum of 50% marks in aggregate |
| 49 | M. Tech. in Food Engineering and Technology** | 18(+2) (Through GATE- 15, Through TUEE - 03) | B.E. /B. Tech. in Food Engineering and Technology/ Food Process Engineering/ Food Technology/ Agricultural Engineering/ Mechanical Engineering/ Chemical Engineering / Biotechnology/Dairy Engineering /Dairy Technology or food related fields with a minimum of 55% marks in aggregate. (Note: The B. Tech./ B.E. programme completed by the candidate should satisfy the AICTE requirements). |
| 50 | M. Tech. in Mechanical Engineering (Specialization: Machine Design) | 18(+2) (Through GATE- 15, Through TUEE - 03) | BE/B.Tech. or equivalent Bachelor's degree in Mechanical, Aerospace Engineering, Automobile Engineering or in any allied disciplines in Mechanical Engineering with a minimum of 60% marks (or 6 CGPA in 10 point scale) in aggregate. |
| | M. Tech. in Mechanical Engineering (Specialization: Thermo Fluids Engineering) | | BE/B.Tech. or equivalent Bachelor's degree in Mechanical, Energy and Power Engineering, Aerospace/ Aeronautical or any other relevant Engineering discipline. |
| 51 | M. Com. | 06(+1) | B. Com. with minimum of 50% marks in major/honours. Mathematics at degree level is desirable. |
| 52 | Master of Tourism and Travel Management (MTTM) | 15(+2) | Bachelor's Degree in any discipline with at least 45% marks in major/honours. Candidates not having major/honours must have 50% marks in aggregates |
| 53 | Master of Business Administration (MBA)^ | 46(+5) | Bachelor's Degree in any discipline with a minimum of 50% marks in major/honours subject or in aggregate. (Admission Process of 2019 is already over) |

2.3 Ph. D. Programmes

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| 54 | Ph.D. in 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 |
| 55 | Ph.D. in Education | - | Post Graduate in Education or in any allied discipline/ subjects with 55% marks. |
| 56 | Ph.D. in English and Foreign Languages | - | M.A. in English (specialization may be in Literature, English Language Teaching or Linguistics); M.A. in Linguistics |
| 57 | Ph.D. in Hindi | - | M.A. in Hindi |
| 58 | Ph.D. in Mass Communication and Journalism | - | M.A. in Mass Communication, Mass Communication & Journalism/ Communication. Master of mass Communication (MMC). Master of Journalism & Mass Communication (MJMC). Master of Science in Communication (M.S. Communication). M.Sc. Communication. Master of Journalism. |
| 59 | Ph.D. in 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 |
| 60 | Ph.D. in 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.); |
| 61 | Ph.D. in 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. |
| 62 | Ph.D. in Mathematical Sciences | - | M.A. /M.Sc. in Mathematics or M.A. /M.Sc. in Statistics with requisite background in Mathematics. |

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| 63 | Ph.D. in Molecular Biology and Biotechnology | - | Masters in any branches of Life Sciences/ Physical Sciences/ Chemical Sciences/ Mathematical Sciences/ Agricultural Sciences / Veterinary Sciences/Engineering Sciences / Medical Sciences or in any allied field. B. Tech./ B. E. degree with 80% marks or equivalent CGPA (with GATE score > 90.00 percentile) in Chemical Engineering/ Chemical Sciences/ Bioinformatics or any allied field. MBBS or BVSc. degree with at least 60% marks or equivalent CGPA. Apart from the above, candidates having consistently good academic record will be preferred. |
| 64 | Ph.D. in 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. |
| 65 | Ph.D. in Computer Science and Engineering | - | M.Tech. in Computer Science/ I.T./Electronics. M.Sc. in Computer Science/ I.T. MCA. B.E./B.Tech. with 75% marks in aggregate or equivalent CGPA with valid GATE Score and Minimum two recommendation Letters from the Institute/University from where B.E./B.Tech degree was obtained. |
| 66 | Ph.D. in Civil Engineering | - | (a) M.E./M.Tech. /M.Sc.(Engg.) in Civil Engg. or allied areas or (b) M.Sc. in relevant discipline with minimum 70% marks in aggregate or equivalent CGPA or (c) B.E. / B.Tech with 75% marks in aggregate or equivalent CGPA with a valid GATE Score. Minimum two recommendation Letters from the Institute/University from where B.E./B.Tech degree was obtained. |
| 67 | Ph.D. in 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 75% marks in aggregate or equivalent CGPA with valid GATE score. Minimum two recommendation Letters from the Institute/University from where B.E./B.Tech degree was obtained. |
| 68 | Ph.D. in Energy | - | M.Sc. / M.E. / M.Tech. degree in Energy Technology/ Energy Management/Energy related Engineering and Technology/ Physics/ Chemistry/Agriculture Allied subjects. |
| 69 | Ph.D. in Food Engineering and Technology | - | M.Tech. / M.E./Integrated M.Tech. in Food Engineering and Technology/ Food and Dairy related other programme/Mechanical |

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| | | | Engineering/Chemical Engineering/Bio-process/Bio-chemical/ Biotechnology,or, M.Sc. and Integrated M.Sc. in Food processing Technology/Food and Dairy related other programme/applied Microbiology/ Microbiology/ Biochemistry/Chemistry/ Biotechnology/Bioscience and Informatics,or, B.E. / B.Tech.(in Food Engineering and Technology/ Food and Dairy related other programme) with 75% marks in aggregate or equivalent CGPA with valid GATE score. Minimum two recommendation Letters from the Institute/University from where B.E./B.Tech degree was obtained. |
| 70 | Ph.D. in Mechanical Engineering | - | M.E. / M.Tech. / M.Sc. (Engg.) in Mechanical Engg. or allied areas. (i) B.E. / B.Tech. with 75% marks in aggregate or equivalent CGPA with a valid GATE Score (ii) Minimum two recommendation letters from the Institution/ University from where B.E./B.Tech. was obtained. |
| 71 | Ph.D. in 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 |
| 72 | PhD in Social Work | | |

Note: Intakes shown in the bracket are subject to approval by UGC/MHRD for implementation of EWS Quota.

†Admission to all the B. Tech. programmes shall be made through the **JEE Main 2019**, conducted by NTA. Out of the total seats, 60% seats are reserved for permanent residents of North East States (to be filled up through the Tezpur University Counselling) and remaining 40% seats are open for filling up through the Central Counselling conducted by CSAB/JoSA.

\$For the School of Engineering across 06 B. Tech. programs, a maximum of 18 seats, (5% of approved intake to existing B Tech programmes) will be admitted **through Lateral Entry**. Exact number of candidates to be admitted against each of the B. Tech. program will be notified separately through University webpage after facilitating internal sliding among continuing students.

***For admission to M.Sc in MBBT**, 12 seats are reserved for permanent residents of any of the North-East-States (filled up through the Tezpur University Entrance Examinations-2019) and 26 seats are filled up through “All India Combined Entrance Test” conducted by DBT, Government of India from time to time). This is subject to latest policy changes .

**Seats remaining vacant after accommodating candidates with valid GATE score will be filled up through TUEE-2019 merit list. If the candidate claims admission based on a valid GATE score, the following criteria will be used:

- (i) For GATE holder with food technology as one of the optional subjects: 100% weightage for GATE Score.
- (ii) For GATE holder without food technology as one of the optional subject: GATE score (70% weightage) TUEE score (30% weightage).

^Admission to the MBA programme shall be made on the basis ofCAT/ MAT /XAT /ATMA /GMAT/ CMAT score.

Important Note: Students of any category seeking admission in open category seats should fulfil the requirement as needed for General category candidates.



The logo of Tezpur University is a circular emblem. It features a central atomic symbol with three elliptical orbits. The text 'TEZPUR UNIVERSITY' is written in a semi-circle above the emblem, and 'ESTD. 1961' is written in a semi-circle below it. The entire logo is rendered in a light purple color.

SECTION- III

Admission Procedure

1. General Admission Procedure
 - (a) [B. Tech. Programmes](#)
 - (b) [M.Tech. Programmes](#)
 - (c) [M.Sc. in MBBT](#)
 - (d) [MBA](#)
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Tezpur University offers a number of programmes on Under-Graduate Degree/Diploma/Certificate, Post-Graduate Degree/Diploma and Doctor of Philosophy Degree in various Disciplines. Admission to most of these programmes is held through entrance examinations conducted by the University in various centres across the country. Application process for the session 2019-2020 will be online, but examination will be offline.

The general admission procedures for various Academic Programmes are outlined below:

1. B. Tech. Programmes:

- (i) Candidates seeking admission to the B. Tech. Programmes are required to appear in the **JEE (Main) - 2019** to be conducted by NTA, New Delhi. All admission shall be based on **JEE (Main) - 2019** All India Ranking/CRL.
- (ii) The Candidates who appear in the **JEE (Main) - 2019** have two channels for admission to the B. Tech. Programmes.
 - (a) 40% of the total seats shall be made through the central counselling i.e. Central Seat Allocation Board (CSAB) based on **JEE (Main)-2019**. The Candidates of any part of India can participate in “Central Counselling” conducted by CSAB/ JoSA (Online Choice filling process), to get admission in Tezpur University (TU) against these 40% seats.
 - (b) 60% of the total seats shall be made through the Tezpur University counselling. These seats are reserved for the permanent residents of North East (NE) States. The Candidates need to fill-up Tezpur University application form in addition to **JEE (Main) - 2019** application. The applicants desiring a seat under the NE quota must upload a PRC (Permanent Residence Certificate) issued by the competent authority of any of the North Eastern states along with the Tezpur University application form.

2. Lateral entry to the 2nd year of B.Tech. programmes:

As per the provisions of AICTE, diploma holders may apply for admission to the 2nd year of existing B. Tech. programs of the University. General eligibilities are as follows.

- (i) Diploma holders who have completed the 03 years AICTE approved diploma after 10th (Matriculation) in conventional system of Diploma programs or who have completed 04 years AICTE approved Diploma after 10th (Matriculation) in modular system of Diploma programs, are eligible to apply.
- (ii) The Candidate must have passed 10th (Matriculation) with 60% marks in aggregate and must have secured 60% marks in Mathematics, as well as must have a minimum aggregate of 70% marks at Diploma level.
- (iii) Those, who are appearing for the final year of Diploma examinations are also eligible, subject to the condition that they shall submit the provisional certificate at the time of admission, along with final grade sheet to support fulfilment of eligibility criteria.

3. M. Tech. Programmes:

Candidates applying for M.Tech. Programmes may seek admission either based on valid GATE score on GATE category or based on the performance in the University entrance examinations.

4. M.Sc. Programme in Molecular Biology and Biotechnology:

Candidates in this Programme may seek admission either based on the performance in the University entrance examination or through the *All India Combined Entrance Test* conducted by Jawaharlal Nehru University, New Delhi, under the sponsorship of the Department of Biotechnology, Govt. of India (eligibility as decided by DBT, Govt. of India). For NE reserved seat, PRC will be required.

5. Master of Business Administration (MBA):

Candidates in the MBA Programme may seek admission on the basis of CAT/ MAT /XAT/ATMA/GMAT/CMAT score and the score of the Test should be valid till the day of Personal Interaction.

6. All other Non Ph.D. Programmes:

Applicants of other programmes, admission to which is made based on the performance in the University entrance examinations, shall have to appear in the University entrance examinations to be conducted this year.

7. Ph. D Programmes:

(i) General criteria as per UGC Guidelines for admission into Ph.D. Programmes:

- Master's degree or a professional degree declared equivalent to the Master's degree by the corresponding statutory regulatory body, with at least 55% marks in aggregate or its equivalent grade 'B' in the UGC 7-point scale (or an equivalent grade in a point scale wherever grading system is followed) or an equivalent degree from a foreign educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions.
- Candidates possessing a Degree considered equivalent to M.Phil. Degree of an Indian Institution, from a Foreign Educational Institution accredited by an Assessment and Accreditation Agency which is approved, recognized or authorized by an authority, established or incorporated under a law in its home country or any other statutory authority in that country for the purpose of assessing, accrediting or assuring quality and standards of educational institutions, shall be eligible for admission to Ph.D. programme.
- Relaxation of 5% of marks, from 55% to 50%, or an equivalent relaxation of grade, may be allowed for those belonging to SC/ST/OBC (non-creamy layer)/ Differently-Abled and other categories of candidates as per the decision of the Commission from time to time, or for those who had obtained their Master's degree prior to 19th September, 1991. The eligibility marks of 55% (or an equivalent grade in a point

scale wherever grading system is followed) and the relaxation of 5% to the categories mentioned above are permissible based only on the qualifying marks without including the grace mark procedures.

- (ii) Department-specific further requirement for admission into Ph.D. Programme in Tezpur University is given separately.
- (iii) Ph.D. candidates shortlisted based on the performance in the University entrance examinations shall be called for personal interview in the respective Departments.
- (iv) Candidate desiring full time Ph. D. will be given preference.



Entrance Examinations Schedule

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|---|---|
| <p>May 31, 2019 (10 AM to 12 Noon)</p> | <p>May 31, 2019 (2 PM to 4 PM)</p> |
| <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Mathematics/Integrated B.Sc. B.Ed. in Mathematics 2) M.A. in Social Work 3) P.G. Diploma in Translation (Hindi) 4) B.Ed. 5) M.Tech. in Food Engineering and Technology 6) LL.M. 7) Ph.D. in Business Administration 8) Ph.D. in Chemical Sciences 9) Ph.D. in Civil Engineering | <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Physics/Integrated B.Sc. B.Ed. in Physics 2) M.Tech. in Bioelectronics 3) Master of Tourism and Travel Management(MTTM) 4) M.Sc. in Chemistry 5) M.Sc. in Mathematics 6) M.A. in Sociology 7) Ph.D. in Cultural studies 8) Ph.D. in Environmental Science |
| <p>June 1, 2019 (10 AM to 12 Noon)</p> | <p>June 1, 2019 (2 PM to 4 PM)</p> |
| <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Chemistry/Integrated B.Sc. B.Ed. in Chemistry 2) P.G. Diploma in Child Rights and Governance 3) M.Tech. in Mechanical Engineering 4) M.A. in Hindi 5) M.A. in Mass Communication and Journalism 6) Certificate in Chinese 7) M.Tech. in Electronics Design and Technology 8) Ph.D. in Education 9) Ph.D. in Physics 10) Ph.D. in Food Engineering & Technology | <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Life Science 2) M.Sc. in Environmental Science 3) M. Com. 4) MTech. in Civil Engineering 5) M.A. in Cultural Studies 6) Ph.D. in Sociology 7) Ph.D. in Molecular Biology and Biotechnology 8) Ph.D. in Mathematical Sciences 9) Ph.D. in Mechanical Engineering |
| <p>June 2, 2019 (10 AM to 12 Noon)</p> | <p>June 2, 2019 (2 PM to 4 PM)</p> |
| <ol style="list-style-type: none"> 1) Integrated dual B.A. & M.A. in English 2) M.A. in Linguistics and Language Technology 3) M.A. in Education 4) M.Tech. in Energy Technology 5) P.G. Diploma in Women's Studies 6) M.A. in Communication for Development 7) M.Sc. in Physics 8) Ph.D. in Electronics and Communication Technology 9) Ph.D. in English and Foreign Languages 10) Ph.D. in Mass Communication and Journalism | <ol style="list-style-type: none"> 1) M.Tech. in Information Technology/M.Tech. in CSE 2) Master of Computer Application (MCA) 3) M.Sc. in Molecular Biology and Biotechnology 4) Integrated dual B.Com. & M. Com. 5) Lateral Entry to 2nd year of B.Tech. 6) M.A. in English 7) Ph.D. in Computer Science and Engineering 8) Ph.D. in Energy 9) Ph.D. in Hindi 10) Ph. D. in Social Work |

List of the University Entrance Examinations Centres

| | | |
|--------------|-----------|-----------------|
| Agartala | Goalpara | Kolkata |
| Aizwal | Guwahati | North Lakhimpur |
| Barpeta Road | Hyderabad | Patna |
| Bengaluru | Imphal | Pune |
| Bhubaneswar | Itanagar | Shillong |
| Chennai | Jorhat | Silchar |
| Delhi | Kanpur | Siliguri |
| Dibrugarh | Kohima | Tezpur |
| Diphu | Kokrajhar | |

Application Procedure

Interested eligible candidates may APPLY ONLINE through the university website www.tezuadmissions.com by paying a fee of Rs. 400/- for SC, ST, EWS and PWD candidates, and Rs. 800/- for other categories. Additional bank charges may apply.

The applicants should read the available instructions carefully while filling in the online Application Form. The following major points are also to be noted:

- Application Fee:** The payment of the Application fee is to be made online using credit card/debit card/net-banking. The transaction detail may be printed and preserved for later references. **The submission of an Application Form will remain incomplete until the required Application Fee is transferred successfully.**
- Multiple Programmes:** Candidates applying for multiple Programmes must apply separately with separate Application Fee for each Programme. However, there will be one entrance test per department for Integrated dual B.Sc. & M.Sc. and Integrated B.Sc. B.Ed. programmes. **Similarly, there will be one entrance test for M.Tech (IT) and M. Tech (CSE) programmes.** Students applying for integrated programmes for the same department can apply in single application form. The candidates can give their preference either for a single programme or both the programmes. The one who applies for both the programmes will be considered as applying for two programmes and will have to pay two times the application fee.
- B. Tech. Programmes:** In the case of B. Tech. programmes, a candidate needs to apply in a single application form only. The selected candidates will opt for the Programme/ Department based on the availability of seats at the time of their turns during the admission process.
- Candidates yet to obtain the last qualifying Degree/Diploma/Certificate:** Candidates who have already finished their qualifying examinations or expect to finish all the components, including

practical, viva-voce (if any), and backlog courses/ papers of earlier semesters before the date of admission may also apply.

- e) **Admit Card for Entrance Examinations:** Candidates shortlisted for appearing University entrance examinations (not for B.Tech. Programmes) will be intimated separately through e-mail/SMS in their registered e-mail IDs/mobile numbers to download their admit cards.
- f) **Documents (digital/scanned copy) to be uploaded:**
- (i) Copy of the JEE (Main) 2019 admit card, if applying for the B. Tech. Programmes.
 - (ii) Copy of the Permanent Residence Certificate (PRC) issued by the competent authority of any North East State, if applying for the B.Tech. Programmes or M.Sc. Programme in Molecular Biology and Biotechnology under the North East quota.
 - (iii) Copy of the valid GATE score card, if applying for direct admission to any M.Tech. Programme.
 - (iv) Copy of the relevant certificate issued by the competent authority, if seeking admission under any reserved category as mentioned.
 - (v) Copy of the Sponsorship/No Objection Certificate issued by the employer, if the candidate is employed.
 - (vi) A passport size photograph.
 - (vii) Scanned copy of the signature.
 - (viii) Relevant certificate as evidence of representing State or Country in sports, if any (**Not applicable for B. Tech, M. Tech and Ph. D programme**)

Examination Pattern:

- (i) Duration for the TUEE for all programmes will be of 2 hours.
- (ii) The question will be of multiple choice types in general. All such questions will carry **1** mark for a correct answer and **-0.25** marks for a wrong answer.
- (iii) For the Departments under the School of Humanities and Social Sciences, question papers will comprise of 60 multiple choice questions and descriptive questions of 40 marks.
- (iv) In case of Ph.D. programmes under the School of Humanities and Social Sciences, question papers will comprise of 40 MCQ's and descriptive questions of 60 marks.
- (v) MCQ part of the question paper will be divided into 4 sections; **I, II, III, and IV.**

Tie-Breaking Criteria:

If there is a tie, the ratio of positive marks to negative marks will be considered. Candidate having higher absolute value of the ratio will be given priority.

If tie is not resolved even after this, the following procedure will be followed

- a) The candidate scoring higher marks in section **IV** will be given priority. In case of a tie even thereafter, section **III** will be considered and so on.
- b) If there is a tie even after this criterion either graduation or 10+2 marks will be considered.
- c) If the resolution is not possible after this criterion, candidates will be given equal priority.

Reservation Policy

- (a) Seats are reserved for SC/ST/OBC (NCL)/EWS and Differently abled persons as per the Government of India rules. In the case of differently abled persons, a minimum of 40% permanent disabilities will only be considered.
- (b) As per the Directives of the Govt. of India, Supernumerary Seats are available in the following categories:
1. Prime Minister's special scholarship scheme for candidates from Jammu and Kashmir.
 2. Upto 5% of the approved seats are reserved for the widows/wards/wives of Armed Forces personnel and Ex-Servicemen as per the priorities set by Govt. of India:

Important Dates

- | | |
|---|--------------------------------|
| (a) Opening of the online application submission | : 27 February, 2019 |
| (b) Closing of the online application submission | : 30 April, 2019 |
| (c) Online Admit Card Generation (not for B.Tech) | : 10 May, 2019 |
| (d) University entrance examinations | : 31st May & June 1-2, 2019 |
| (e) Declaration of merit lists of provisionally selected candidates | : 25 June, 2019 (tentative) |
| (f) Counselling/Admission of selected candidates (other than B.Tech.) | : 22-25 July, 2019 (tentative) |
| (g) Commencement of classes of the Autumn Semester | : 26 July, 2019 |

Note:

- (i) All communication with candidates will be made through their registered e-mail ID/mobile number or notification in the admission portal www.tezu.ernet.in/admission.
- (ii) No separate letter will be issued for acceptance/rejection of application form, appearing entrance examinations (admit card), entrance examination schedule, selection for admission, etc.
- (iii) Communication for any doubt/query may be made on asktuee@tezu.ernet.in

Admission

Admission of a candidate to a Programme is subject to the following conditions:

- (a) Fulfilment of the eligibility criteria as specified in Eligibility Criteria for Admission
- (b) Selection for admission to the Programme.
- (c) Production of all the relevant documents such as pass certificates and marksheets of all earlier examinations with requisite percentage of marks in original and original copies of documents uploaded at the time of submission of the application form.
- (d) Submission of a set of self-attested copy of all pass certificate, marksheets and other the relevant documents.
- (e) Submission of the character certificate from the Head of the Institution and Migration certificate (in original) from the Board/University last attended.
- (f) Submission of a self-attested printout of the filled-in application form.

(g) Receipt of payment of admission fee in full.

Provisional Admission

- a) If the result of the qualifying examination of a student is awaited at the time of admission, he/she must produce/submit pass certificate/marksheet with requisite percentage of marks within **30th October, 2019** . Such a candidate must submit a proof of taking all the examinations including practical/lab/project/backlog courses of the qualifying Degree/Diploma/Certificate at the time of admission duly certified by the Head of the Institute last attended. **If any backlog course or other component remains incomplete after admission, then the candidate will be treated as not qualified for continuation and will be asked to leave the programme.**
- b) If a candidate fails to produce/submit any document (such as the completion certificate and mark sheet/transcripts of the qualifying examinations, migration certificate from the Board/University last attended, etc.) at the time of admission, the same must be produced as early as possible but not later than **30th October, 2019**. Candidates failing to produce marksheet or pass certificate with requisite percentage of marks within the specified period will not be allowed to continue her/his study.

Admission to Ph.D. Programmes:

- (i) The candidates who have appeared in the qualifying examination but their results are yet to be declared may be selected provisionally for admission to Ph.D. programme. Such candidates must produce mark sheets of the qualifying examination fulfilling the eligibility criteria at the time of admission.
- (ii) If a provisionally selected candidate fails to produce the mark sheet of the qualifying examination at the time of admission, the seat will be offered to the next eligible candidate from the merit list.

All admissions are provisional in nature. The admission of a student in a Programme may be cancelled under the following circumstances:

- (i) Production/submission of any false/tempered information/document.
- (ii) Failing to produce/submit any required pending document within **30th October, 2019**.
- (iii) If the required percentage of marks of the qualifying examination is not fulfilled or does not meet the requirement of the eligibility criterion.

SECTION- IV

Departments / Centres

Departments

1. [Civil Engineering](#)
2. [Computer Science and Engineering](#)
3. [Electronics and Communication Engineering](#)
4. [Electrical Engineering](#)
5. [Energy](#)
6. [Food Engineering and Technology](#)
7. [Mechanical Engineering](#)
8. [Business Administration](#)
9. [Commerce](#)
10. [Cultural Studies](#)
11. [Education](#)
12. [English and Foreign Languages](#)
13. [Hindi](#)
14. [Law](#)
15. [Mass Communication and Journalism](#)
16. [Social Work](#)
17. [Sociology](#)
18. [Chemical Sciences](#)
19. [Environmental Science](#)
20. [Mathematical Sciences](#)
21. [Molecular Biology and Biotechnology](#)
22. [Physics](#)

Centres

1. [Centre for Assamese Studies](#)
2. [Centre for Disaster Management](#)
3. [Centre for Endangered Languages](#)
4. [Centre for Inclusive Development](#)
5. [Centre for Open and Distance Learning](#)
6. [Teaching Learning Centre](#)
7. [Chandraprava Saikiani Centre for Women's Studies](#)

CIVIL ENGINEERING
(Year of Establishment: 2009)

The Department of Civil Engineering of Tezpur University was established in the year 2009 under the School of Engineering for offering B. Tech. Degree. Ph.D. Programme was initiated in spring, 2011 and the M. Tech. programme of the department was started from Autumn, 2018. The Department aims to provide quality education, research and professional experiences that enable its 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. M. Tech. in Civil Engineering (Specialization in Geotechnical Engineering)
3. Ph.D.

Faculty and Areas of Interest

| Professor | | |
|----------------------|---|------------------------------------|
| 1. | Utpal Kumar Das,* Ph.D. (GU)- HoD and Dean, P&D | <i>Geotechnical Engineering</i> |
| Assistant Professors | | |
| 1. | Ankurjyoti Saikia*, Ph.D. (TU) | <i>Geotechnical Engineering</i> |
| 2. | Kamal Uddin Ahamad,* Ph.D. (IITG) | <i>Environmental Engineering</i> |
| 3. | Binanda Khungur Narzary, M.Tech. (IITG) | <i>Transportation Engineering</i> |
| 4. | Debaraj Bailung Sonowal, M.Tech. (IITR) | <i>Structural Engineering</i> |
| 5. | Shailen Deka*, Ph.D. (IITG) | <i>Geotechnical Engineering</i> |
| 6. | Jayanta Deori Bharali, M.Tech. (IITG) | <i>Transportation Engineering</i> |
| 8. | Rituraj Buragohain, M.Tech. (IITG) | <i>Water Resources Engineering</i> |
| 9. | KarabiBharadwaj, M.E. (NITS) | <i>Structural Engineering</i> |
| 10. | Arunav Chakraborty, M.E. (AEC) | <i>Geotechnical Engineering</i> |

*Recognized Ph.D Supervisor

LEGENDS:GU-Gauhati University, P&D- Planning and Development, TU-Tezpur University, IITG-Indian Institute of Technology Guwahati, IITR-Indian Institute of Technology Roorkee, AEC-Assam Engineering College Guwahati, NITS- National Institute of Technology Silchar, HoD- Head of the Department.

Facilities

The Department has the following Laboratory facilities

Computational Laboratory Facilities

| | | |
|----------------------------|-----------------------------------|----------------|
| MatLab and Simulink R2011b | Civil FEM for Ansys, version 12.1 | Plaxis 2D |
| ETABS Version 9 | AutoCAD | SAP 2000, v-20 |

Core Departmental Laboratories

| | | |
|-----------------------------------|-----------------------------------|----------------------------|
| Geotechnical Engg. Laboratory-I | Environmental Engg. Laboratory -I | Water Resources Laboratory |
| Structural Engg. & NDT Laboratory | Transportation Engg. Laboratory | Surveying Laboratory |
| Geotechnical Engg. Laboratory-II | Environmental Engg. Laboratory-II | Computational Laboratory |

Research Activities

- No. of papers published in the year 2017-2018: 10
- No of ongoing research projects: 01
- No. of current Ph.D. scholars : 08

Selected Publications

- Narzary, B.K. and Ahamad, K.U., *Estimating elastic modulus of California bearing ratio test sample using finite element model*, Construction and Building Materials, July 2018, 175, 601-609, <https://doi.org/10.1016/j.conbuildmat.2018.04.228>
- Bhagowati, B. and Ahamad, K.U., *A review on lake eutrophication dynamics and recent developments in lake modeling*, a Ecohydrology & Hydrobiology, July 2018, <https://doi.org/10.1016/j.ecohyd.2018.03.002>
- Chakraborty, A. and Goswami, D., *Three-dimensional (3D) slope stability analysis using stability charts*, International Journal of Geotechnical Engineering May2018, <https://doi.org/10.1080/19386362.2016.1172807>

Courses offered in B. Tech. in Civil Engineering

| First Semester | | | Second Semester | | |
|----------------|----------------------------------|-----|-----------------|------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS104 | Mathematics I | 4 | PH104 | Physics II | 2 |
| PH103 | Physics I | 3 | MS105 | Mathematics II | 4 |
| CH103 | Chemistry | 4 | CO103 | Introductory Computing | 3 |
| EE103 | Basic Electrical Engineering | 3 | ME103 | Workshop Practice | 2 |
| EE104 | Basic Electrical Engineering Lab | 1 | CE103 | Engineering Graphics | 3 |
| EF103 | English | 3 | CO104 | Computing Laboratory | 2 |
| SE100 | Induction Programme | 0 | ME102 | Engineering Mechanics | 4 |
| | | | EC102 | Basic Electronics | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|-----------------------------------|-----|-----------------|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS205 | Mathematics-III | 3 | BT201 | Biology | 3 |
| ES201 | Environmental Science | 0 | CE 223 | Fluid Mechanics | 4 |
| BA201 | Economics | 3 | CE224 | Surveying | 5 |
| CE220 | Building Construction and Drawing | 4 | CE225 | Structural Analysis-I | 4 |
| CE221 | Building Materials & Technology | 3 | CE226 | Geotechnical Engineering-I | 4 |
| CE 222 | Concrete & Structure Lab | 2 | CE227 | Geotechnical Engineering Lab | 2 |
| CE228 | Engineering Geology | 2 | | | |
| CE229 | Solid Mechanics | 4 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|---------------------------------|-----|----------------|-------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LW301 | Indian Constitution | 0 | IC361 | Accounting and Financial Management | 3 |
| CE320 | Structural Design-I | 4 | CE328 | Structural Design-II | 3 |
| CE321 | Hydraulics | 3 | CE329 | Environmental Engineering-II | 3 |
| CE322 | Structural Analysis-II | 3 | CE330 | Estimating, Costing and Valuation | 3 |
| CE323 | Geotechnical Engineering-II | 3 | CE331 | Construction Management | 3 |
| CE324 | Environmental Engineering-I | 3 | CExxx | Programme Elective-I | 3 |
| CE325 | Environmental Engineering Lab. | 2 | XXxxx | Open Elective-I | 3 |
| CE326 | Transportation Engineering-I | 3 | | | |
| CE327 | Transportation Engineering Lab. | 1 | | | |

| Seventh Semester | | | Eighth Semester | | |
|------------------|----------------------------|-----|-----------------|--------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| XXxxx | HSS / Management Elective | 3 | CExxx | Programme Elective | 3 |
| CExxx | Programme Elective-II | 3 | CExxx | Programme Elective | 3 |
| CExxx | Programme Elective-III | 3 | XXxxx | Open Elective | 3 |
| CExxx | Programme Elective-IV | 3 | CE484 | Project | 6 |
| XXxxx | Open Elective-II | 3 | | | |
| CE471 | Industrial Summer Training | 2 | | | |
| CE483 | Project-I | 4 | | | |

| CT465 | Essentials of Indian Traditional Knowledge | 0 | | | | |
|------------------|---|-----|--|-------------|--|-----|
| Elective Courses | | | | | | |
| Course Code | Course Title | Cr. | | Course Code | Course Title | Cr. |
| CE 421 | Advanced Reinforced Concrete Design | 3 | | CE 432 | Hydraulic Machines | 3 |
| CE 422 | Dynamics of Structures | 3 | | CE 433 | Groundwater Hydrology and Management | 3 |
| CE 423 | Pre-stressed Concrete and Industrial Structures | 3 | | CE 434 | Air Pollution and Industrial Waste Management | 3 |
| CE 424 | Bridge Engineering | 3 | | CE 435 | Solid Waste Engineering | 3 |
| CE 425 | Soil Dynamics and Foundation Engineering | 3 | | CE 436 | Environmental Impact Assessment | 3 |
| CE 426 | Ground Improvement Methods | 3 | | CE 437 | Remote Sensing and GIS | 3 |
| CE 427 | Earth Retaining Structures | 3 | | CE 438 | Pavement Design | 3 |
| CE 428 | Applied Geotechnical Engineering | 3 | | CE 439 | Pavements Materials | 3 |
| CE 429 | Environmental Geo-techniques | 3 | | CE 440 | Geometric Design of Road Transportation System | 3 |
| CE 430 | Open Channel Flow | 3 | | CE 441 | Design and Construction of Rural Roads | 3 |
| CE 431 | Hydraulic Structures | 3 | | CE442 | Analysis and design of foundations | 3 |

Courses offered in M. Tech. in Civil Engineering

Specialization: Geotechnical Engineering

| First Semester | | | Second Semester | | |
|----------------|---------------------------------------|-----|-----------------|---------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CE501 | Engineering Behaviour of Soil | 4 | CE 504 | Advanced Foundation Engineering | 4 |
| CE 502 | Geotechnical Exploration and Testing | 5 | CE 505 | Ground Improvement Methods | 3 |
| CE 503 | Strength and Compressibility of Soils | 3 | CE 590 | Term Paper | 2 |
| | Elective I | 3 | | Elective III | 3 |
| CE 101 | Elective II | 3 | | Elective IV | 3 |
| | Open Elective I | 3 | | Elective V | 3 |
| | | | | Open Elective II | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|-----------------------------|-----|-----------------|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CE 598 | MTech Project (MTP) Phase-I | 12 | CE 599 | MTech Project (MTP) Phase-II | 12 |

| Elective Courses | | | | | |
|------------------|----------------------------|-----|---------------|--|-----|
| Semester - I | | | Semester - II | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CE 521 | Unsaturated Soil Mechanics | 3 | CE 527 | Slope stability and Retaining Structures | 3 |

| | | | | | |
|--------|------------------------------------|---|--------|--|---|
| CE 522 | Reinforced Earth and Geosynthetics | 3 | CE 528 | Soil Dynamics and Foundation Engineering | 3 |
| CE 523 | Rock Mechanics | 3 | CE 529 | Earth and Rockfill Dams | 3 |
| CE 524 | Groundwater Hydrology | 3 | CE 530 | Geotechnical Aspects of Waste Disposal | 3 |
| CE 525 | Numerical Methods in Engineering | 3 | CE 531 | Environmental Geotechnology | 3 |
| CE 526 | Analysis and Design of Pavements | 3 | CE 532 | Earthquake Engineering | 3 |

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



COMPUTER SCIENCE AND ENGINEERING (Year of Establishment: 1994)

The Department of Computer Science and Engineering was established in 1994 and it 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 Special Assistance Programme (SAP DRS Phase II). During 2005-2009 and 2018-2023 the Department received support from the Department of Science and Technology (DST), Govt. of India under its FIST- programme. The Department has also been recognized as ISEA member, MeitY, GoI and BRICS-NU Member. 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, computer vision, bioinformatics, image processing algorithms, speech processing, algorithms and optimization techniques, 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. **M. Tech. in Computer Science and Engineering**
5. Ph. D.

Faculty and Areas of Interest

| Professors | | |
|------------|--|---|
| 1. | Dilip Kumar Saikia,* Ph.D. (IITKgp), Vice-Chancellor | Pro <i>Networks, Mobile Computing</i> |
| 2. | Dhruba Kumar Bhattacharyya,* Ph.D. (TU), Dean, Academic Affairs | <i>Data Mining, Network Security, Bio-informatics</i> |
| 3. | Smriti Kumar Sinha,* Ph.D. (TU) | <i>Workflow Automation, Web Theory</i> |
| 4. | Utpal Sharma,* Ph.D. (TU) | <i>Natural Language Processing</i> |
| 5. | NityanandaSarma,* Ph.D. (IITG)- HoD | <i>Wireless Networks and Mobile Computing</i> |

| | | |
|-----------------------------|---|--|
| 6. | BhogeswarBorah,* Ph.D. (TU) | <i>Data Mining, Image Processing</i> |
| Associate Professors | | |
| 1. | Sarat Saharia,* Ph.D. (TU) | <i>Pattern Recognition</i> |
| 2. | Bhabesh Nath,* Ph.D. (TU) | <i>Data Mining</i> |
| 3. | Siddhartha Sankar Satapathy,*Ph.D. (TU) | <i>Computational Biology and Bioinformatics,Wireless Sensor Network</i> |
| Assistant Professors | | |
| 1. | SarangthemIbotombi Singh, Ph.D. (TU) | <i>Service Oriented Systems, Trust and Reputation</i> |
| 2. | LoitongbamBasanta Kumar Singh, M.Tech. (TU) (On Study leave) | <i>Object Recognition, Trust and Reputation</i> |
| 3. | Rosy Sarmah,* Ph.D. (TU) | <i>Data Mining, Bioinformatics, Image Processing</i> |
| 4. | Sanjib Kumar Deka,* Ph.D. (TU) | <i>Cognitive Radio Network, Operating System</i> |
| 5. | DebojitBoro, Ph.D. (TU) | <i>Network Security</i> |
| 6. | ArindamKarmakar,* Ph.D. (ISI) | <i>Algorithms, Computational Geometry</i> |
| 7. | SanghamitraNath, Ph.D. (TU) | <i>Speech Processing</i> |
| 8. | SwarnajyotiPatra,* Ph.D. (JU) | <i>Pattern Recognition, Machine Learning, Remote Sensing, Image Analysis</i> |
| 9. | ShobhanjanaKalita, Ph.D. (TU) | <i>Knowledge Representation and Reasoning</i> |
| 10. | NabajyotiMedhi, Ph.D. (NITM) | <i>Software Defined Networking, Wireless Networks, Network Security, Cloud Computing, Web Technologies</i> |
| 11. | Monisha Devi, M.Tech.(TU)(On Adhoc) | <i>Cognitive Radio Networks</i> |
| 12. | Nazrul Hoque, Ph.D. (TU)(On Adhoc) | <i>Data Mining, Network Security</i> |

*** Recognized Supervisor**

LEGENDS: IITKgp-Indian Institute of Technology Kharagpur, TU-Tezpur University, Leeds-University of Leeds England, IITG-Indian Institute of Technology Guwahati, MU-Manipur University, ISI-Indian Statistical Institute Kolkata, JU-Jadavpur University Kolkata, NITM- National Institute of Technology Meghalaya, 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

- * High Performance Computing (23 TFlops speed and 50TB storage) centre
- * IoT Laboratory

The Department houses the following Research / Special Computing Facilities:

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

Departmental Library

The Department has a library with a collection of more than 2238 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 2017-2018:47
- No. of ongoing research projects:08
- No. of current Ph.D. scholars: 50

Selected Publications:

- T Kakoty, HJ Kashyap and DK Bhattacharyya (2018) THD-Tricluster: A Robust Triclustering Technique and Its Application in Condition Specific Change Analysis in HIV-1 Progression Data, Journal of Computational Biology and Chemistry, Vol 75 (2018): PP 154-167, 2018.
- S Borah and B Borah, Watermarking Techniques for Three Dimensional (3D) Mesh Authentication in Spatial Domain, 3D Research, 9(3), 43, 2018.
- Hussain A. Chowdhury, Dhruba K. Bhattacharyya and Jugal K. Kalita, Differential Expression Analysis of RNA-seq Reads: Overview, Taxonomy and Tools, IEEE/ACM Transaction on Computational Biology and Bioinformatics, 2018.
- K Bhardwaj and S Patra, An unsupervised technique for optimal feature selection in attribute profiles for spectral-spatial classification of hyperspectral images, ISPRS Journal of photogrammetry and remote sensing, vol. 138. Page 139-150, 2018.
- S Kalita, A Karmakar and SM Hazarika, Efficient extraction of spatial relations for extended objects vis-à-vis human activity recognition in video, Journal of Applied Intelligence, Volume 48, Issue 1, Pages 204-219, 2018.
- H Choudhury, B Roychoudhury and D K Saikia, Enhanced Identity Privacy in UMTS, International Journal of Ad Hoc and Ubiquitous Computing, 28 (4), 203-219, 2018.

Courses offered in B. Tech. in Computer Science and Engineering

| First Semester | | | Second Semester | | |
|----------------|----------------------------------|-----------|-----------------|------------------------|-----------|
| Course Code | Course Title | CR | Course Code | Course Title | CR |
| CH103 | Chemistry | 4 | PH104 | Physics-II | 2 |
| PH103 | Physics-I | 3 | MS105 | Mathematics-II | 4 |
| MS104 | Mathematics-I | 4 | CO105 | Discrete Mathematics | 4 |
| EE103 | Basic Electrical Engineering | 3 | EC102 | Basic Electronics | 4 |
| EE104 | Basic Electrical Engineering Lab | 1 | ME102 | Workshop Practice | 2 |
| EF103 | Communicative English | 3 | CO103 | Introductory Computing | 3 |
| SE100 | Induction Program | - | CO104 | Computing Lab | 2 |
| | | | CE103 | Engineering Graphics | 3 |
| Total - | | 18 | Total - | | 24 |

| Third Semester | | | Fourth Semester | | |
|----------------|---|-----------|-----------------|--|-----------|
| Course Code | Course Title | CR | Course Code | Course Title | CR |
| MS205 | Mathematics - III | 3 | BT201 | Biology | 3 |
| CO202 | Digital Logic Design | 4 | CO218 | Data Communication | 3 |
| CO209 | Computing Workshop | 2 | CO214 | Computer Architecture and Organization | 4 |
| BA201 | Economics | 3 | CO215 | Computer Organization Lab | 1 |
| CO210 | Data Structures | 4 | CO216 | Formal Language and Automata | 3 |
| CO211 | Data structures using Object Oriented Programming Lab | 3 | CO206 | Design and Analysis of Algorithms | 4 |
| EC201 | Signals and Systems | 3 | CO217 | Graph Theory | 3 |
| ES201 | Environmental Science | - | Total - | | 21 |
| Total - | | 22 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|-------------------------------------|-----------|----------------|-------------------------------------|-----------|
| Course Code | Course Title | CR | Course Code | Course Title | CR |
| CO309 | Operating Systems | 3 | CO314 | System Software and Compiler Design | 4 |
| CO311 | Software Engineering | 3 | | Elective-II (PEC02) | 3 |
| CO310 | Operating Systems Lab | 1 | | Open Elective-II (OEC02) | 3 |
| CO312 | Database Systems | 3 | CO315 | Computer Networks | 3 |
| CO313 | Data base Systems Lab | 2 | CO316 | Computer Networks Lab | 1 |
| CO303 | Computer Graphics | 4 | IC361 | Accounting and Financial Management | 3 |
| | Elective-I (PEC01) | 4 | CO317 | Project-I (using SE perspective) | 2 |
| | Open Elective-I (OEC01) | 3 | Total - | | 19 |
| LW301 | Indian Constitution (MC-Non Credit) | - | | | |
| Total - | | 23 | | | |

| Seventh Semester | | | Eight Semester | | |
|------------------|--|-----------|----------------|--------------------------|-----------|
| Course Code | Course Title | CR | Course Code | Course Title | CR |
| XXxxx | * HSS/Management Elective | 3 | | Elective-V (PEC05) | 3 |
| CO401 | Artificial Intelligence | 3 | | Open Elective-IV (OEC04) | 3 |
| | Elective-III (PEC03) | 4 | CO403 | Project-III | 8 |
| | Elective-IV (PEC04) | 3 | Total- | | 14 |
| | Open Elective-III (OEC03) | 3 | | | |
| CO402 | Project-II | 4 | | | |
| CT465 | Essence of Indian Traditional Knowledge (MC- Non Credit) | 0 | | | |
| Total - | | 20 | | | |

Mandatory Non-credit Courses:

| S. No. | Course Code | Course Name | Schedule |
|--------|-------------|---|----------------------------|
| 1 | SE100 | Induction Programme | Semester I |
| 2 | CO404 | Summer Internship /Industrial Training | After Semester VI |
| 3 | CO405 | Comprehensive Written Exam | Semester VII/Semester VIII |
| 4 | ES201 | Environmental Science | Semester III |
| 5 | LW301 | Indian Constitution | Semester V |
| 6 | CT465 | Essence of Indian Traditional Knowledge | Semester VI |

Professional Elective Courses (PEC)

Sixth Semester :

| Group | Course Name | L-T-P | Credit |
|-------|-------------------------------------|-------|--------|
| PEC01 | Web Technology | 3-0-1 | 4 |
| | Embedded Systems | 3-0-1 | 4 |
| | Parallel Programming | 3-0-1 | 4 |
| PEC02 | Principles of Programming Languages | 3-0-0 | 3 |
| | Network Management and Security | 3-0-0 | 3 |
| | Cryptography | 3-0-0 | 3 |
| | Logic in Computer Science | 3-0-0 | 3 |
| | Theory of Computations | 3-0-0 | 3 |

Seventh Semester :

| Group | Course Name | L-T-P | Credit |
|-------|---|-------|--------|
| PEC03 | Machine Learning | 3-0-1 | 4 |
| | Distributed Systems | 3-0-1 | 4 |
| | Computer Vision & Image Processing | 3-0-1 | 4 |
| PEC04 | Cloud Computing | 3-0-0 | 3 |
| | Quantum Computing | 3-0-0 | 3 |
| | Statistical Modelling and Applications | 3-0-0 | 3 |
| | Internet of Things | 3-0-0 | 3 |
| | Software Defined Networking and Network Function Virtualization | 3-0-0 | 3 |
| | Geometric Algorithms | 3-0-0 | 3 |
| | Bioinformatics | 3-0-0 | 3 |

Eight Semester :

| Group | Course Name | L-T-P | Credit |
|--------------------|---|-------|--------|
| PEC05 | Natural Language Processing | 3-0-0 | 3 |
| | Linear Optimization | 3-0-0 | 3 |
| | Advanced Database Management Systems | 3-0-0 | 3 |
| | Fuzzy Logic and Neural Networks | 3-0-0 | 3 |
| | Mobile Computing | 4-0-0 | 4 |
| | Knowledge Representation and Reasoning | 4-0-0 | 4 |
| | Advanced Algorithms | 4-0-0 | 4 |
| | Data Mining | 3-0-0 | 3 |
| | Computer Architecture Parallel Processing | 3-0-0 | 3 |
| Operation Research | 3-0-0 | 3 | |

Courses offered in Master of Computer Application

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 404 | Programming and Problem Solving | 5 | CS 403 | File Structures | 2 |
| CS 405 | Discrete Mathematics | 3 | CS 408 | Data Structures | 5 |
| CS 406 | Digital Logic | 4 | CS 409 | Computer Organization and Architecture | 5 |
| CS 407 | Information and Communication Technology | 4 | | Elective | - |
| | Elective | 3 | | Elective | - |
| | | | | Open Elective-I | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|-------------------------|-----|-----------------|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 502 | System Software | 3 | CS 504 | Operating System | 4 |
| CS 508 | Database Management | 5 | CS 505 | Software Engineering | 4 |
| CS 509 | Data Communication | 4 | CS 507 | Computer Networks | 4 |
| | Elective | - | | Elective | - |
| | Elective | - | | Elective | - |
| | Open Elective-II | 3 | | Elective/Open Elective-III | 3 |

| Fifth Semester | | | Sixth Semester | | |
|----------------|--|-----|----------------|---------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 514 | Minor Project | 8 | CS 515 | Major Project | 16 |
| | Elective | - | | | |
| | Elective | - | | | |
| | Elective | - | | | |
| | Elective/ Open Elective-III (if three Open Electives not yet taken) | - | | | |

| Elective Courses | | | | | |
|------------------|---|-----|-------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 421 | Graph Theory | 3 | CS 525 | Artificial Intelligence | 3 |
| CS 422 | Numerical Methods | 4 | CO 504 | Natural Language Processing | 3 |
| CS 424 | Formal Language and Automata | 3 | CS 529 | Embedded Systems | 4 |
| CS 522 | Computer Graphics | 4 | CS 531 | Object Oriented Programming and Design | 5 |
| CS 523 | Enterprise Resource Planning | 3 | CS 532 | Compiler Design | 4 |
| CS 524 | Theory of Computation | 3 | CO 503 | Fuzzy Logic and Neural Network | 3 |
| CS 538 | Computational Geometry | 3 | IT 504 | E-Commerce | 3 |
| CS 601 | Design and Analysis of Algorithms | 3 | IT 507 | Computer Security and Cryptography | 3 |
| CS 602 | Image Processing | 3 | IT 509 | Data Mining and Data Warehousing | 4 |
| CS 606 | Computer Architecture and Parallel Processing | 3 | IT 517 | Pattern Recognition | 4 |
| CS 609 | Geographic Information Systems | 3 | IT 611 | Distributed Systems | 3 |
| CS 610 | Bioinformatics | 3 | BM 421 | Accounting and Financial Management | 3 |
| CS 621 | Mobile Computing | 4 | BM 501 | Foundation of Management | 3 |
| CS 625 | Web Technology | 4 | BM 504 | Managerial Economics | 2 |
| CS 725 | Knowledge Representation and Reasoning | 4 | MS 509 | Probability and Statistics | 4 |

Courses offered in M.Tech. in Information Technology

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 531 | Object Oriented Programming and Design | 5 | CS 601 | Design and Analysis of Algorithms | 3 |
| CS 634 | Selected Topics in Computer Networks | 4 | IT 610 | Advanced Database System | 4 |
| IT 611 | Distributed Systems | 3 | | Elective-II | 3 |
| | Elective-I | 3 | | Elective-III | 3 |
| | Open Elective -I | 3 | | Open Elective-II | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|----------------|-----|-----------------|-----------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IT 604 | Term Project-I | 8 | IT 605 | Term Project-II | 16 |
| | Elective-IV | 3 | | | |
| | Elective-V | 3 | | | |

| Elective Courses | | | | | |
|------------------|---------------------------------|-----|-------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 424 | Formal Language and Automata | 3 | CS 607 | Optimization Technique | 3 |
| CS 502 | System Software | 3 | CS 610 | Bioinformatics | 3 |
| CO 503 | Fuzzy Logic and Neural Networks | 3 | CS 621 | Mobile Computing | 4 |
| CO 504 | Natural Language Processing | 3 | CS 625 | Web Technology | 4 |
| CS 505 | Software Engineering | 4 | CS 725 | Knowledge Representation and Reasoning | 4 |
| CS 507 | Computer Networks | 4 | CS 731 | Data Mining in Security | 4 |
| CS 508 | Database Management Systems | 5 | IT 503 | Multimedia Systems | 4 |
| CS 509 | Data Communication | 4 | IT 504 | E-Commerce | 3 |

| | | | | | |
|--------|---|---|--------|---|---|
| CS 522 | Computer Graphics | 4 | IT 506 | Logic Programming | 3 |
| CS 523 | Enterprise Resource Planning | 3 | IT 507 | Computer Security and Cryptography | 3 |
| CS 524 | Theory of Computation | 3 | IT 509 | Data Mining and Data Warehousing | 4 |
| CS 525 | Artificial Intelligence | 3 | IT 510 | Advanced Operating Systems | 4 |
| CS 529 | Embedded Systems | 4 | IT 517 | Pattern Recognition | 4 |
| CS 532 | Compiler Design | 4 | IT 518 | Graph Theory | 3 |
| CS 538 | Computational Geometry | 3 | IT 523 | Discrete Mathematics | 3 |
| CS 602 | Image Processing | 3 | CO 501 | Network Management and Security | 3 |
| CS 606 | Computer Architecture and Parallel Processing | 3 | CS637 | Topics on Cognitive Radio and Networks | 4 |
| | | | CS638 | Software-Defined Networking and Network Function Virtualization | 3 |

Additional Elective Courses (from SWAYAM MOOCs courses of UGC)

| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
|-------------|--|-----|-------------|--|-----|
| CS 650 | Introduction to Machine Learning | 2 | CS 660 | Programming in Java | 3 |
| CS 651 | AI: Search Methods for Problem Solving | 3 | CS 661 | Data Science for Engineers | 2 |
| CS 652 | Privacy and Security in Online Social Media | 2 | CS 662 | Machine Learning for Engineering and Science Applications | 3 |
| CS 653 | Introduction to Internet of Things | 2 | CS 663 | Randomized Algorithms | 3 |
| CS 654 | Programming, Data Structures and Algorithms using Python | 2 | CS 664 | Parallel Algorithms | 3 |
| CS655 | Scalable Data Science | 2 | CS 665 | AI: Knowledge Representation and Reasoning | 3 |
| CS656 | Introduction to R Software | 2 | CS 666 | Embedded System Design with ARM | 2 |
| CS657 | Cloud Computing | 2 | CS 667 | Introduction to Soft Computing | 2 |
| CS658 | Social Networks | 3 | CS 668 | Blockchain Architecture and Use Cases | 3 |
| CS659 | An Introduction to Probability in Computing | 3 | CS 669 | Introduction to Industry 4.0 and Industrial Internet of Things | 3 |

Courses offered in M.Tech. in Computer Science and Engineering

The curriculum structure is subject to the approval of BoS/SB.

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 541 | Mathematical Foundation for Computer Science | 4 | IT510 | Advanced Operating Systems | 4 |
| CS 542 | Advanced Algorithms and Data Structures | 3 | CS 634 | Selected Topics in Computer Networks | 4 |
| CS 606 | Computer Architecture and Parallel Processing | 3 | CS 544 | Advanced Programming Lab II | 3 |
| CS543 | Advanced Programming Lab I | 3 | CS 545 | Seminar Presentation | 2 |
| | Elective I | 3/4 | | Elective II | 3/4 |
| | Open Elective I | 3 | | Open Elective II | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|----------------|-----|-----------------|-----------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| | Elective III | 3/4 | CS 641 | Term Project-II | 16 |
| | Elective IV | 3/4 | | | |
| CS 640 | Term Project I | 8 | | | |

| Elective I | | | | | |
|-------------|---|-----|-------------|--------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IT 610 | Advanced Database System | 4 | IT 611 | Distributed Systems | 3 |
| CS 607 | Optimization Techniques | 3 | CS 612 | Advanced Computer Graphics | 3 |
| CS 659 | An Introduction to Probability in Computing | 3 | CS 613 | Image Processing and Computer Vision | 3 |
| CS 611 | Modern Compiler Design | 3 | CS 614 | Graph Theoretic Algorithms | 3 |
| IT 517 | Pattern Recognition | 4 | CS 664 | Parallel Algorithms | 3 |

| Elective II | | | | | |
|-------------|--|-----|-------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 615 | Robotics | 3 | CS 538 | Computational Geometry | 3 |
| CS 637 | Topics on Cognitive Radio and Networks | 4 | IT 509 | Data Mining and Data Warehousing | 4 |
| CS 525 | Artificial Intelligence | 3 | CS 504 | Natural Language Processing | 3 |
| CS 616 | Machine Learning | 3 | CS 610 | Bioinformatics | 3 |
| CS 529 | Embedded Systems | 4 | CS 663 | Randomized Algorithms | 3 |
| CS 653 | Introduction to Internet of Things | 3 | CS 638 | Software Defined Networking and Network Function Virtualization | 3 |
| IT 503 | Multimedia Systems | 4 | CS 524 | Theory of Computation | 3 |
| CS 617 | VLSI Design | 3 | CS 618 | Information Theory and Coding | 3 |

| Elective III & IV | | | | | |
|-------------------|--|--|--|--|--|
| | | | | | |

| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
|-------------|--|-----|-------------|---|-----|
| CS 621 | Mobile Computing | 4 | C0503 | Fuzzy Logic and Neural Networks | 3 |
| IT 507 | Computer Security and Cryptography | 3 | CS 619 | Privacy and Security in Online Social Network | 3 |
| CS 725 | Knowledge Representation and Reasoning | 4 | CS 668 | Blockchain Architecture and Use cases | 3 |
| CS 602 | Image Processing | 3 | CS 620 | Data Science | 3 |

| Additional Elective Courses (from SWAYAM MOOCs courses of UGC) | | | | | |
|--|--|-----|-------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CS 650 | Introduction to Machine Learning | 2 | CS 660 | Programming in Java | 3 |
| CS 651 | AI: Search Methods for Problem Solving | 3 | CS 661 | Data Science for Engineers | 2 |
| CS 652 | Privacy and Security in Online Social Media | 2 | CS 662 | Machine Learning for Engineering and Science Applications | 3 |
| CS 653 | Introduction to Internet of Things | 2 | CS 663 | Randomized Algorithms | 3 |
| CS 654 | Programming, Data Structures and Algorithms using Python | 2 | CS 664 | Parallel Algorithms | 3 |
| CS655 | Scalable Data Science | 2 | CS 665 | AI: Knowledge Representation and Reasoning | 3 |
| CS656 | Introduction to R Software | 2 | CS 666 | Embedded System Design with ARM | 2 |
| CS657 | Cloud Computing | 2 | CS 667 | Introduction to Soft Computing | 2 |
| CS658 | Social Networks | 3 | CS 668 | Blockchain Architecture and Use Cases | 3 |
| CS659 | An Introduction to Probability in Computing | 3 | CS 669 | Introduction to Industry 4.0 and Industrial Internet of Things | 3 |

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

ELECTRONICS AND COMMUNICATION ENGINEERING (Year of Establishment: 1997)

Established in 1997, the Department of Electronics and Communication Engineering is one of the oldest departments in the University. Starting 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. (currently under the department of Electrical Engineering since October, 2016). The department also carried out implementation of a three year diploma programme in Advanced Diploma in Healthcare Informatics and Management under the career oriented scheme of the University Grants Commission (2012-2017). In addition, the department offers Ph.D. programme in different areas including Signal and Image Processing, Bioelectronics, Biosensors, Microwave Engineering, Communication Engineering and Microelectronics.

The department is supported by:

- DST-FIST
- DeitY - MIT
- UGC-SAP (DRS-I)

Programmes offered

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

Faculty and Areas of Interest

| Professors | |
|----------------------------------|---|
| Manabendra Bhuyan,* Ph.D. (GU) | <i>Sensor Design, Intelligent Instrumentation, Signal Processing</i> |
| Partha Pratim Sahu,* Ph.D. (JU) | <i>Optical Networks and its Components, Clinical Instrumentation, Micro-fabrication</i> |
| Jiten Chandra Dutta,* Ph.D. (JU) | <i>Biosensors and Bio-electronics, Neurobioengineering,</i> |

| | |
|--|---|
| SatyajibBhattacharyya,* Ph.D. (DU)- HoD | <i>Microwave Antennas, Absorbing Materials</i> |
| Associate Professors | |
| Santanu Sharma,* Ph.D. (TU) | <i>Semiconductor Devices, Bioelectronic Devices, Vehicular Electronics, Power Electronics</i> |
| Soumik Roy,* Ph.D. (TU) | <i>Neuroengineering.</i> |
| BhabeshDeka,* Ph.D. (IITG) | <i>Image Processing, Computer Vision, Compressive Sensing MRI, Biomedical Signal Processing</i> |
| Vijay Kumar Nath,* Ph.D. (IITG) | <i>Image and Video Processing</i> |
| NayanMoniKakoty,*Ph.D. (TU) | <i>Robotics, Biomedical Signal Processing</i> |
| Assistant Professors | |
| Riku Chutia, Ph.D. (TU) | <i>E-nose, Instrumentation and Signal Processing, Embedded System</i> |
| Deepika Hazarika*, Ph.D.(TU) | <i>Image Processing</i> |
| RatulKumarBaruah, Ph.D. (IITG) | <i>Nanoelectronics, VLSI, MEMS</i> |
| Biplob Mondal, Ph.D. (JU) | <i>VLSI and MEMS Devices</i> |
| Durlav Sonowal, Ph.D. (TU) | <i>Sensors, Signal Processing</i> |
| Ananya Bonjyotsna, M. Tech. (TU) | <i>Audio Processing</i> |
| Priyanka Kakoty, M. Tech. (TU) | <i>Intelligent Instrumentation</i> |
| SantanuMaity, Ph.D. (NITY) | <i>Semiconductor devices, Nano Technology, RF-MEMS switch and Antenna, Photo-voltaic cell</i> |

*** Recognized Ph. D. Supervisor**

LEGENDS: **GU**-Gauhati University, Guwahati; **JU**-Jadavpur University, Jadavpur; **DU**- University of Delhi, Delhi; **TU**-Tezpur University, Tezpur **IITG**-Indian Institute of Technology Guwahati, **AEC**-Assam Engineering College Guwahati, **NITY**- National Institute of Technology, Yupia Arunachal Pradesh, **HoD**-Head of the Department

Facilities

(a) 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.

(b) 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.

(c) Design and Prototyping Laboratory: 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.

(d) M.Tech. Project Laboratory: It is equipped with a number of computers equipped with software for computer simulation of different M.Tech. project works.

(e) Software Simulation Laboratory: It is equipped with PCs connected to a LAN server and the internet. There are up-to-date Circuit Simulators like PCB layout, XILINX. Experiments on Data and Computer Networks (DCN), VLSI, Modelling and Simulation (MS), Device Modelling, and Advanced Programming Language (APL) are conducted in this lab.

(f) Communication Laboratory: It is equipped with CRO, DSO, function generator, trainer kit, measuring instruments, spectrum analyser, etc. Experiments on Principles of Communication (PC), Digital Communication (DC), Control System (CS) and Microprocessors are conducted in this lab.

(g) Microwave Laboratory: It is equipped with Power meter, VSWR meter, DMM etc. and consists of setups for different microwave experiments.

(h) 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.

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

(j) 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. **(Supported by AICTE under MODROB).**

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

(l) Neuro engineering 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.

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

(n) 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.

(o) 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, thickness measurement instrument, stereo-microscope etc.

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

- Power Electronics Laboratory (Vehicular Electronics)
- Microwave Engineering Laboratory
- Wireless Communication Engineering Laboratory
- E-nose Laboratory
- Computer Vision and Image Processing Laboratory

Research Activities

- No. of papers published in the year 2017-2018: 23
- No. of ongoing research projects: 4
- No. of current Ph. D scholars: 35

Selected Publications

- Dutta, L., Talukdar, C., Hazarika, A. and Bhuyan, M., A Novel Low Cost Hand-Held Tea Flavor Estimation System. IEEE Transactions on Industrial Electronics (2017), 10.1109/TIE.2017.2772184, IEEE.
- Datta, S. and Deka, B. Magnetic Resonance Image Reconstruction using Fast Interpolated Compressed Sensing. Journal of Optics, Springer, (2017).
- Dutta, J.C., and Thakur, H.R., Sensitivity Determination of CNT-Based ISFETs for Different High-Dielectric Materials. IEEE Sensors Letters, 1(2), 1-4, (2017).
- Maity, S., Muchahary, D., Sahu, P.P., Enhancing Responsivity and Detectivity of Si-ZnO Photodetector With Growth of Densely Packed and Aligned Hexagonal Nano rods. IEEE Transactions on Nanotechnology, 16 (6), 939-945, (2017).
- Gogoi, N. and Sahu, P.P., All-optical tunable power splitter based on a surface plasmonic two-mode interference waveguide. Applied Optics, 57 (10), 2715-2719, (2018).
- Das, H.K. and Sahu, P.P., Electro-Physiology of Coupling Model and Its Impact on Naja Kaouthia Venom Treated Sciatic Nerves of Toad IEEE Transactions on Neural Systems and Rehabilitation Engineering, 26(5), 987-992, (2018).

Courses offered in B. Tech. in Electronics and Communication Engineering

| First Semester | | | Second Semester | | |
|----------------|----------------------------------|-----|-----------------|------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CH103 | Chemistry | 4 | PH104 | Physics-II | 2 |
| MS104 | Mathematics-I | 4 | MS105 | Mathematics-II | 4 |
| EE103 | Basic Electrical Engineering | 3 | EC102 | Basic Electronics | 4 |
| EE104 | Basic Electrical Engineering Lab | 1 | ME103 | Workshop Practice | 2 |
| PH103 | Physics-I | 3 | CO103 | Introductory Computing | 3 |
| EF103 | English | 3 | CO104 | Computing Lab | 2 |
| SE100 | Induction Program | - | ME102 | Engineering Mechanics | 4 |
| | | | CE103 | Engineering Graphics | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|---------------------------|-----|-----------------|------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EC201 | Electronics Devices | 3 | EC207 | Analog & Digital Communication | 3 |
| EC202 | Electronics Devices Lab | 1 | EC208 | Analog & Digital Communication Lab | 1 |
| EC203 | Digital System Design | 3 | EC209 | Analog Circuits | 3 |
| EC204 | Digital System Design Lab | 1 | EC210 | Analog Circuits Lab | 1 |
| EC205 | Signals and Systems | 3 | EC211 | Microcontroller and Microprocessor | 3 |
| EC206 | Network Theory | 3 | EC212 | Microcontroller Lab | 1 |
| MS205 | Mathematics-III | 3 | BT201 | Biology | 3 |
| BA302 | Economics | 3 | CS201 | Data Structure & Operating System | 3 |
| ES201 | Environmental Science | 0 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|--|-----|----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EC301 | Electromagnetic Waves | 3 | EC311 | Control System | 3 |
| EC302 | Electromagnetic Waves Lab | 1 | EC312 | Computer Network | 3 |
| EC303 | Computer Architecture | 3 | EC313 | Computer Network Lab | 2 |
| EC304 | Probability Theory & Stochastic Process | 3 | EC314 | Electronic Measurement Lab | 1 |
| EC305 | Digital Signal Processing | 3 | EC315 | Mini Project | 2 |
| EC306 | Digital Signal Processing Lab | 1 | | ECE Elective-II (any one from the subjects below) | |
| | ECE Elective-I (any one from the subjects below) | | EC316 | Microwave techniques | |
| EC307 | Mobile communication & Networks | 3 | EC317 | Speech and Audio processing | 3 |
| EC308 | Electrical machines and power protection | | EC318 | Digital image and video processing | |
| EC309 | Intelligent instrumentation | | EC319 | VLSI Design | |
| EC310 | CMOS design | | | Open Elective-II | 3 |
| | Open Elective-I | 3 | IC361 | Accounting & Financial Management | 3 |
| LW301 | Indian constitution (MC- Non Credit) | 0 | | | |

Students will undergo a summer training of 4 weeks after 6th semester during summer vacation and submit the report and the certificate of completion in the department in the beginning of 7th semester.

| Seventh Semester | | | Eighth Semester | | |
|------------------|--|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| | ECE Elective -III(any one from the subjects below) | 3 | | ECE Elective-VI(any one from the subjects below) | 3 |
| EC401 | Information Theory & Coding | | EC418 | Power electronics | |
| EC402 | Embedded systems | | EC419 | Mixed signal design | |
| EC403 | Satellite communication | | EC420 | High speed electronics | |
| EC404 | Digital systems and VHDL | | | Open Elective-IV | 3 |
| | ECE Elective-IV(any one from the subjects below) | 3 | EC421 | Project- Stage II | 20 |
| EC405 | Computer Vision | | | | |
| EC406 | Biomedical Signal Processing | | | | |
| EC407 | Antenna and propagation | | | | |
| EC408 | Digital control system | | | | |
| | ECE Elective-V(any one from the subjects below) | 3 | | | |
| EC409 | Introduction to MEMS | | | | |
| EC410 | Biomedical electronics | | | | |
| EC411 | Fibre optic communication | | | | |
| EC412 | Nano-electronics | | | | |
| | ECE Elective-VII(any one from the subjects below) | 3 | | | |
| EC413 | Fuzzy Logic and Neural network | | | | |
| EC414 | Bioneuro engineering | | | | |
| EC415 | Digital signal processor | | | | |
| EC416 | Electronics design automation | | | | |
| | Open Elective -III | 3 | | | |
| EC417 | Project- Stage I | 12 | | | |
| | * HSS/Management Elective | 3 | | | |
| CT465 | Essence of Indian Traditional Knowledge (MC- Non Credit) | 1 | | | |

Courses offered in M. Tech. in Electronics Design and Technology

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EL 517 | Physical and Industrial Design of Electronics Systems | 4 | EL 516 | Design of Fine Mechanics and Power Devices | 4 |
| EL 531 | Design of Digital Systems | 4 | EL 530 | VLSI Design | 4 |
| EL521 | Design and Technology of Electronic Devices | 4 | EL 538 | Advanced Electronic Devices | 3 |

| | | | | | | |
|-------|-------------------------------|---|--|--------|-----------------------------|---|
| EL537 | Advanced Programming Language | 4 | | EL540 | Intelligent Instrumentation | 4 |
| | Open Elective I | 3 | | BE 528 | MEMs and Nanotechnology | 3 |
| | Elective I | 4 | | | Open Elective II | 3 |
| | | | | | Elective II | 4 |

| Third semester and Fourth Semester | | |
|------------------------------------|-----------------------|-----|
| Course Code | Course Title | Cr. |
| EL601 | M. Tech. Dissertation | 24 |

| Elective I (Any one from the following courses) | | | Elective II (Any one from the following courses) | | |
|---|-------------------------------|-----|--|-------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EL 533 | Data Communication & Networks | 4 | EL 534 | Modeling and Simulation | 4 |
| EL 535 | Information Systems | 4 | EL 536 | Application Software | 4 |

Courses offered in M. Tech. in Bioelectronics

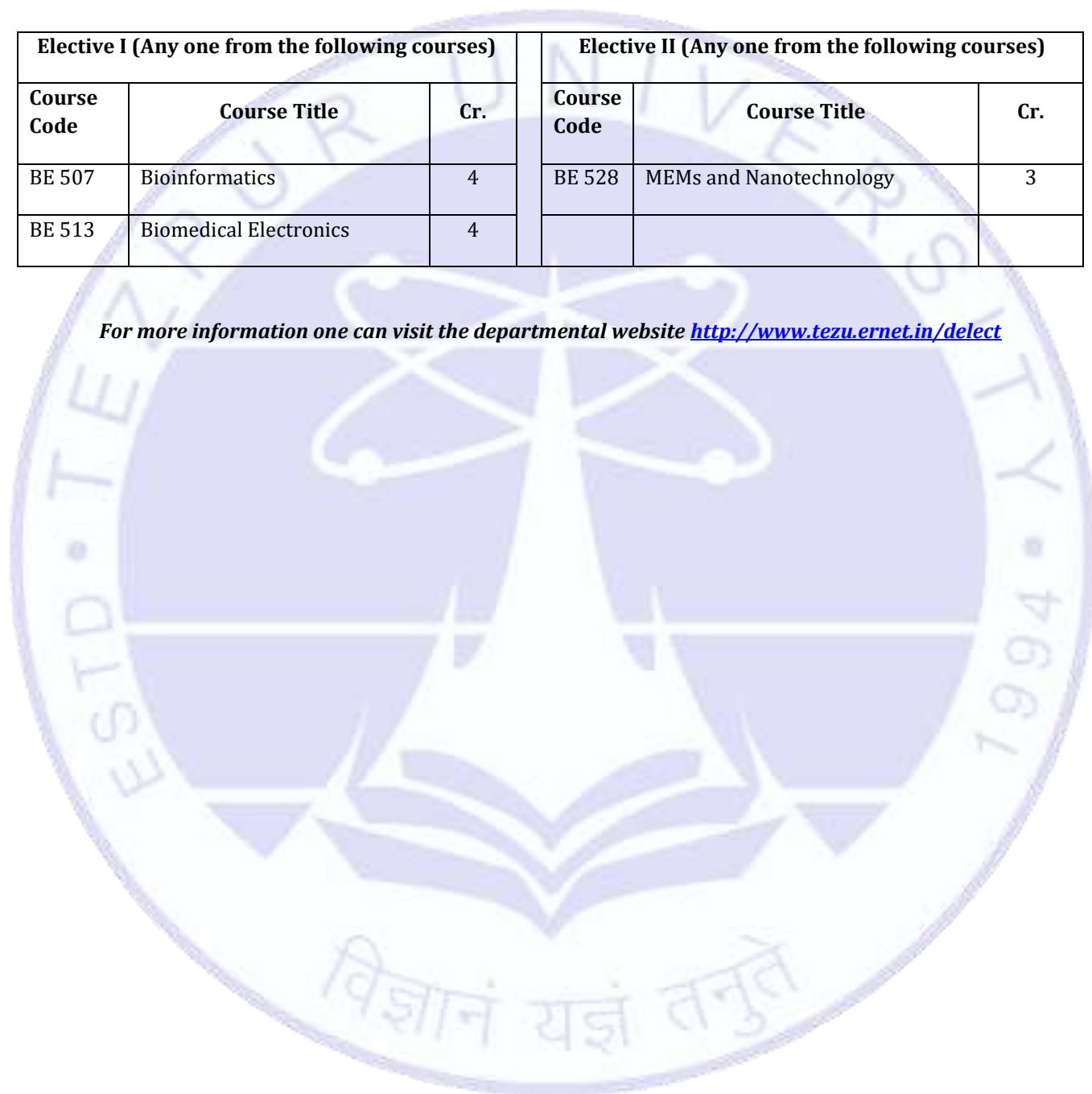
| First Semester | | | Second Semester | | |
|----------------|-------------------------------------|-----|-----------------|------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BE 515 | Basic Bioelectronics | 3 | BE 524 | Advanced Bioelectronic Devices | 4 |
| BE 517 | Biomedical Signal Processing | 4 | BE 504 | Neuroengineering | 3 |
| BE 519 | Bioinspired Systems and Engineering | 3 | BE 506 | Biomedical Image Processing | 4 |
| BE 509 | Biomathematics | 3 | BE518 | Bioelectronic Systems and Controls | 4 |
| BE 511 | Basic Bioelectronics Laboratory | 4 | EL 540 | Intelligent Instrumentation | 4 |
| | Open Elective I | 3 | | Open Elective II | 3 |
| | Elective I | 4 | | Elective – II | 3 |

Third semester and Fourth Semester

| Course Code | Course Title | Cr. |
|-------------|-----------------------|-----|
| BE 601 | M. Tech. Dissertation | 24 |

| Elective I (Any one from the following courses) | | | Elective II (Any one from the following courses) | | |
|---|------------------------|-----|--|-------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BE 507 | Bioinformatics | 4 | BE 528 | MEMs and Nanotechnology | 3 |
| BE 513 | Biomedical Electronics | 4 | | | |

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



ELECTRICAL ENGINEERING (Year of Establishment: 2016)

The Electrical Engineering Department was established in 2016 under the School of Engineering for offering B.Tech. programme in Electrical Engineering (this B.Tech. Programme was originally started in the year 2014 under the Department of Electronics and Communication Engineering). The prime motive of the department is to impart quality education, training and research at the undergraduate level in forefront areas of Electrical Engineering and its allied technologies. The Department currently offers B.Tech. in Electrical Engineering. This programme aims at producing engineers with sound basic and applied knowledge in electrical engineering. Department plans to expand its teaching and research infrastructure, enhance its industrial and research collaboration, and implement modern techniques for training to realize the above goal. The key areas of faculty expertise of the department include Power System Engineering, Power Electronics, Nonlinear Analysis-Theory, Methods and Applications, Control Systems, Fractional Order Chaotic Systems, Converter and Inverter Topologies, Sensor Technologies, Smart Grid Technologies and Policy Design, Distributed Generation Based System Optimization, Renewable Energy Management, Bio-electronics and Neuro Engineering.

Programme offered

1. B.Tech. in Electrical Engineering

Faculty and Areas of Interest

| Professor | | |
|----------------------|--------------------------------------|--|
| 1. | Jiten Chandra Dutta* Ph.D. (JU)- HoD | <i>Biosensors and Bioelectronics</i> |
| Assistant Professors | | |
| 1. | Rahat Mahboob, PhD (JMI) | <i>Sensors and Sensing Technology; Electronics Instrumentation; Wireless Sensor</i> |
| 2. | Manashita Borah, M.Tech. (NITS) | <i>Control Systems, Non-linear Control, Chaos and Fractional Order Systems</i> |
| 3. | Angshuman Sharma, M.Tech. (AEC) | <i>Multilevel Inverters, Vehicle-to-Grid Interconnection, Bidirectional DC-Dc Converters, Hybrid Electric Vehicles</i> |
| 4. | Barnam Jyoti Saharia, M.Tech.(NITA) | <i>Power Electronic Converters for Renewable Energy Applications, Hybrid PV-Wind Energy System Modeling and Optimization, Fuzzy and Neural Network Applications in Power Point Tracking of PV Systems, 5Optimization in Power Electronic Converters Design, Artificial Intelligence in Renewable Energy Applications</i> |

* **Recognized Supervisor**

LEGENDS: **JU**- Jadavpur University West Bengal, **JMI**-Jamia Milia Islamia, **NITS**- National Institute of Technology Silchar, **AEC**- Assam Engineering College Guwahati, **NITA**- National Institute of Technology Agartala, **HoD**- Head of the Department

Facilities

- (a) Basic Electrical Engineering Laboratory:** Laboratory experiments conducted in this lab are based on fundamentals of electrical engineering, Kirchoff's law's, Thevenin's theorem, Nortons theorem, maximum power transfer theorem, superposition theorem, calibration experiments, power factor measurement. The lab is all the necessary equipment's for successful completion of the experiments.
- (b) Network Laboratory:** Laboratory experiments conducted in this lab are based upon Realization of Current Source and Voltage Source, study application of Thevenin's Theorem, Norton's Theorem, Superposition Theorem, Maximum Power Transfer Theorem, the step response of RL, RC & RLC circuits., Calculation and Verification of Z, Y, ABCD parameters of a Two-port Network., Design and frequency response of Passive Filter circuit., Ladders and Bridges, Multi DC Mesh Analysis. The lab is equipped with number DMM, analog voltmeters and ammeters, DSO, CRO, Function generator and various trainer kits.
- (c) Measurement and Instrumentation Laboratory:** Laboratory experiments conducted in this lab are based upon potentiometers, a.c. bridges, Maxwell's bridge, Anderson's bridge, Kelvin's bridge, single phase and three phase power measurements, synchronizing of loads.
- (d) Electrical Machine Laboratory:** This laboratory is sponsored under the AICTE-NEQIP Scheme. Laboratory experiments conducted in this lab are based upon application of dc machines, speed control of dc motors, characteristics of generators, transformer- open circuit, short circuit tests, regulation tests, Swinburne test, synchronous machine tests, and tests on three phase induction motors. The laboratory is well stocked with ammeters, voltmeters, power factor meters, wattmeters, tachometers, single phase and three phase resistive as well as mechanical loads for successful completion of the experiments.
- (e) Power Systems Laboratory:** Laboratory experiments conducted in this lab are based upon application of transmission line parameters evaluation, transformer testing, breakdown voltage evaluation of transformers, radial and ring distribution systems, differential relay protection, determination of x_d and x_q parameters of machines. The equipment's in the laboratory are protected for use and are state of the art in terms of laboratory testing and experimentation.
- (f)** In addition to these laboratories, the department also offers its students experience in laboratory with the assistance from Electronics and Communication Engineering Department which include Basic Electronics Laboratory, Computer Laboratory (Software), Communication Laboratory, DSP Laboratory, Image Processing Laboratory and Hardware Laboratory.

Research Activities

- Number of papers published in the year 2017-2018: 11
- Number of ongoing research projects: Nil
- Number of current Ph.D. scholars: Nil

Selected Publications

- Dutta, J. and Thakur, H., Sensitivity determination of CNT based ISFETs for different high- κ dielectric materials. IEEE Sensors Letters, 1(2). 2017
- Saharia, B.J. and Manas, M. Viability Analysis of Photovoltaic/Wind Hybrid Distributed Generation in an Isolated Community of Northeastern India, Distributed Generation & Alternative Energy Journal , 32, (1), 2017.
- Siddiqui,A. ,Mahboob, M. Rand Tarikul, I. A Passive Wireless Tag With Digital Readout Unit for Wide Range Humidity Measurement. IEEE Transactions on Instrumentation and Measurement, vol. 66, no.5, pp. 1013-1020,. 2017
- Borah, M., Roy, P., & Roy, B. K. Enhanced Performance in Trajectory Tracking of a Ball and Plate System using Fractional Order Controller. IETE Journal of Research, 1-11, 2017.
- Borah, M., & Roy, B. K. An enhanced multi-wing fractional-order chaotic system with coexisting attractors and switching hybrid synchronisation with its nonautonomous counterpart. Chaos, Solitons & Fractals.vol. 102, pp 372-386, 2017.

Courses offered in B.Tech. in Electrical Engineering

| First Semester | | | Second Semester | | |
|----------------------------|--|-----|------------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 101 | Mathematics -I | 4 | MS 103 | Mathematics -II | 4 |
| PH 101 | Physics -I | 4 | PH 102 | Physics -II | 4 |
| CH 101 | Chemistry | 4 | ME 102 | Engineering Mechanics | 4 |
| EL 101 | Basic Electrical Engineering | 4 | EL 102 | Basic Electronics | 5 |
| CE 101 | Engineering Graphics | 3 | CO 101 | Introductory Computing | 3 |
| ME103 | Workshop Practice | 2 | CO 102 | Computing Laboratory | 2 |
| Humanities Elective | | | Science Elective | | |
| EG101/ SO101/ BM 101 | Communicative English/ Sociology/Elementary Economics | 3 | BT 101/ ES 101/ CH 102 | Elements of Modern Biology/ Environmental Science/ Introductory Material Science | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|--------------------|-----|-----------------|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 201 | Mathematics-III | 3 | EE 203 | Measurement and Instrumentation | 4 |
| EE 201 | Network Theory | 3 | EE 204 | Electrical Machines -I | 3 |
| EE 202 | Network Laboratory | 2 | EE 205 | Electrical Machines Laboratory -I | 2 |

| | | | | | |
|--------|--|---|--------|---|---|
| EL 201 | Switching Circuits and Digital Logic | 4 | EL 205 | Integrated Circuit | 4 |
| EL 203 | Analog Electronic Devices and Circuits | 4 | EL 206 | Principles of Communication | 4 |
| EL 204 | Signals and Systems | 3 | EL 208 | Engineering Electromagnetic | 3 |
| CO 212 | Computer Architecture and Organization | 5 | CO 221 | Data Structures and Object Oriented Programming | 4 |

| Fifth Semester | | | Sixth Semester | | |
|----------------|------------------------------------|-----|----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EE 301 | Power Systems-I | 5 | EE 304 | Power Systems-II | 5 |
| EE 302 | Electrical Machines -II | 3 | EE 305 | Advanced Control System Engineering | 4 |
| EE 303 | Electrical Machines Laboratory -II | 2 | EE 306 | Power Electronics and Drives | 3 |
| EL 302 | Microprocessors and Interfacing | 4 | EE 307 | Power Electronics and Drives Laboratory | 2 |
| EL 303 | Digital Signal Processing | 4 | BM 322 | Social Responsibility and Professional Ethics in Engineering | 3 |
| EL 304 | Control System Engineering | 4 | - | EE Elective - I | 3 |
| BM 321 | Fundamentals of Management | 3 | - | Open Elective - I* | 3 |

| Seventh Semester [§] | | | Eight Semester | | |
|-------------------------------|--------------------------------------|-----|----------------|---------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EE 401 | Computer Aided Power System Analysis | 5 | EE 404 | Project- II | 12 |
| EE 402 | Industrial Summer Training # | 2 | - | EE Elective - IV | 3 |
| EE 403 | Project -I | 6 | - | Open Elective -III* | 3 |
| - | EE Elective - II | 3 | | | |
| - | EE Elective - III | 3 | | | |
| - | Open Elective -II* | 3 | | | |

| Elective Courses | | | | | |
|------------------|---|-----|-------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EE 308 | Nonconventional Energy Sources | 3 | EE 408 | High Voltage Engineering | 3 |
| EE 309 | Utilization and Conservation of Electrical Energy | 3 | EE 409 | Industrial Drives and Control | 3 |
| EE 310 | Embedded Systems | 3 | EE 411 | Power System Interconnection and Control | 3 |
| EE 405 | Industrial Automation Systems | 3 | EL 426 | Fuzzy Logic and Neural Networks | 3 |
| EE 407 | Advanced Power Electronics and Drives | 3 | | | |

*Open Elective: Any course of level 400 and above offered in the University and recommended by the department.

\$ The 7th semester will start a month later than usual and therefore be shorted by a month. To compensate for it there shall be 4 class hours per week for a 3 credit course.

Industrial Summer Training: Training shall be of 8 weeks duration carried out during the summer break after the 6th semester. The report will be submitted in the 7th semester.

Elective courses are offered based on the choice of students and availability of teacher for teaching a particular course

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



ENERGY
(Year of Establishment: 1996)

Founded in 1996, the Department of Energy has been a vibrant academic platform, engaging itself with an academic mandate to produce manpower pool in the field of energy, development of new and efficient energy technologies, and 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 through CODL) 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 teaching and research, the department also organizes training programmes, workshops and seminars in the relevant areas of energy. The Faculty of Department has successfully completed a number of international collaborative research projects, notable among them are, 1) Indo-UKIERI, 2) Indo-European Union and 3) Indo-Finland. The Department also has six on-going international collaborative research projects. Research Scholars in the Department received accolades at national and international level, 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. M.Tech. in Energy Technology
2. Ph.D.
3. Post Graduate Diploma in Renewable Energy and Energy Management (through CODL)

Faculty and Areas of Interest

| Professors | |
|---------------------------------------|--|
| Debendra Chandra Baruah,* Ph.D. (PAU) | <i>Renewable Energy and Energy Management</i> |
| Dhanapati Deka,* Ph.D. (TU)-DSW | <i>Biofuels, Catalytic transformation of biomass to biofuel and chemical, Bioenergy and Environment</i> |
| Rupam Kataki,* Ph.D. (TU)- HoD | <i>Biomass and Bioenergy, Biofuels, Energy Environment interaction</i> |
| Associate Professor | |
| Sadhan Mahapatra, Ph.D. (IISc) | <i>Biomass Gasification, Climate Responsive Buildings, Decentralized Energy Options, Energy Conservation</i> |

Assistant Professors

| | |
|---------------------------------------|---|
| Pradyumna Kumar Choudhury, Ph.D. (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, Graphene, Nanocatalyst.</i> |
| Nabin Sarmah,* Ph.D. (HWU) | <i>Solar Energy, Photovoltaic, Energy Systems</i> |
| Bibha Boro, M.Tech. (TU) | <i>Electrical Engineering</i> |
| Vikas Verma, Ph.D. (IITR) | <i>Thermal Engineering, Solar Thermal Energy, Heat Transfer</i> |

*Recognized Supervisor

LEGENDS: PAU-Punjab Agriculture University, TU-Tezpur University, DSW-Dean, Student's Welfare, IISc.- Indian Institute of Science Bangalore, IITG- Indian Institute of Technology Guwahati, HWU-Heriot Watt University, United Kingdom, IITR- Indian Institute of Technology Roorkee, 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, Duel Fuel Engine, Vacuum Distillation Apparatus, Microhydel test set-up, Research Radiometer, Solar thermal collector test set-up, Solar Dryer, Peristaltic Pump, Ultrasonicator, Programmable Muffle Furnace, Biodiesel Plant and various renewable energy systems.

Departmental Library

A good number of books, video cassettes and CDs on Energy 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

MHRD fellowships are available for GATE qualified candidates. NEC fellowships are available for the students from North East regions. ONGC also offers scholarship to M. Tech. students of the Department.

Research Activities

- No. of papers published in the year 2017 - 2018: 20
- No. of ongoing research projects: 09
- No of current Ph.D scholars: 23

Selected Publications

- Baruah, D., Baruah, D.C., Hazarika, M.K. Artificial neural network based modeling of biomass gasification in fixed bed downdraft gasifiers, *Biomass and Bioenergy*, 98, 2017.
- Gohain, M., Devi, A., and Deka, D. Musa balbisiana Colla peel as highly effective renewable heterogeneous base catalyst for biodiesel production, *Industrial Crops and Products*, 109, 2017.
- Narzari, R., Bordoloi, Neon J., Sarma, B., Gogoi, L., Gogoi, N., Borkotoki, B. and Kataki, R. Fabrication of bio-carbons obtained from valorization of biowaste and evaluation of its physicochemical properties, *Bioresource Technology*, 242, 2017.
- Snehesh, S., Mukunda, H S., Mahapatra and S., Dasappa, S. Fischer-Tropsch route for the conversion of biomass to liquid fuels - Technical and economic analysis, *Energy*, 130, 2017.
- Sivasakthivel, T., Philippe, M., Murugesan, K., Verma, V. and Hu, P. Experimental thermal performance analysis of ground heat exchangers for space heating and cooling applications, *Renewable Energy*, 113, 2017.

Courses offered in M. Tech. in Energy Technology

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EN 560 | Foundation for Energy Engineering | 2 | EN 570 | Energy Management and Auditing | 4 |
| EN 561 | Fuel and Combustion | 3 | EN 571 | Energy Economics and Planning | 3 |
| EN 562 | Heat Transfer | 3 | EN 572 | Energy Systems and Simulation Laboratory | 3 |
| EN 563 | Solar Energy Engineering and Application | 3 | EN 573 | Energy Study with Community Engagement | 2 |
| EN 564 | Biomass Energy and Application | 3 | - | Elective- I | 3 |
| EN 565 | Wind and Hydro Energy | 3 | - | Elective- II | 3 |
| EN 566 | Energy Laboratory | 2 | - | CBCT-II | 3 |
| - | CBCT-I | 3 | - | CBCT -III | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|------------------|-----|-----------------|-------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EN 539 | Project (Part-I) | 8 | EN 540 | Project (Part-II) | 16 |

| Elective -I (Any one from the following Courses) | | | Elective -II & III (Any two from the following Courses) | | |
|--|--|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EN 515 | Advanced Bio-Energy | 3 | EN 525 | Thermal Power Plant Engineering | 3 |
| EN 516 | Advanced Solar Thermal Energy | 3 | EN 526 | Energy Efficient Buildings | 3 |
| EN 517 | Advanced Solar Photovoltaic Energy | 3 | EN 527 | Renewable Energy Grid Integration | 3 |
| EN 518 | Hydrogen Energy and Fuel Cell | 3 | EN 528 | Decentralized Energy Systems | 3 |
| EN 519 | Alternative Fuels for IC Engines | 3 | EN 529 | Energy, Climate Change and Carbon Trade | 3 |
| EN 520 | Petroleum Exploration, Production and Refining | 3 | EN 530 | Instrumentation and Control for Energy Systems | 3 |
| EN 521 | Nuclear Energy | 3 | EN 531 | Numerical Heat Transfer and Fluid Flow | 3 |
| | | | EN 532 | Energy Conservation and Waste Heat Recovery | 3 |
| | | | EN 533 | Energy Storage Systems | 3 |
| | | | EN 534 | Energy Modeling and Optimization | 3 |
| | | | EN 535 | Energy Environment Interaction | 3 |
| | | | EN 536 | Materials and Devices for Energy Applications | 3 |
| | | | EN 537 | Power Generation and System Planning | 3 |
| | | | EN 538 | Hybrid Renewable Energy Systems Design | 3 |

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

FOOD ENGINEERING AND TECHNOLOGY **(Year of Establishment: 2006)**

The Department of Food Engineering and Technology (FET) was established in the year 2006 with the aim of creating skilled human resources in the engineering aspect of food processing in order to cater to the needs of the rapidly growing food processing sector. Since its inception the Department has been imparting Post Graduate education in the area of food processing and engineering. The B. Tech. programme in Food Engineering and Technology (FET), which was started in the year 2010, has the accreditation of the National Board of Accreditation (NBA) as a Tier-I programme. The Department also offers Ph. D. in Food Engineering and Technology.

The B Tech and M Tech programs of the Department are approved by the All India Council for Technical Education (AICTE). AICTE offers PG Scholarship to GATE qualified students joining the M.Tech. programme of the Department. Students from the department have been benefited from MHRD's schemes for North-East under ISHAN UDAY, ISHAN VIKAS etc. B Tech and M Tech students are finding placements in organizations such as, Tata global beverages, ITC Ltd, Himalayan Foods, Adani Wilmar, Britannia, Parle Agro, Mother Dairy etc.

The department has well developed laboratories for teaching and research created from grants received from various agencies viz., HRD grant from the Ministry of Food Processing Industries (MoFPI), Govt. of India, grant under the FIST programme from the the Department of Science and Technology (DST), grant under the UGC-SAP (DRS-I) programme of the University Grant Commission, and grant under the NEQIP Scheme of the AICTE. With its expertise in food quality testing, and with the support from the MoFPI, the Department has established one NABL accredited Food Quality Control Laboratory to facilitate the entrepreneurs and various organizations.

Research activities at the Department are supported by sponsoring agencies like UGC, MoFPI, DST, DBT, DRDO, ICAR, AICTE, MSME, ASTEC, 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), Dean- SoE | <i>Rice Science and Technology, Product Development and Food Quality</i> |
| Sankar Chandra Deka,* Ph.D. (HAU) | <i>Food Biochemistry and Food Quality, Fermented Foods</i> |
| Associate Professors | |
| Manuj Kumar Hazarika,* Ph.D. (IITKgp) | <i>Food Materials Engineering, Food Industrial Engineering, Food Design.</i> |
| Brijesh Srivastava,* Ph.D. (IITKgp)- HoD | <i>Process and Food Engineering, Fruits and Vegetable Processing and Machineries, Non-Thermal Processing, Unit Operations in Food Engineering</i> |
| Nandan Sit,*Ph.D. (TU) | <i>Food Engineering, Biochemical Engineering, Oils and Fats, Food and Biotechnology</i> |
| Poonam Mishra,*Ph.D. (TU) | <i>Nano Composite, Fruits and Vegetable Technology, Function Food, Biosensors.</i> |
| Laxmikant S. Badwaik,* Ph.D. (TU) | <i>Food Packaging, Food Safety and Laws, Osmotic Dehydration</i> |
| Assistant Professors | |
| Dibyakanta Seth, Ph.D. (TU) | <i>Dairy and Food Engineering, Dairy Technology, Unit Operations in Food Engineering, Emerging Trends in Food Process Engineering</i> |
| 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> |
| Nishant Rachayya Swami Hulle, Ph.D. (IITKgp) | <i>Food Process Technology, Non Thermal Processing, Product Development</i> |
| Sourav Chakraborty, M.Tech. (TU) | <i>Food Engineering, Food Process Simulation and Modeling</i> |

* **Recognized Supervisor**

LEGENDS: CFTRI-Central Food Technological Research Institute Mysore, SoE- School of Engineering, 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 equipment and is in the process of strengthening it with the state of the art facilities. Great emphasis is laid on the practical aspects for processing of foods and quality assurance. List of some major equipment available with department are as follows: HPLC, Atomic Absorption Spectrometer (AAS), GC-MS, Supercritical fluid extractor, Texture Analyser, Dynamic Rheometer, Rapid Visco Analyser, Hunter Lab Color Spectrophotometer, UV-Vis Spectrophotometer, Water activity meter, Freeze Dryer, Lyophilizer, Lab. Scale Spray Drier, Tray Drier, Drum Drier, Fluidized Bed Drier, Laboratory Pasteurizer, Canning Unit, Baking Oven, Basic Engineering Equipment in heat transfer and fluid mechanics, Hammer Mill, Ball mill, Paddy Huller, Paddy Sheller, Binocular Microscope, BOD Incubator, Rotary Vacuum Evaporator, Photofluorometer, Biohazard Safety Cabinet, Packaging Equipment, Laminar Flow, Fruit Crusher, etc.

Research Activities

- Number of papers published in the year 2017-18: 45
- Number of ongoing research projects: 10
- Number of current Ph.D. scholars: 30

Selected Publications

- Saxena, J., Ahmad Makroo, H., & Srivastava, B. (2017) Effect of ohmic heating on Polyphenol Oxidase (PPO) inactivation and color change in sugarcane juice. *Journal of Food Process Engineering*, 40(3).
- Bora, S. J., Handique, J., & Sit, N. (2017) Effect of ultrasound and enzymatic pre-treatment on yield and properties of banana juice. *Ultrasonics Sonochemistry*, 37, 445-451.
- Borah, P. P., Das, P., & Badwaik, L. S. (2017) Ultrasound treated potato peel and sweet lime pomace based biopolymer film development. *Ultrasonics sonochemistry*, 36, 11-19.
- Borah, P.K., Deka, S. C. and Duary, R. K. (2017) Effect of repeated cycled crystallization on digestibility and molecular structure of glutinous bora rice starch. *Food Chemistry*, 223, 31-39.
- Dutta, H., Mahanta, C. L., Singh, V., Das, B. B., & Rahman, N. (2016). Physical, physicochemical and nutritional characteristics of Bhoja chaul, a traditional ready-to-eat dry heat parboiled rice product processed by an improvised soaking technique. *Food chemistry*, 191, 152-162.
- Chakraborty, S, Sarma, M, Bora, J, Faisal, S and Hazarika, M K, (2016) Comparative study between ANN and master curve technique for the thin layer drying kinetic study of paddy and modeling of its critical drying temperature. *Agricultural Engineering International: CIGR Journal* 18 (4), 177-189.

Courses offered in B. Tech. in Food Engineering and Technology

| First Semester | | | Second Semester | | |
|----------------------------|--|-----|------------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 101 | Mathematics -I | 4 | MS 103 | Mathematics -II | 4 |
| PH 101 | Physics -I | 4 | PH 102 | Physics -II | 4 |
| CH 101 | Chemistry | 4 | ME 102 | Engineering Mechanics | 4 |
| EL 101 | Basic Electrical Engineering | 4 | EL 102 | Basic Electronics | 5 |
| CE 101 | Engineering Graphics | 3 | CO 101 | Introductory Computing | 3 |
| ME 103 | Workshop Practice | 2 | CO 102 | Computing Laboratory | 2 |
| Humanities Elective | | | Science Elective | | |
| EG101/ SO101/ BM 101 | Communicative English/ Sociology/Elementary Economics | 3 | BT 101/ ES 101/ CH 102 | Elements of Modern Biology/ Environmental Science/ Introductory Material Science | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|---------------------------------|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 201 | Mathematics- III | 3 | FT 205 | Food Biochemistry and Nutrition | 4 |
| FT 201 | Food Chemistry | 4 | FT 206 | Principles of Food Processing and Preservation | 3 |
| FT 202 | Basic and Food Microbiology | 3 | FT 207 | Transfer Processes in Food Engineering | 4 |
| FT 203 | Fluid Mechanics | 5 | FT208 | Mechanical Operations in Food Processing | 4 |
| FT 204 | Computations in Food Processing | 4 | FT209 | Fruits and Vegetables Process Technology | 3 |
| ME 205 | Thermodynamics | 4 | EL 321 | Instrumentation and Process Control | 4 |

| Fifth Semester | | | Sixth Semester | | |
|----------------|--|-----|----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 301 | Instrumental Methods of Food Analysis | 2 | FT 307 | Food Quality and Safety | 3 |
| FT 302 | Thermal Operations in Food Processing | 4 | FT 308 | Food Plant Utilities | 3 |
| FT 303 | Mass Transfer Operations in Food Processing | 4 | FT 309 | Dairy Products Technology | 3 |
| FT 304 | Cereals, Pulses and Oilseeds Processing Technology | 4 | FT 310 | Food Process Equipment Design | 3 |
| FT 305 | Biochemical Engineering | 3 | BM 322 | Social Responsibility and Professional Ethics in Engineering | 3 |
| FT 306 | Recent Advances in Food Research | 1 | - | FT Elective- I | 3 |
| BM 321 | Fundamentals of Management | 3 | - | Open Elective- I* | 3 |

| Seventh Semester ^{\$} | | | Eight Semester | | |
|--------------------------------|--|-----|----------------|---------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 401 | Food Packaging, Transportation and Storage | 3 | FT 482 | Project- II | 12 |
| FT 402 | Plant Design and Process Economics | 3 | - | FT Elective- IV | 3 |
| FT 471 | Industrial Summer Training# | 2 | - | Open Elective- III* | 3 |
| FT 481 | Project- I | 6 | | | |
| - | FT Elective- II | 3 | | | |
| - | FT Elective- III | 3 | | | |
| - | Open Elective- II* | 3 | | | |

| Elective Courses | | | | | |
|------------------|--|-----|-------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 421 | Bakery and Confectionary Technology | 3 | FT 431 | Food Process Design and Analysis | 3 |
| FT 422 | Plantation Products and Spices Technology | 3 | FT 432 | Food Process Automation | 3 |
| FT 423 | Oils and Fats Technology | 3 | FT 433 | Numerical Methods in Food Processing | 3 |
| FT 424 | Processing Technology of Meat, Poultry and Fish | 3 | FT 434 | Energy Conservation in Food Processing | 3 |
| FT 425 | Fermented and Non Fermented Beverages | 3 | FT 435 | Food Plant Hygiene and Sanitation | 3 |
| FT 426 | Food Product Development | 3 | FT 436 | Food Industry Waste Management | 3 |
| FT 427 | Flavors Technology | 3 | FT 437 | Industrial Safety and Hazards | 3 |
| FT 428 | Specialty Foods: Nutraceuticals and Functional Foods | 3 | FT 438 | Optimization Techniques | 3 |
| FT 429 | Traditional Indian Foods | 3 | FT 439 | Advanced Food Processing Methods | 3 |
| FT 430 | Industrial Microbiology and Enzyme Technology | 3 | FT 440 | Engineering Properties of Biological Materials | 3 |

Open Elective: Any course of level 400 and above offered in the University and recommended by the department.

^{\$}The 7th semester will start a month later than usual and therefore be shorted by a month. To compensate for it there shall be 4 class hours per week for a 3 credit course.

Industrial Summer Training: Training shall be of 8 weeks duration carried out during the summer break after the 6th semester. The report will be submitted in the 7th semester.

Elective courses are offered based on the choice of students and availability of teacher for teaching a particular course

Courses offered in M. Tech. in Food Engineering and Technology

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 511 | Research Methodology | 3 | FT 516 | Emerging Food Processing Technologies | 3 |
| FT 512 | Advanced Food Engineering | 4 | FT 517 | Food Equipment and Plant Design | 3 |
| FT 513 | Engineering Properties of Biological Materials | 3 | FT 518 | Recent Trends in Food Product development and Packaging | 3 |
| - | Elective- I | 3 | FT 519 | Food Process Modeling and Simulation | 3 |
| - | Elective- II | 3 | FT 571 | Seminar | 1 |
| - | Elective -III | 3 | - | Elective- IV | 3 |
| - | CBCT-I (Open elective) | 3 | - | Elective- V | 3 |
| | | | - | CBCT-II (Open elective) | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|-----------------|-----|-----------------|--------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 681 | Project Seminar | 12 | FT 682 | Project | 12 |

| Elective Courses | | | | | |
|------------------|---|-----|-------------|--|-----|
| Group-I | | | Group-II | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| FT 541 | Recent Trends in Plant Products Technology | 3 | FT 546 | Powder Technology | 3 |
| FT 542 | Recent Trends in Animal Products Technology | 3 | FT 547 | Recent trends in Biochemical engineering | 3 |
| FT 543 | Recent Trend in Baking and Confectionary | 3 | FT 548 | Nano Technology in Food Applications | 3 |
| FT 544 | Extrusion technology | 3 | FT 549 | Recent Trends in Fermentation Technology | 3 |
| FT 545 | Traditional Indian Food; Case Studies | | FT550 | Recent trend in Enzyme technology | 3 |
| | | | FT 551 | Valorization of food byproduct | 3 |

| Group-III | | |
|-------------|---|-----|
| Course Code | Course Title | Cr. |
| FT 552 | Recent trend in drying and dehydration | 3 |
| FT 553 | Food microstructure and texture | 3 |
| FT 554 | Novel separation process | 3 |
| FT 555 | Food supply chain management case study | 3 |

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

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. Both the B.Tech and M. Tech (Mechanical Engineering) programmes are approved by AICTE. Moreover, B. Tech Mechanical Engineering programme is accredited by National Board of Accreditation with effect from 01/01/2016.

Programmes offered

1. B. Tech in Mechanical Engineering
2. M. Tech in Mechanical Engineering (Three Specializations)
 - 2a. M. Tech in Thermal and Fluid Engineering
 - 2b. M. Tech in Applied Mechanics
 - 2c. M. Tech in Machine Design
3. Ph.D. in Mechanical Engineering

Faculty and Areas of Interest

| Professors | |
|--------------------------------------|--|
| Dilip Datta,* Ph.D.(IITK) | <i>Design, Optimization and Operational Research</i> |
| Tapan Kumar Gogoi,* Ph.D. (TU) | <i>Thermal, Energy and Environment Engineering</i> |
| Associate Professor | |
| Partha Pratim Dutta*, Ph.D. (TU)-HoD | <i>Energy and Thermal Engineering, Drying Technology</i> |
| Assistant Professors | |
| Paragmoni Kalita, Ph.D. (IITG) | <i>Computational Fluid Dynamics , High speed flows</i> |
| Polash Pratim Dutta, M.E. (BIT) | <i>CAD, Laser Forming, Mechatronics, Soft Computing</i> |
| Sushen Kirtania, Ph.D. (IITG) | <i>Composite Materials, Carbon Nanotubes, Carbon Nanotubes Based Composites, Finite Element Method, Fracture Mechanics</i> |
| Prabin Haloi, M.E. (GU) | <i>Fluid and Thermal Engineering</i> |
| Sanjib Banerjee,* Ph.D. (IITG) | <i>Materials and Manufacturing</i> |
| Monoj Bardalai, Ph.D. (GU) | <i>Thermal Engineering, Renewal Energy Conversion</i> |
| Satadru Kashyap, M.Sc. (Engg.) (UA) | <i>Manufacturing and Materials Science</i> |
| Zahnupriya Kalita, M.E. (AIT) | <i>Mechatronics</i> |

| | |
|-----------------------------------|--|
| Rakesh Bhadra, M.E. (BESUS) | <i>Manufacturing, Production Engineering</i> |
| Barnali Chowdhury, M.E. (AEC) | <i>Mechanical Engineering</i> |
| Seikh Mustafa Kamal, Ph.D. (IITG) | <i>Machine Design</i> |
| Vivek Kumar Mehta, Ph.D. (IITK) | <i>Robotics, Optimization: Classical and Evolutionary Algorithms, Multi-objective Optimization, Multi-modal Optimization</i> |
| Shikha Bhuyan, M. Tech. (NITS) | <i>Thermal Engineering</i> |
| Kalpajyoti Borah M. Tech (IITKgp) | <i>Aerospace Engineering, Navel Architecture (Guest Faculty)</i> |

***Recognized Supervisor**

LEGENDS: IITK-Indian Institute of Technology Kanpur, TU-Tezpur University, 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, NITS - National Institute of Technology ,Silchar, IITKgp- Indian Institute of Technology Kharagpur, 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, Pro-E Wildfire 3.0 version, NI Lab. View Software, COMSOL Multiphysics, MATLAB and CATIAV5. 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.

Engineering Mechanics

This laboratory is equipped with Bell crank lever apparatus, Cantilever beam apparatus, Combined coil and flat belt friction apparatus, Compound lever, Deflection of beam apparatus, Fly wheel, Hook's Law, Jib crane, Law of

moments apparatus, Link polygon apparatus, Parallel forces apparatus, Screw jack, Torsion apparatus, Triangle and parallelogram law of forces and Universal force table 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 micro-scope.

Thermal Science Laboratory (Refrigeration and Air Conditioning/Heat Transfer)

This laboratory is equipped with Vapour Absorption refrigeration system, Standard vapour compression refrigeration system, Air conditioning and Cooling tower, Concentric tube heat exchanger, Critical heat flux apparatus, double pipe heat exchanger, Drop and film condensation apparatus, Emissivity measurement apparatus, Heat transfer in natural convection, Shell and tube heat exchanger apparatus, Thermal conductivity of liquids, Heat transfer through lagged pipe, Heat pipe demonstrator, Heat transfer in forced convection, Heat transfer through composite wall, Stefan Boltzmann apparatus, Thermal conductivity of insulating slab.

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), Variable compression ratio spark ignition engine, Diesel Engine Vehicle etc.

Kinematics Laboratory

In this laboratory, there are various types of models of different mechanisms, like shaper model, clutch model, Old-ham 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 pro-tractor, 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.

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

- Number of paper published in the year 2016-2017: 42
- Number of ongoing research projects: 01
- Number of current Ph.D. scholars: 10

Selected Publications

- Gogoi, T. K., Estimation of operating parameters of a water-LiBr vapour absorption refrigeration system through inverse analysis, *ASMEJ of Energy Resources Technology*, 138(2), 022002, 2017.

- Kalita, P., Dass, A. K., A diffusion-regulated scheme for the compressible Navier-Stokes equations using a boundary-layer sensor, *Computers & Fluids*, 2016, Vol. 29, pp. 91-100, DOI 10.1016/j.compfluid.2016.02.001.
- Dutta, P.P., Kumar, A. Development and Performance Study of Solar Air Heater for Solar Drying Applications, In: *Solar Drying Technology, Concept, Design, Modelling, Economics and Environment* (Springer), 579-501, 2017.
- Deka, A., Datta, D. Geometric size optimization of annular step fin using multi-objective genetic algorithm. *Journal of Thermal Science and Engineering Applications* (ASME), 9(2), 2017.
- Talukdar, K., Gogoi, T. K., Energy analysis of a combined vapour power cycle and boiler fuel gas driven double effect water-LiBr absorption refrigeration system, *Energy Conversion & Management*, 110, 468—477, 2017.

Courses offered in B.Tech. in Mechanical Engineering

| First Semester | | | Second Semester | | |
|----------------------------|--|----|------------------------------|---|----|
| Course Code | Course Title | Cr | Course Code | Course Title | Cr |
| MS 101 | Mathematics -I | 4 | MS 103 | Mathematics -II | 4 |
| PH 101 | Physics -I | 4 | PH 102 | Physics -II | 4 |
| CH 101 | Chemistry | 4 | ME 102 | Engineering Mechanics | 4 |
| EL 101 | Basic Electrical Engineering | 4 | EL 102 | Basic Electronics | 5 |
| CE 101 | Engineering Graphics | 3 | CO 101 | Introductory Computing | 3 |
| ME 103 | Workshop Practice | 2 | CO 102 | Computing Laboratory | 2 |
| Humanities Elective | | | Science Elective | | |
| EG101/ SO101/ BM 101 | Communicative English/Sociology/Elementary Economics | 3 | BT 101/ ES 101/ CH 102 | Elements of Modern Biology/ Environmental Science/Introductory Material Science | 4 |
| Third Semester | | | Fourth Semester | | |
| Course Code | Course Title | Cr | Course Code | Course Title | Cr |
| MS 201 | Mathematics- III | 3 | ME 204 | Machine Drawing | 2 |
| ME 201 | Solid Mechanics | 4 | ME 207 | Theory of Mechanisms and Machines | 4 |
| ME 202 | Fluid Mechanics- I | 3 | ME 208 | Manufacturing Technology- I | 3 |
| ME 203 | Material Science | 3 | ME 209 | Fluid Mechanics- II | 3 |
| ME 211 | Basic Thermodynamics | 3 | ME 210 | Mechanical Engineering Laboratory- II | 3 |
| ME 206 | Mechanical Engineering Laboratory- I | 3 | ME 212 | PDE and Numerical Methods | 4 |
| EL 202 | Electrical Technology | 4 | CO 221 | Data Structures and Object Oriented Programming | 4 |
| Fifth Semester | | | Sixth Semester | | |
| Course Code | Course Title | Cr | Course Code | Course Title | Cr |

| | | | | | |
|--------|---|---|--------|--|---|
| ME 301 | Dynamics and Vibration of Machinery | 3 | ME 306 | Advanced Workshop Practice | 3 |
| ME 302 | Mechanical Measurements and Instrumentation | 3 | ME 307 | Applied Thermodynamics- II | 3 |
| ME 303 | Manufacturing Technology- II | 3 | ME 308 | Heat and Mass Transfer | 4 |
| ME 304 | Applied Thermodynamics- I | 3 | ME 309 | Systems and Control | 3 |
| ME 310 | Mechanical Engineering Laboratory- III | 3 | ME 312 | Machine Design -II | 3 |
| ME 311 | Mechanical Design-I | 3 | BM 322 | Social Responsibility and Professional Ethics in Engineering | 3 |
| BM 321 | Fundamentals of Management | 3 | - | Open Elective- I* | 3 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|---|------|-----------------|---------------------|--------|
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr . |
| ME 402 | Industrial Engineering and Operation Research | 4 | ME 482 | Project- II | 1 2 |
| ME 471 | Industrial Summer Training# | 2 | - | ME Elective- III | 3 |
| ME 481 | Project- I | 6 | - | ME Elective- IV | 3 |
| - | ME Elective- I | 3 | - | Open Elective- III* | 3 |
| - | ME Elective- II | 3 | | | |
| - | Open Elective- II* | 3 | | | |

| Elective Courses | | | | | |
|------------------|---------------------------------------|------|-------------|--|------|
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr . |
| ME 421 | Computer Graphics and Solid Modeling | 3 | ME 435 | Machine Tool Design | 3 |
| ME 422 | Optimization Methods in Engineering | 3 | ME 436 | Combustion Engineering | 3 |
| ME 423 | Mechanical Vibration | 3 | ME 437 | Tea Machineries | 3 |
| ME 424 | Theory of Elasticity | 3 | ME 438 | Petroleum and Drilling Technology | 3 |
| ME 425 | Machine Tools and Machining | 3 | ME 439 | Refrigeration and Air Conditioning | 3 |
| ME 426 | Reliability Engineering | 3 | ME 440 | Advanced Mechanics of Solids | 3 |
| ME 427 | Productivity Improvement Techniques | 3 | ME 503 | Mechanics of Composite Materials | 4 |
| ME 428 | Finite Element Methods in Engineering | 3 | ME 504 | Failure Analysis of Materials | 3 |
| ME 429 | Gas Turbine and Compressor | 3 | ME 505 | Advanced Dynamics | 4 |
| ME 430 | Value Engineering | 3 | ME 506 | Theory of Elasticity and Plasticity | 3 |
| ME 431 | Fracture and Fatigue | 3 | ME 507 | Theory of Plates and Shells | 3 |
| ME 432 | Engineering Optimization | 3 | ME 508 | Continuum Mechanics | 3 |
| ME 433 | Experimental Stress Analysis | 3 | ME 521 | Robotics | 3 |
| ME 434 | Composite Materials | 3 | ME 522 | Quality Engineering | 3 |
| ME 523 | Non-Conventional Energy | 3 | ME 539 | Optimization Techniques in Engineering | 3 |
| ME 524 | Operations Management | 3 | ME 540 | Evolutionary Algorithms for Optimum Design | 3 |

| | | | | | |
|--------|---|---|--------|---|---|
| ME 525 | Tribology | 3 | ME 542 | Computational Fluid Dynamics | 4 |
| ME 526 | Modern Control System | 3 | ME 543 | Compressible Flow | 4 |
| ME 527 | CAD-CAM | 3 | ME 544 | Turbulent Shear Flow | 3 |
| ME 528 | Energy Conservation and Waste Heat Recovery | 3 | ME 545 | Viscous Fluid Flow | 3 |
| ME 529 | Artificial Intelligence in Engineering | 3 | ME 546 | Fluid Transportation Systems | 3 |
| ME 531 | Project Management | 3 | ME 547 | Two Phase Flow | 3 |
| ME 532 | Power Plant Engineering | 3 | ME 601 | Automobile Engineering | 3 |
| ME 533 | Energy Management | 3 | ME 602 | Computational Fluid Dynamics and Heat Transfer | 3 |
| ME 534 | Mechatronics | 3 | ME 605 | Hybrid Electric Vehicles | 3 |
| ME 535 | Advanced Engineering Thermodynamics | 3 | ME 622 | Communication Skills for Scientists and Engineers | 3 |
| ME 537 | Applied Computational Methods | 4 | ME 701 | Advance Heat Transfer | 3 |
| ME 538 | Computer-Aided-Design in Engineering | 4 | | | |

*Open Elective: Any course of level 400 and above offered in the University and recommended by the department.

§ The 7th semester will start a month later than usual and therefore be shorted by a month. To compensate for it there shall be 4 class hours per week for a 3 credit course.

Industrial Summer Training: Training shall be of 8 weeks duration carried out during the summer break after the 6th semester. The report will be submitted in the 7th semester.

Elective courses are offered based on the choice of students and availability of teacher for teaching a particular course

Courses Offered in M.Tech. in Mechanical Engineering

| First Semester | | | Second Semester | | |
|-----------------------------------|---|-----|-----------------------------------|--------------------------------|-----|
| Specialization: Applied Mechanics | | | Specialization: Applied Mechanics | | |
| Course Code | Course Title | Cr | Course Code | Course Title | Cr |
| ME 501 | Advanced Solid Mechanics | 4 | ME 502 | Finite Element Methods | 4 |
| ME 541 | Advanced Fluid Mechanics | 4 | ME 572 | Advanced Engineering Materials | 3 |
| ME 561 | Experimental Methods for Solid and Fluids | 5 | ME 592 | Term Paper | 2 |
| - | Open Elective I | 3 | - | Open Elective II | 3 |
| - | Elective I | 3/4 | - | Elective III | 3 |
| - | Elective II | 3/4 | - | Elective IV | 3/4 |
| | | | - | Elective V | 3/4 |

| Specialization: Thermo and fluids Engineering | | | Specialization: Thermo and Fluids Engineering | | |
|---|--|------|---|-----------------------------------|------|
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr . |
| ME 535 | Advanced Engineering Thermodynamics | 3 | ME 530 | Numerical methods | 4 |
| ME 541 | Advanced Fluid Mechanics | 4 | ME 548 | Convective Heat and Mass Transfer | 3 |
| ME 562 | Experimental Methods for Solid and Fluid Engineering | 5 | ME 593 | Seminar | 2 |
| - | Open Elective I | 3 | - | Open Elective II | 3 |
| - | Elective I | 3 | - | Elective III | 3 |
| - | Elective II | 3 | - | Elective IV | 3 |
| | | | - | Elective V | 3 |

| Specialization: Machine Design | | | Specialization: Machine Design | | |
|--------------------------------|------------------------------------|------|--------------------------------|-------------------------------|------|
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr . |
| ME 501 | Advanced Solid Mechanics | 4 | ME 502 | Finite Element Methods | 4 |
| ME 509 | Advanced Dynamics and Vibration | 4 | ME 510 | Engineering Design Laboratory | 3 |
| ME 623 | Mathematical Methods for Engineers | 3 | ME 592 | Term Paper | 2 |
| - | Open Elective I | 3 | - | Open Elective II | 3 |
| - | Elective I | 3* | - | Elective III | 3* |
| - | Elective II | 3* | - | Elective IV | 3* |
| | | | - | Elective V | 3* |

| Third and Fourth Semester | | | | | |
|-----------------------------------|-----------------|------|---|-----------------|-----|
| Specialization: Applied Mechanics | | | Specialization: Thermal and Fluid Engineering | | |
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr. |
| ME 615 | M. Tech. Thesis | 12 | ME 611 | M. Tech. Thesis | 12 |
| ME 616 | M. Tech. Thesis | 12 | ME 612 | M. Tech. Thesis | 12 |
| Specialization: Machine Design | | | | | |
| ME 613 | M. Tech. Thesis | 12 | ME 614 | M. Tech. Thesis | 12 |

| Elective Courses | | | | | |
|------------------|---|------|-------------|---|------|
| Course Code | Course Title | Cr . | Course Code | Course Title | Cr . |
| ME 503 | Mechanics of Composite Materials | 4 | ME 534 | Mechatronics | 3 |
| ME 504 | Failure Analysis of Materials | 3 | ME 535 | Advanced Engineering Thermodynamics | 3 |
| ME 505 | Advanced Dynamics | 4 | ME 537 | Applied Computational Methods | 4 |
| ME 506 | Theory of Elasticity and Plasticity | 3 | ME 538 | Computer Aided Design in Engineering | 4 |
| ME 507 | Theory of Plates and Shells | 3 | ME 539 | Optimization Techniques in Engineering | 3 |
| ME 508 | Continuum Mechanics | 3 | ME 540 | Evolutionary Algorithms for Optimum Design | 3 |
| ME 521 | Robotics | 3 | ME 542 | Computational Fluid Dynamics | 4 |
| ME 522 | Quality Engineering | 3 | ME 543 | Compressible Flow | 4 |
| ME 523 | Non-Conventional Energy | 3 | ME 544 | Turbulent Shear Flow | 3 |
| ME 524 | Operations Management | 3 | ME 545 | Viscous Fluid Flow | 3 |
| ME 525 | Tribology | 3 | ME 546 | Fluid Transportation Systems | 3 |
| ME 526 | Modern Control System | 3 | ME 547 | Two Phase Flow | 3 |
| ME 527 | CAD-CAM | 3 | ME 601 | Automobile Engineering | 3 |
| ME 528 | Energy Conservation and Waste Heat Recovery | 3 | ME 602 | Computational Fluid Dynamics and Heat Transfer | 3 |
| ME 529 | Artificial Intelligence in Engineering | 3 | ME 603 | Hybrid Electric Vehicles | 3 |
| ME 531 | Project Management | 3 | ME 622 | Communication Skills for Scientists and Engineers | 3 |
| ME 532 | Power Plant Engineering | 3 | ME 701 | Advance Heat Transfer | 3 |
| ME 533 | Energy Management | 3 | | | |

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

BUSINESS ADMINISTRATION

(Year of Establishment:1995)

The Department of Business Administration came into existence in 1995 with the objectives of producing quality management professionals and carrying out research in the areas of Finance, Human Resources, Marketing, Production and System Management. The Department has been conducting PG Diploma in Tourism Management since 2002, which has been upgraded to Master of Tourism and Travel Management with the first batch of students admitted in the Academic Year 2016-17. 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. It was ranked 39th among all institutions offering Management Education in India by NIRF (Ministry of HRD, Govt. of India). The Department has successfully completed a research on "Microfinance and Livelihood Development" under the UGC-SAP (DRS-I) research grant.

Programmes offered

1. Master of Business Administration (MBA).
2. Master in Tourism and Travel Management (MTTM).
3. Post Graduate Diploma in Human Resource Management (Distance Mode)
4. Ph.D.

Apart from these the Department has started a short term certificate course on National Stock Exchange Certified Capital Market Professional (NCCMP) Programme from autumn semester 2017.

Faculty and Areas of Interest

| Professors | |
|---|--|
| Mrinmoy Kumar Sarma,* Ph.D. (TU) | <i>Services Marketing, Tourism Marketing</i> |
| Chandana Goswami,* Ph.D. (GU)- Dean, SoMS | <i>Financial Management, General Management</i> |
| Subhrangshu Sekhar Sarkar,* Ph.D. (TU) | <i>Accounting, Taxation, Social Development Issues</i> |
| Debabrata Das,* Ph.D. (RGU), Director, CODL | <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)-HoD | <i>Human Resource Management, Organization Behaviour, Change Management, Rural Development, NGOs</i> |
| Associate Professors | |

| | |
|----------------------------------|---|
| Tridib Ranjan Sarma,* Ph.D. (TU) | <i>Operations Management, Project Management, Tourism</i> |
| Anjan Bhuyan,* Ph.D. (TU) | <i>Economics, Rural Economics, Tourism Management, Entrepreneurship</i> |
| Arup Roy,* Ph. D. (TU) | <i>Microfinance, Stock Market, Development Finance, Social Entrepreneurship</i> |
| Assistant Professors | |
| Heera Barpujary, Ph.D. (TU) | <i>Knowledge Management, Web Technology</i> |
| Kakali Mahanta, Ph.D. (DU) | <i>Human Resource Management, Organization Behaviour</i> |
| Runumi Das, Ph.D. (GU) | <i>Marketing, Rural Marketing, Human Resource Management</i> |
| Mridul Dutta, Ph.D. (GU) | <i>Community Based Tourism, Intellectual Property Rights</i> |
| Prayash Baruah, MBA (SIU) | <i>Supply Chain Management, Logistics, Transportation</i> |

* Recognized Supervisor

LEGENDS: IIMA- Indian Institute of Management Ahmadabad, TU-Tezpur University, GU-Gauhati University, SoMS-School of Management Sciences, RGU-Rajiv Gandhi University Itanagar, CODL-Centre for Open and Distance Learning, DU-Dibrugarh University, SIU- Symbiosis International University Pune, 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. and air conditioned student lounge.

Research Activities

- No. of papers published in the year 2017-2018: 08
- No. of ongoing research projects: Nil
- No. of current Ph.D. scholars: 19

Selected Publications

- Begum, R. & Goswami, C. (2017). Problems and Prospects of Informal Enterprises : A Study of Street Vendors and Home Based Enterprises in Assam (India), *International Journal of Entrepreneurship and Development Studies (IJEDS)*, 5(1), 33-52.
- Gurung, D.J. & Goswami, C. (2017). User Generated Content on Sikkim as an Image Formation Agent : A Content Analysis of Travel Blog, *International Journal of Hospitality & Tourism Systems*, 10(2), 47-57, (ISSN: 0947-6250)
- Yasung, M. & Baruah, P. (2017). Professionalism and Employee Outcome : A Comparative Analysis of Three Districts in Arunachal Pradesh, *IBMRD's Journal of Management and Research*, 6 (1), Print (ISSN: 2277-7830), Online (ISSN: 2348-5922).

- Sarkar, S. S. (2017). Base Erosion and Profit Shifting : A Challenge to Governments, *Management Accountant*, 52(6).
- Roy, A. (2017). *Impact Assessment of Microfinance Programme of MFI's on their Clients : A Study in Sonitpur District of Assam in India*, Germany: Lambert Academic Publishing. [ISBN: 978-3-300-03940-7].
- Das, D. & Das, R. (2017). Barriers in Financial Inclusion : Ground Level Observations From Assam, In S. S. Sangwan and G. Deep (Eds), *Efficiency of Financial Inclusion Policies and Way Ahead*, (pp. 23-44), Chandigarh : CRRID, [ISBN : 978-81-85835-85-3].

Courses offered in Master of Business Administration

| First Semester | | | Second Semester | | |
|----------------|-------------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 501 | Foundations of Management | 3 | BA 510 | Research Methods in Business | 3 |
| BA 502 | Financial Management | 3 | BA 511 | Managerial Economics and Legal Environment | 3 |
| BA 503 | Marketing Management | 3 | - | Specialization A -I | 3 |
| BA 504 | Human Resource Management | 3 | - | Specialization A- II | 3 |
| BA 505 | Operations Management | 3 | - | Specialization B-I | 3 |
| BA 506 | Quantitative Techniques | 2 | - | Specialization B-II | 3 |
| BA 507 | Organizational Behaviour | 2 | - | CBCT | 3 |
| - | CBCT | 3 | - | Elective-II | 3 |
| - | Elective-I | 3 | | | |
| Third Semester | | | Fourth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 601 | Management Information System | 3 | BA 606 | Strategic Management | 3 |
| BA 602 | Summer Internship Project | 3 | BA 607 | Business Ethics and Corporate Social Responsibility | 2 |
| - | Specialization A-III | 3 | BA 608 | Entrepreneurship Development | 2 |
| - | Specialization A-IV | 3 | - | CBCT | 3 |
| - | Specialization B-III | 3 | - | CBCT | 3 |
| - | Specialization B-IV | 3 | - | Elective-IV | 3 |
| - | CBCT | 3 | | | |
| - | Elective-III | 3 | | | |

| Elective-I (Any one from the following Courses) | | | Elective-II (Any one from the following Courses) | | |
|--|----------------------|-----|---|-----------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 508 | Financial Accounting | 3 | BA 512 | Systems Analysis and Design | 3 |

| | | | | | |
|--------|-----------------------------------|---|--------|--------------------------------|---|
| BA 509 | Information Technology Management | 3 | BA 513 | Managerial Communication | 3 |
| | | | BA 514 | Cost and Management Accounting | 3 |

| Elective-III (Any one from the following Courses) | | | Elective-IV (Any one from the following Courses) | | |
|---|------------------------------------|-----|--|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 603 | International Business Environment | 3 | BA 609 | Project Management | 3 |
| BA 604 | Operations Research | 3 | BA 610 | Knowledge Management | 3 |
| BA 605 | Business Online Basics | 3 | BA 611 | Supply Chain Management | 3 |
| | | | BA 612 | Organization Effectiveness and Change | 3 |

Specialisation papers

(Students are to take any two Specializations from the areas mentioned below. Students can choose the total credit requirement out of the basket of papers offered within a Specialization in a particular semester.)

| AREA -I: MARKETING (Total of 12 Credits Spread over Semester II and Semester III) | | | | | |
|--|-----------------------------------|-----|---|-----------------------------|-----|
| SEMESTER -II (Total Credit - 6) | | | SEMESTER -III (Total Credit - 6) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 524 | Consumer Analysis | 3 | BA 613 | Promotional Strategies | 3 |
| BA 525 | Sales and Distribution Management | 3 | BA 614 | Brand Management | 3 |
| BA 526 | Digital Marketing | 3 | BA 615 | Retail Management | 3 |
| BA 527 | Services Marketing | 3 | BA 616 | Rural Marketing | 3 |
| | | | BA 617 | Advanced Marketing Research | 3 |

| AREA -II: HUMAN RESOURCE MANAGEMENT (Total of 12 Credits Spread over Semester II and Semester III) | | | | | |
|---|----------------------------------|-----|---|-------------------------------------|-----|
| SEMESTER -II (Total Credit - 6) | | | SEMESTER -III (Total Credit - 6) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 528 | Human Resource Development | 3 | BA 618 | Industrial Relations | 3 |
| BA 529 | Labour Law | 3 | BA 619 | Cross Culture and International HRM | 3 |
| BA 530 | Social and Industrial Psychology | 3 | BA 620 | Compensation Management | 3 |

AREA -III: INFORMATION TECHNOLOGY (Total of 12 Credits Spread over Semester II and Semester III)

| SEMESTER -II (Total Credit - 6) | | | SEMESTER -III (Total Credit - 6) | | |
|--|----------------------------|-----|---|-------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 531 | Database Management System | 3 | BA 621 | Operating Systems | 3 |

| | | | | | |
|--------|-------------------------------------|---|--------|---|---|
| BA 532 | Object Oriented Analysis and Design | 3 | BA 622 | Networking and Communication | 3 |
| BA 533 | Software Engineering | 3 | BA 623 | Data Mining | 3 |
| BA 534 | Web Designing | 3 | BA 624 | Business Software System Design and Development | 3 |

AREA -IV: OPERATIONS MANAGEMENT (Total of 12 Credits Spread over Semester II and Semester III) (Nomenclature Industrial Management is changed to Operations Management as per experts recommendation.)

| SEMESTER -II (Total Credit - 6) | | | SEMESTER -III (Total Credit - 6) | | |
|---------------------------------|---|-----|----------------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 536 | Quality Management | 3 | BA 625 | Advanced Operation Research and Optimization | 3 |
| BA 537 | Material Management and Inventory Control | 3 | BA 626 | Logistics and Transportation Management | 3 |
| | | | BA 627 | Process Certification | 3 |
| | | | BA 628 | Management of Technology | 3 |

Area V: FINANCE (Total of 12 credits spread over Semester II and Semester III.)

| SEMESTER -II (Total Credit - 6) | | | SEMESTER -III (Total Credit - 6) | | |
|---------------------------------|---|-----|----------------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BA 521 | Security Analysis and Investment Management | 3 | BA 629 | Financial Engineering | 3 |
| BA 522 | Financial Institutions and Financial Services | 3 | BA 630 | Management Control System | 3 |
| BA 523 | Corporate Taxation | 3 | BA 631 | Trends and Innovations in Financial Sector | 3 |
| | | | BA 632 | Advanced Financial Management | 3 |
| | | | BA 633 | International Finance | 3 |
| | | | BA 634 | Treasury, Forex and Risk Management | 3 |

Courses offered in Master of Tourism and Travel Management (M.T.T.M.)

| First Semester | | | Second Semester | | |
|------------------|---|-----|--------------------|--------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| TM 501 | Fundamentals of Tourism | 3 | TM 541 | Finance and Accounting for Tourism | 3 |
| TM 502 | Destination Geography, History and Heritage | 3 | TM 542 | Marketing in Tourism | 3 |
| TM 503 | Fundamentals of Management | 3 | TM 543 | Human Resource Management | 3 |
| TM 504 | Tourism and Travel Industry | 3 | TM 544 | Travel Agency and Tour Operation | 3 |
| TM511/ TM 512 | Department Centric Elective -I | 3 | TM 561 / TM 562 | Department Centric Elective -II | 3 |
| - | Open Elective- IT Base | 3 | - | Open Elective- Foreign Language Base | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|--|-----|--|-------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| TM 601 | Research Methods | 3 | TM 641 | Destination Planning and Management | 3 |
| TM 602 | Tourism Entrepreneurship | 3 | TM 642 | Sustainable Tourism | 3 |
| TM 603 | Foundation of Information Technology and Computerised Reservation System | 3 | TM 643 | Legal and Ethical Issues in Tourism | 3 |
| TM 604 | Hospitality Management | 3 | TM 661/ TM662/ TM 663/ TM 644 | Department Centric Elective -IV | 3 |
| TM 605 | Summer Internship | 3 | - | Department Centric Elective-V | 3 |
| TM 611/ TM 612 | Department Centric Elective - III | 3 | - | Open Elective | 3 |
| - | Open Elective- Foreign Language Base | 3 | | | |

| Department Centric Elective -I | | | Department Centric Elective -II | | |
|--------------------------------|-------------------------|-----|---------------------------------|---------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| TM 511 | Soft Skill Development | 3 | TM 561 | Tour Guiding and Local Handling | 3 |
| TM 512 | Leisure Delivery System | 3 | TM 562 | Basic Cargo Rating and Handling | 3 |

| Department Centric Elective -III | | | Department Centric Elective -IV and V | | |
|----------------------------------|-----------------------------------|-----|---------------------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| TM 611 | Tourism in North East India | 3 | TM 661 | Managerial and Financial Decisions for Small Business | 3 |
| TM 612 | Promotional Strategies in Tourism | 3 | TM 662 | MICE Management | 3 |
| | | | TM 663 | Tourist Behaviour | 3 |
| | | | TM 664 | Basic Airfare | 3 |

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

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 the dynamic business environment.

Programmes Offered

1. 5-year Integrated Master of Commerce.
2. Master of Commerce.

Faculty and Areas of Interest

| Professors | |
|---|---|
| Subhrangshu Sekhar Sarkar, Ph.D. (TU)- HoD (i/c) | <i>Accounting, Taxation, Social Development Issues</i> |
| Assistant Professors | |
| Reshma Tiwari, Ph.D (GU) | <i>Accounting, Financial Inclusion and Microfinance</i> |
| Farah Hussain, Ph. D. (DU) | <i>Econometrics, Mathematical Economics</i> |
| Manish Kumar, M. Com (DU^) | <i>Corporate Finance, Accounting</i> |
| DhritabrataJyotiBharadwaz, M.Phil. (DU) | <i>Accounting and Finance, Micro Finance and Risk Management</i> |
| AnkurimaGoswami, M. Com (GU) | <i>Accounting and Finance</i> |
| Guest/Visiting Faculty | |
| CS Amitava Banerjee, NFCG, New Delhi | <i>Corporate Governance</i> |
| Prof. Gautam Dutta, IIFT, Kolkata | <i>International Business</i> |
| Anjan Choudhury | <i>Inter-personal Skills</i> |
| NavneetaBhuyan, MA(DU^) | <i>English Communicative Skills & Functional Communicative Skills</i> |
| Priyanka Kakoti, MA (TU) | <i>English Communicative Skills & Functional Communicative Skills</i> |
| CA SurendraDugar (ICAI) | <i>Taxation</i> |
| CARachita Saraf(ICAI) | <i>Corporate Tax</i> |
| CA RajkumarNahata (ICAI) | <i>Indirect Taxes</i> |

From the Department of Business Administration

| | |
|---------------------------------------|--|
| Prof. Mrinmoy Kumar Sarma, Ph.D. (TU) | <i>Services Marketing, Tourism Marketing</i> |
|---------------------------------------|--|

| | |
|---|---|
| Prof. Debabrata Das, Ph.D. (RGU) | <i>Financial Management, Financial Markets and Development Finance</i> |
| Prof. PaporiBaruah, Ph.D. (TU) | <i>Human Resource Management, Organization, Behaviour, Change Management, Rural Development , NGOs.</i> |
| Dr. TridibRanjanSarma, Ph.D (TU) | <i>Operations Management , Project Management, Tourism</i> |
| Dr.AnjanBhuyan Ph.D. (TU) | <i>Economics, Rural Economics, Tourism Management and Entrepreneurship</i> |
| Dr. Arup Roy, Ph. D. (TU) | <i>Microfinance, Stock Market, Development Finance, Social Entrepreneurship.</i> |
| Dr.HeeraBarpujary, Ph.D. (TU) | <i>Knowledge Management, Web Technology</i> |
| Dr.Mridul Dutta, Ph.D. (GU) | <i>Community Based Tourism, Intellectual Property Rights</i> |
| Mr. Prayash Baruah, B.Tech (TU) MBA (Symbiosis) | <i>Supply Chain Management, Logistics, Transportation</i> |

LEGENDS: TU: Tezpur University, GU: Gauhati University, DU: Dibrugarh University, DU^: Delhi University, RGU: Rajiv Gandhi University, ICSI: The Institute of Company Secretaries of India ICAI: The Institute of Chartered Accountants of India.

Facilities

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

Research Activities

- No. of paper published in the year 2017-2018: 07
- No. of ongoing research projects: NIL

Selected Publications

- Tiwari R.K.&Debnath J. (2017). Forensic Accounting: A Blend of Knowledge, *Journal of Financial Regulation and Compliance*, (Emerald), 25 (1), 73-85
- Tiwari R. K.&Debnath J. (2018). Financial Inclusion: A Study of Street Vendors in Nagaland, Gauhati University Journal of Commerce, Vol. XIX, 37-57
- Hussain,F.andSaikia,B. Rural Non- Farm Employment in North Eastern Region: The Changing Structure, *Quest International Multidisciplinary Research Journal*, Vol-7(2), February 2018, ISSN: 2278-4497
- Kumar, M. and Vij, M. Earnings management and financial crisis: Evidence from India, *Journal of International Business and Economy*, 18(2), 2017
- Bharadwaz D.J & Sharma A. (2017), "Basel III in Indian Banks: A Review of Literature", IRACST-International Journal of Commerce, Business & Management (IJCBM), Vol 6, No. 3 (June), pp 48-56,ISSN: 2319-2828
- Bharadwaz D.J (2017), "Corporate Social Responsibility Practices of Banks in India: A Study of Two Private Sector Banks", International Journal of Research in Commerce, Economics and Management, Vol No. 7, Issue No. 10 (October), pp 64-68, ISSN: 2231-4245

- Bharadwaz D.J (2017), "Micro Financing Model of Bandhan Financial Services: Functions and Operations", International Journal of Engineering Development and Research, UGC Approved Peer Reviewed Journal, Volume 5, Issue 4, (November), pp 400-402, ISSN: 2321-9939

Courses offered in Integrated M.Com and M.Com

| First Semester | | | Second Semester | | |
|----------------|---------------------------------------|-----|-----------------|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IC 101 | English Comprehension Skill | 3 | IC 122 | Principles and Practice of Management | 4 |
| IC 106 | Business Regulatory Framework-I | 3 | IC 123 | Financial Accounting – II | 4 |
| IC 107 | Business Organization and Environment | 4 | IC 124 | Business Mathematics- I | 4 |
| IC 108 | Micro Economics | 4 | IC 125 | Macro Economics | 3 |
| IC 109 | Financial Accounting – I | 4 | ES 103 | Environmental Studies | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|----------------------------------|-----|------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IC 201 | Business Regulatory Framework-II | 3 | IC 222 | Indirect Taxes | 4 |
| IC 205 | Functional Communicative Skill | 3 | IC 223 | Fundamentals of Insurance | 4 |
| IC 207 | Inter-Personal Skills | 4 | IC 224 | Banking Laws and Practice | 4 |
| IC 208 | Basic Statistics | 4 | IC 225 | Corporate Accounting -II | 4 |
| IC 209 | Cost Accounting | 4 | IC 226 | Business Mathematics- II | 3 |
| IC 210 | Corporate Accounting- I | 4 | | Open Elective | 3 |
| Fifth Semester | | | Sixth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IC 301 | Company Law | 2 | IC 321 or IC 341 | Computer and Its Application in Accounting and Taxation@ Computer and Its Application in Banking and Finance@ | 4 |
| IC 303 | Corporate Accounting-III | 4 | IC 327 or IC 342 | Auditing and Assurance Indian Financial Market and Financial System | 3 |
| IC 304 | Income Tax – Law and Practice | 4 | IC 323 or IC 343 | Management Accounting Financial Services | 4 |
| IC 307 | Entrepreneurship | 4 | IC 324 or IC 344 | Public Finance Banking Regulatory Framework | 4 |
| IC 308 | Business Finance | 4 | IC 325 or IC 347 | Tax Planning and Procedures Capital Market Operations | 4 |
| | Open Elective | 3 | IC 326 or IC 346 | Dissertation (Accounting, Taxation Area) Dissertation (Banking, Finance Area) | 3 |

| Seventh Semester (Integrated M Com) /First Semester (M Com) | | | Eighth Semester (Integrated M Com) /Second Semester (M Com) | | |
|---|--|-----|---|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IC 501 | Organizational Theory and Behaviour | 4 | IC 521 | Human Resource Management | 3 |
| IC 502 | Financial Statement Analysis | 4 | IC 522 | Marketing Management | 3 |
| IC 503 | Statistics for Business Decisions | 4 | IC 523 | Managerial Economics | 4 |
| IC 504 | Corporate Governance and Business Ethics | 3 | IC 524 | Operations Research | 4 |
| IC 505 | International Business | 3 | IC 525 | Methodology for Business Research | 4 |
| | | | | Open Elective | 3 |

| Ninth Semester (Integrated M Com) /Third Semester (M Com) | | | Tenth Semester (Integrated M Com) /Fourth Semester (M Com) | | |
|---|-------------------------------|-----|--|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| IC 601 | Strategic Management | 3 | IC 625 | Strategic Financial Management | 4 |
| IC 602 | Management Information System | 4 | GROUP 'A': Accounting And Taxation | | |
| IC 605 | Project Work | 4 | IC 621 | Advanced Auditing | 3 |
| | Open Elective | 3 | IC 622 | Strategic Cost & Management Accounting | 3 |
| GROUP 'A': Accounting And Taxation | | | IC 623 | Innovations in Accounting | 3 |
| IC 603 | Corporate Financial Reporting | 4 | or | or | |
| IC 604 | Business Valuation | 3 | IC 630 | Project Planning and Control | 3 |
| GROUP 'B': Banking and Finance | | | IC 624 | Corporate Tax Management | 4 |
| | | | GROUP 'B': Banking and Finance | | |
| IC 606 | Retail Banking | 4 | IC 626 | Security Analysis and Portfolio Management | 4 |
| IC 607 | Insurance Management | 3 | IC 627 | International Finance | 3 |
| | | | IC 628 | Marketing of Financial Services | 3 |
| | | | IC 629 | Credit and Risk Management | 3 |
| | | | or | or | |
| | | | IC 630 | Project Planning and Control | 3 |

@ Students opting for "Accounting/Taxation" are provided trainings on TALLY whereas those opting for "Banking/Finance" are trained on FINACLE.

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

CULTURAL STUDIES

(Year of Establishment: 1996)

Established in 1996, the Department of Cultural Studies of Tezpur University took the lead in the establishment of the UGC's prestigious 'Centre with Potential for Excellence in Particular Area' at Tezpur University in 2016. The department engages in an analysis of society, culture and expressive forms from a wide range of disciplinary engagements. We use methods evolved in Cultural Studies to promote an understanding of various issues like memory, ethnicity, migration, nationalism, gender, media, museology, art history, environment and emerging lifestyle patterns. The department mediates global concerns and theoretical approaches of the discipline with issues that are of local importance to promote an understanding of the rich cultural heritage and the folk and oral inheritances of the region. The department is currently supported by UGC-SAP (DRS-II).

Programmes offered

1. M.A. in Cultural Studies
2. Ph.D.

Faculty and Areas of Interest

| Professor | |
|--|--|
| Debarshi Prasad Nath,* Ph.D. (RGU) (HoD) | <i>Cultural Theory and Contemporary Culture, Comparative Literature and Translation, Cultural Memory</i> |
| Associate Professor | |
| Madhurima Goswami,#Ph.D. (TU)- On Lien | <i>Sanskrit Poetics, Indian Classical Performing Arts</i> |
| Assistant Professors | |
| 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. (UoH) | <i>Performance Studies, Community Studies, Research Methodology</i> |
| Moushumi Kandali*, Ph.D. (UB) | <i>Contemporary Visual Culture, Literary Cultures of India, Gender Studies, Translation and Creative Writing</i> |

*Recognized Supervisor

LEGENDS: **RGU**-Rajiv Gandhi University Arunachal Pradesh, **TU**-Tezpur University, **DU**-Dibrugarh University, **UoH**-University of Hyderabad, **UB**-University of Baroda Gujarat, **HoD**-Head of the Department.

Facilities

The Department has a well-equipped seminar-cum-conference hall, classrooms with projection facilities and audio-visual teaching aids, and an archival center-cum-edit suite. The student support infrastructure also includes the Pratibha Kath Hazarika Memorial Library and a Cultural Interpretation Centre.

ResearchActivities

- No. of papers published in the year 2018-19: 17
- No. of ongoing research projects: 04
- No. of current Ph.D. scholars: 18

Selected Publications

- Dowerah S and Nath D. P. "Exploring Selfhood through Performance in The Danish Girl". Journal of Creative Communications. (A Sage Journal). Published online: 31 Aug 2018.
- Goswami M. "Staging of Rituals: Role of a Ritual Priestess, The North-east Indian Women: Issues of Displacement, Violence, Media and Law," Olympia Prakashan.2018. ISBN- 978-93-87035-23
- Das J. V. Protests, Resistance and Violence: The collective Performance of Everyday Images in Manipur in Performative Communication: Culture and Politics in South Asia. Pathak, Dev and SasankPerreira (eds.). Routledge: New Delhi. 2018.
- Konwar J. G and Borah T. "Indian Food Advertisements through a Gendered Lens", Literary Insight, 9, January 2018, pp. 106-112, ISSN 0975-6248
- Kandali M. "The Patkai Tales: An interpenetration of folk/tribal/avant-garde art, The Chitralkha". Journal of Art and Design. India. International e journal, March 2018.
- Hazarika P and Nath D. P. "Reflection of Nationalist and Social Consciousness in Literature: A Study on Select Plays of BishnuprasadRabha". International Journal of Innovative Studies in Sociology and Humanities. Volume 3, Issue: 7, pp. 7-11. July 2018
- Hazarika P and Nath D. P. "The Rise of Assamese Nationalism: An Overview of the Times of JyotiprasadAgarwala". International Journal of Research in Social Sciences. Volume 8, Issue: 8. August 2018.

Courses offered in M.A in Cultural Studies

| First Semester | | | Second Semester | | |
|----------------|----------------------------------|-----|-----------------|---------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CT 420 | Introduction to Cultural Studies | 4 | CT 425 | Introduction to Popular Culture | 4 |
| CT 421 | Cultural Theory: Key Concepts | 4 | CT 426 | Culture and Heritage | 4 |
| CT 422 | Folklore and Culture I | 3 | CT 427 | Cultural Policy | 3 |
| CT 423 | Exploring North East India | 4 | CT 428 | Folklore & Culture II | 3 |

| | | | | | |
|--------|-----------------------|---|--------|---|---|
| CT 424 | Society and Culture | 3 | CT 429 | Reading Culture: Perspectives from the West | 3 |
| CT 528 | Performance & Culture | 3 | - | Open elective | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|--|-----|-----------------|--------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CT 520 | Digital Culture | 4 | CT 146 | Dissertation | 6 |
| CT 521 | Methods & Methodology | 3 | - | Elective –I (Any two) | 6 |
| CT 522 | Mapping the Contemporary : Reading through Visual Cultural Expressions | 4 | - | Elective –II (Any three) | 9 |
| CT 523 | Gender and Culture | 4 | | | |
| CT 524 | Fundamentals of Photography and Documentary Production (skill based) | 4 | | | |
| | Open elective | 3 | | | |

| Elective Courses I (Any two from the following courses) | | | Elective Courses II (Any two from the following courses) | | |
|---|---|-----|--|---|-----|
| First Semester | | | Second Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CT 526 | Cultural Industries (Skill based) | 3 | CT 532 | Culture for Social Change(Skill based) | 3 |
| CT 527 | Reading Indian through the Cinematic lens | 3 | CT 533 | Contemporary Cultural Phenomena : Spectacles and Infotainment | 3 |
| CT 529 | Cultural Memory | 3 | CT 534 | Reading Culture : Perspective from Assam | 3 |
| CT 530 | Culture, Science and Society | 3 | CT 535 | Intercultural Communication (skill based) | 3 |
| CT 531 | Cultural Documentation (Skill based) | 3 | CT 536 | Tapping the Transitions: Folk and Tribal Art in Contemporary time | 3 |
| | | | CT 537 | Cross Cultural Studies: North East India and South East Asia | 3 |
| | | | CT 538 | Bhakti Aesthetics | 3 |

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

EDUCATION (Year of Establishment: 2014)

The Department of Education was established in the year 2014 under the School of Humanities and Social Sciences. The Department aims at producing prospective teachers with sound knowledge of the content, pedagogy and skills needed for the society. The department has started postgraduate and doctoral programmes in Education from Autumn semester, 2015.

Programmes offered

1. B.Ed.
2. M.A. in Education
3. Ph. D.

Faculty and Areas of Interest

| Associate Professor | |
|----------------------------------|--|
| Nil Ratan Roy,* Ph.D. (AU)-HoD | <i>Measurement and Evaluation in Education, Research Methodology, Educational Planning and Management, Curriculum Development.</i> |
| Assistant Professors | |
| Yeasmin Sultana,* Ph.D. (AU) | <i>Language Education and Research Methodology</i> |
| R.D. Padmavathy, Ph.D. (PU) | <i>Mathematics Education, Educational Psychology, Educational Technology, e-content Development, Research Methodology and 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> |
| SashapraChakrawarty, Ph.D. (BHU) | <i>Biological Science, Educational Psychology, Teacher Education, Elementary Education, Special Education, Guidance and Counselling</i> |
| PratimaPallai,*Ph.D. (LU) | <i>Social Science Teaching, ICT in Education, Guidance and Counselling, Measurement and Evaluation, Educational Psychology</i> |
| Mohammad Asif, M. Ed. (JMI) | <i>Contemporary Indian Education, Teacher Education, Educational Technology, Pedagogy of Social Science, History of Education</i> |
| Sradhanjali Pradhan, M.Ed. (UU) | <i>Pedagogy of Physical Science, Educational Technology and ICT in Education, Measurement and Evaluation</i> |
| Rajinder Singh*, Ph.D. (PU^) | <i>Educational Technology, Educational Research, Special Education, ICT in Education, Language Education, Environment Education, Educational Guidance and Counselling</i> |

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

LEGENDS: **AU**-Assam University ,**PU**-Pondicherry University, **DAV**-Devi AhilyaVishwavidyalaya Indore, **BHU**-Banaras Hindu University Varanasi, **LU**-Lucknow University, **JMI**- JamiaMillailslamiaNew Delhi,**UU**- Utkal University Odisha , **PU^** - Panjab 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, ICT and Language Laboratory

Research Activities

- No. of paper published in the year 2017-18: 21
- No of ongoing research projects: 0
- No. of current Ph.D. scholars: 13

Selected Publications

- Chakrawarty, S. Relevance of Rama's Philosophy in Contemporary Society, *Indian Journal of Psychometry and Education*, 49 (1), 80-84, 2018
- Padmavathy, R.D. Gender Equality in Education: Empower Women, *International Journal of Multidisciplinary Educational Research*, 6(7). 24-39, 2017
- Pallai, P., Chakrawarty, S., & Sultana, Y, Quality Life and Academic Achievement: A survey of Post Graduate Students, *Psycho-lingua*, 48(1), 2017
- Pallai, P. Integration of Technological Tools in Higher Education: Challenges and Opportunities, *Psycho-Lingua*, 49 (1), 2018.
- Roy, N.R and Das, S.S. Social Intelligence of Undergraduate Students in Tezpur University, *Journal of Contemporary Educational Research and Innovations*, 8 (1), 01-08, 2018
- Roy, N.R. Present scenario of Higher Education in Bodoland Territorial Area District of Assam, *Adhikar: An International Refereed & Peer-Reviewed Research Journal Related to Higher Education for all subjects*, 7 (12), 33-35, 2017
- Singh, R. A study of environmental attitude of senior secondary school teachers in relation to their locality, *International Journal of Research in Management & Social Science*, 6(1) VIII, 14-22, 2018
- Singh, R. A study of human rights awareness among college students in relation to their gender and family type, *International Journal of advance and Innovative Research*, 5(4) V, 76-81, 2018
- Sultana, Y. & Akhtar, M. A Study on Human Rights Awareness among Undergraduate Students of Nagaon District, *Indian Journal of Psychometry and Education*, 49(1), 110-118, 2018

Courses offered in B.Ed.

| First Semester | | | Second Semester | | |
|----------------|-------------------------------|-----|--------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BD 401 | Human Growth and Development | 5 | BD 501 | Teaching Learning and Management | 4 |
| BD 402 | Contemporary Indian Education | 5 | BD 502/ BD 503/ | Teaching of Assamese -Part I/ Teaching of English -Part I/ | 3 |

| | | | | | |
|--------|---------------------------------|---|-------------------|--|---|
| | | | BD 504 | Teaching of Hindi -Part I | |
| | | | BD 507/ BD 508 | Teaching of Mathematics -Part I/ Teaching of Biological Science- Part I | |
| | | | BD 505/ BD 506 | Teaching of Social Science -Part I/ Teaching of Physical Science-Part I | 3 |
| BD 403 | Language Across the Curriculum | 4 | BD 509 | Knowledge and Curriculum -Part I | 3 |
| BD 404 | Understanding Disciplines | 4 | BD 510 | Assessment and Evaluation of Learning | 4 |
| BD 405 | Reading and Reflecting on Texts | 2 | BD 511 | Drama and Art in Education | 2 |
| | | | BD 512 | Pre-Internship | 4 |
| - | Open Elective- I | 3 | - | Open Elective- II | 3 |

| Third Semester | | | Fourth Semester | | |
|------------------------------|--|-----|-------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BD 550/ BD 551/ BD 552 | Teaching of Assamese -Part I/ Teaching of English -Part I/ Teaching of Hindi -Part I | 3 | BD 575 | Gender, School and Society | 3 |
| BD 555/ BD 556 | Teaching of Mathematics -Part I/ Teaching of Biological Science- Part I | | BD 576 | Knowledge and Curriculum -Part II | 3 |
| BD 553/ BD 554 | Teaching of Social Science -Part I/ Teaching of Physical Science-Part I | 3 | BD 577 | Creating an Inclusive School | 3 |
| BD 557 | School Internship | 16 | BD 578 | Guidance and Counselling | 3 |
| | | | BD 579/ BD 580 | Peace Education/ Environmental Education | 3 |
| | | | BD 581 | Critical Understanding of ICT | 4 |
| | | | BD 582 | Understanding the Self | 2 |

**Note: Students of Physical Science Pedagogy would select Mathematics / Biological Sciences as 2nd pedagogy and Students of Social Science pedagogy would select English / Assamese as 2nd Pedagogy and vice-versa in the 2nd and 3rd semester.*

Courses offered in M.A in Education

| First Semester | | | Second Semester | | |
|----------------|-------------------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MA 101 | Philosophy of Education | 4 | MA 201 | Sociology of Education | 4 |
| MA 102 | Psychology of Education | 4 | MA 202 | Measurement and Evaluation in Education | 4 |
| MA 103 | Methodology of Educational Research | 4 | MA 203 | History and Contemporary Issues in Indian Education | 4 |
| MA 104 | Educational Technology | 4 | MA 204 | Education Administration, Planning and Financing | 3 |
| - | Open Elective- I | 3 | MA 205 | Education for Special Needs Children | 3 |
| | | | - | Open Elective- II | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|-------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MA 301 | Curriculum Studies | 4 | MA 401 | Comparative Education: National and International Prospective | 4 |
| MA 302 | Statistics in Education | 4 | MA 402 | Principles and Techniques of Teaching | 4 |
| MA 303 | Teacher Education | 4 | MA 403 | Practical Work | 4 |

| | | | | | |
|--------|--------------------------------------|---|--------|--------------|---|
| MA 304 | Educational Guidance and Counselling | 4 | MA 404 | Dissertation | 8 |
| MA 305 | Open and Distance Learning | 4 | - | - | - |

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



ENGLISH AND FOREIGN LANGUAGES (Year of Establishment: 1994)

The Department of English and Foreign Languages was established in 1994. The Department provides instruction and carries out research in American Literature, Critical Theory, English Literature, English Language Teaching, Indian Literature in English, Linguistics, New Literatures in English and Gender and Literature. The Department of English and Foreign Languages is supported by the UGC under the Special Assistance Programme-Departmental Research Support (Phase II).

Programmes offered

1. One Year Certificate Course in Chinese
2. Integrated M.A. in English
3. M.A. in English
4. M.A. in Linguistics and Language Technology
5. Ph. D.

Faculty and Areas of Interest

| Professors | |
|--|--|
| Madan Mohan Sarma,* Ph.D. (DU) | <i>Applied Linguistics, ELT, Literature in English</i> |
| Bijay Kumar Danta,* Ph.D. (UU)-Head | <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)-Dean-HSS | <i>Indian Writing in English, British Literature, Book History</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, Literary Theory</i> |
| Associate Professors | |
| Debasish Mohapatra,* Ph.D. (EFLU, Hyderabad) | <i>Curriculum Development, Materials Production, Language Policy</i> |
| Sravani Biswas,* Ph.D. (NEHU) | <i>Indian Writing in English, Postcolonial Studies, British Romantic Poetry</i> |
| Hemjyoti Medhi,* Ph.D. (DU^) | <i>Gender and Literature, New Literatures in English, Indian Vernacular Literature</i> |
| Sanjib Sahoo,* Ph.D. (TU) | <i>Indian Writing in English, Travel Writing, Contemporary British Literature</i> |

Assistant Professors

| | |
|--|--|
| Rathijit Chakraborty, M.Phil. (Chinese), (JNU) | <i>Chinese Language and Literature</i> |
| Reetamoni Narzari, Ph.D. (TU) | <i>Women's Writing, Indian Writing in English, Postcolonial Literature</i> |
| Pallavi Jha, Ph.D. (UoHyd) | <i>Children's Literature, Popular Culture and Literature, Postcolonial Writing</i> |
| | |
| Bashabi Gogoi, Ph.D. (G.U) | <i>Critical Theory, Adaptation Studies</i> |
| Arup Kumar Nath,*Ph.D. (JNU) | <i>Language Typology, Morphology, Sociolinguistics</i> |
| Bipasha Patgiri, M.Phil. (JNU) | <i>Phonology (Prosody, Dialectology, Language Typology and Syntax)</i> |
| Esther Daimari, Ph.D. (GU) | <i>South Asian English Literature</i> |
| Amalesh Gope,*Ph.D. (IITG) | <i>Acoustic Phonetics, Computational Linguistics, Language Documentation</i> |
| Sarat Kr. Doley,* Ph.D. (EFLU, Shillong) | <i>English Language Education, Language Testing, SLA</i> |
| Daveirou Lanamai, M. A. (Chinese) (JNU) | <i>Chinese Language</i> |
| Pallavi, M. Phil. (German), (JNU) | <i>German Literature and Language, Holocaust Literature, Post-War Literature</i> |

* Recognized Supervisor

LEGENDS:DU-Dibrugarh University, UU-Utkal University Odisha, GU-Gauhati University, HSS- Humanities and Social Sciences, TU-Tezpur University, NTNU-Norwegian University of Science and Technology Norway, EFLU- English and Foreign Language University, NEHU- North Eastern Hill University Shillong DU^ - Delhi University, JNU- Jawaharlal Nehru University New Delhi, UoHyd-University of Hyderabad, IITG- Indian Institute of Technology Guwahati, HoD- Head of the Department.

Facilities

Departmental Library

Select books relating to literature, linguistics and ELT are available in the Departmental Library. The Department also has a collection of audio cassettes 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 2018-2019: 15
- No. of ongoing research projects : 03
- No. of current Ph.D. scholars: 42

Selected Publications

1. Daimari Esther. (2017). "Scarred and Ruined Landscapes in Romesh Gunsekera's *Heaven's Edge*." *Assonance: A Journal of Russian and Comparative Literary Studies*, Vol- 17, pp- 144-154, ISSN: 2394-7853.

Courses offered in One Year Certificate Course in Chinese

| First Semester | | | Second Semester | | |
|----------------|--------------------------|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CL 110 | Read and Write Chinese-I | 3 | CL 111 | Read and Write Chinese-II | 3 |
| CL 112 | Chinese Comprehension | 3 | CL 113 | Chinese Composition | 3 |
| CL 114 | Speaking Chinese-I | 3 | CL 115 | Speaking Chinese-II | 3 |
| CL 116 | China in Brief-I | 3 | CL 117 | China in Brief-II | 3 |

Courses offered in Integrated M. A. in English

| First Semester | | | Second Semester | | |
|-----------------------------------|--|-----|-----------------------------------|--------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG111 | Reading Literature | 4 | EG113 | History of English Literature | 4 |
| EG112 | English for Communication | 3 | EG114 | English Poetry I: Chaucer to Dryden | 3 |
| CS101 | Basics in Computer Application | 3 | ES102 | Elements of Environmental Science | 3 |
| MIL (ANY ONE) | | | MIL (ANY ONE) | | |
| AS101 | MIL Assamese: Poetry (Early and Modern) | 3 | AS102 | Assamese : Drama | 3 |
| HN101 | Madhyakalin aur Adhunik Kabya (in Hindi) | 3 | HN102 | Kahani aur Upanyas (in Hindi) | 3 |
| EG106 | Alternative English -I | 3 | EG109 | Alternative English-II | 3 |
| OPTIONAL COURSES (ANY TWO) | | | OPTIONAL COURSES (ANY TWO) | | |
| SO102 | Introduction to Sociology | 2 | SO103 | Introduction to Sociological Thought | 2 |
| CT161 | Basic Concepts in Cultural Studies -I | 2 | CT162 | Introduction to Folklore Studies | 2 |
| MC101 | Introduction to Communication | 2 | MC201 | Journalism | 2 |

| Third Semester | | | Fourth Semester | | |
|-----------------------------------|---|-----|-----------------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG211 | British Drama I: Beginning to Shakespeare | 4 | EG214 | Literary Criticism-I | 4 |
| EG212 | English Fiction-I | 3 | EG215 | Drama-II: Jacobean to Eighteenth Century | 4 |
| EG213 | English Poetry-II: Pope to Romantics | 4 | EG216 | Fiction-II: Victorian to Modern | 4 |
| To be chosen by students | CBCT-I | 3 | To be chosen by students | CBCT-II | 3 |
| MIL (ANY ONE) | | | MIL (ANY ONE) | | |
| AS201 | MIL (Assamese): Short Story and Novel | 2 | AS202 | MIL (Assamese) Essay, Structure of Assamese | 2 |
| EG209 | Alternative English -III | 2 | EG211 | Alternative English -IV | 2 |
| HN201 | Natak Aur Ekanki (Hindi) | 2 | HN202 | Nibandh Aur Hindi Bhasa Ki Bhasik Sangrachana | 2 |
| OPTIONAL COURSES (ANY TWO) | | | OPTIONAL COURSES (ANY TWO) | | |
| SO201 | Society in India | 2 | SO202 | Social Research Method | 2 |
| CT163 | Basic Concepts in Cultural Studies -II | 2 | CT164 | Cultural Studies: Its Development and Trends | 2 |
| MC301 | Advertising and Public Relations | 2 | MC401 | Electronic Media | 2 |

| Fifth Semester | | | Sixth Semester | | |
|--------------------------|---------------------------------|-----|--------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG311 | Poetry-III: Victorian to Modern | 4 | EG315 | Literary Criticism-II | 4 |
| EG312 | Non-Fictional Prose | 4 | EG316 | Introduction to Postcolonial Literature | 4 |
| EG313 | Drama-III: Shaw to Beckett | 4 | EG317 | Introduction to Children's Literature | 3 |
| EG314 | Phonetics of English and ELT | 4 | EG318 | Introduction to South Asian Writing | 3 |
| To be chosen by students | CBCT-III | 3 | To be chosen by students | CBCT-IV | 3 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|--|-----|--------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG451 | Literary and Critical Theory-I | 4 | EG455 | Language and Language Education | 4 |
| EG452 | English Literature from Chaucer to Marlowe | 4 | EG456 | Puritan to Eighteenth Century Literature (Poetry and Drama) | 4 |
| EG453 | Shakespearean Drama | 4 | EG457 | Romantic Poetry and Prose | 4 |
| EG454 | Fiction-I (Early to Jane) | 4 | EG458 | Fiction-II (Nineteenth Century) | 4 |
| EG417 | Academic and Critical Writing in English | 3 | To be chosen by students | CBCT-V | 3 |

| Ninth Semester | | | Tenth Semester | | |
|--------------------------|----------------------------------|-----|----------------|-------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG501 | Literary and Critical Theory -II | 4 | EG504 | Modern Poetry | 4 |
| EG502 | Modern Drama | 4 | EG505 | Modern Prose | 4 |
| EG503 | Modern Fiction | 4 | EG506 | Postcolonial Literatures in English | 4 |
| - | Elective- I | 4 | - | Elective- II | 4 |
| To be chosen by students | CBCT-VI | 3 | EG519 | Term Paper | 3 |

| Elective -I (Any One from the following Courses) | | | Elective -II (Any One from the following Courses) | | |
|--|-----------------------------|-----|---|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG507 | Translation-I | 4 | EG508 | Translation-II | 4 |
| EG509 | Gender and Literature-I | 4 | EG510 | Gender and Literature-II | 4 |
| EG511 | American Literature-I | 4 | EG512 | American Literature-II | 4 |
| EG513 | Indian Writing in English-I | 4 | EG514 | Indian Writing in English-II | 4 |
| EG515 | ELT-I | 4 | EG516 | ELT-II | 4 |

Courses offered in M. A. in English

| First Semester | | | Second Semester | | |
|----------------|--|-----|--------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG451 | Literary and Critical Theory-I | 4 | EG455 | Language and Language Education | 4 |
| EG452 | English Literature from Chaucer to Marlowe | 4 | EG456 | Puritan to Eighteenth Century Literature (Poetry and Drama) | 4 |
| EG453 | Shakespearean Drama | 4 | EG457 | Romantic Poetry and Prose | 4 |
| EG454 | Fiction-I (Early to Jane) | 4 | EG458 | Fiction-II (Nineteenth Century) | 4 |
| EG417 | Academic and Critical Writing in English | 3 | To be chosen by students | CBCT-I | 3 |
| Third Semester | | | Fourth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG501 | Literary and Critical Theory -II | 4 | EG504 | Modern Poetry | 4 |
| EG502 | Modern Drama | 4 | EG505 | Modern Non Fictional Prose | 4 |

| | | | | | |
|--------------------------|----------------|---|-------|-------------------------------------|---|
| EG503 | Modern Fiction | 4 | EG506 | Postcolonial Literatures in English | 4 |
| - | Elective- I | 4 | - | Elective- II | 4 |
| To be chosen by students | CBCT-II | 3 | EG519 | Term Paper | 3 |

| Elective -I (Any One from the following Courses) | | | Elective -II (Any One from the following Courses) | | |
|--|-----------------------------|-----|---|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| EG507 | Translation-I | 4 | EG508 | Translation-II | 4 |
| EG509 | Gender and Literature-I | 4 | EG510 | Gender and Literature-II | 4 |
| EG511 | American Literature-I | 4 | EG512 | American Literature-II | 4 |
| EG513 | Indian Writing in English-I | 4 | EG514 | Indian Writing in English-II | 4 |
| EG515 | ELT-I | 4 | EG516 | ELT-II | 4 |

Courses offered in M. A. in Linguistics and Language Technology

| First Semester | | | Second Semester | | |
|----------------|---|-----|--------------------------|-----------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LG421 | Philosophy of Linguistics | 4 | LG426 | Phonetics and Phonology -II | 3 |
| LG422 | Phonetics and Phonology -I | 4 | LG427 | Syntax | 3 |
| LG423 | Morphology | 4 | LG428 | Semantics | 3 |
| LG424 | Basic Syntax | 4 | LG429 | Field Linguistics | 3 |
| LG425 | Introduction to Computational Linguistics | 3 | LG430 | Cognitive Linguistics | 4 |
| | | | To be chosen by students | CBCT-I | 3 |

| Third Semester | | | Fourth Semester | | |
|--------------------------|---|-----|-----------------|------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LG501 | Language Typology and Language Universals | 4 | LG509 | Historical Linguistics | 4 |
| LG502 | Sociolinguistics | 4 | LG510 | Advanced Computational Linguistics | 4 |
| LG503 | Natural Language processing | 4 | LG511 | Research Methodology | 4 |
| - | Elective- I | 4 | - | Elective- II | 4 |
| To be chosen by students | CBCT-III | 3 | LG518 | Introduction to Psycholinguistics | 3 |

| Elective -I (Any One from the following Courses) | | | Elective -II (Any One from the following Courses) | | |
|--|---|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LG504 | Advanced Phonology | 4 | LG512 | Minimalist Syntax | 4 |
| LG505 | Advanced Cognitive Linguistics -I | 4 | LG513 | Advanced Cognitive Linguistics-II | 4 |
| LG506 | Generative Syntax | 4 | LG514 | Advanced Field Linguistics (TBL) | 4 |
| LG507 | Lexicography | 4 | LG515 | Experimental Phonology | 4 |
| LG508 | Acoustic Phonetics: Instrumental Techniques and Data Analysis | 4 | LG516 | Formal Semantics | 4 |
| LG517 | Language Documentation and Grammar Writing | 4 | LG519 | Ethnolinguistics and Language Endangerment | 4 |

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

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. M.A.
2. Ph.D.
3. Post Graduate Diploma in Translation (Hindi)
4. Certificate Course in Official Hindi

Faculty and Areas of Interest

| Associate Professor | |
|----------------------------|--|
| S. Tripathi*, Ph.D. (BHU) | <i>Applied Linguistics, Indian Poetics and Folk Literature</i> |
| Assistant Professors | |
| Anju Lata *, Ph.D. (TU) | <i>Fiction</i> |
| Anushabda*, Ph.D. (DU) | <i>Poetry, Poetics, Media and Linguistics</i> |

*Recognized Supervisor

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

Facilities

The Department has a small departmental library.

Selected Publications:

- Tripathi, S. Ganesh Chauth (Book), Vishwavidyalay Prakashan, Varanasi : 2015.
- Tripathi, S. Lok ka Awalokan (Book), Arya Prakashan, Gandhi Nagar, New Delhi, 2013.
- Anju Lata, Dalit Sahitaya Lekhan aur Yatharthwad, ISSN 978-93- 80845-26-5. Ananga Prakashan. Delhi-2015.
- Anju Lata, Stri Lakhan, ISSN 2349 -134X, New Delhi-2015.
- Anju Lata, Chayavad Aur Swakchandtawad, ISSN 2349 -134X, New Delhi-2015.
- Anju Lata : Pachapan Kambhe Laal Divare: Ek Mulyankan. ISSN 2349- 154X. link: Vle.du.ac.in, New Delhi-2015.
- Anushabda, : Hindi: Pratrakarita: Rupak Banam Mithak, Vani Prakashan, Delhi- 2014.

A. Courses offered in PG Diploma in Translation (Hindi)

| CODE | Title | Cr. | CODE | Title | Cr. |
|--------|---|-----|--------|--|-----|
| HN 411 | Prayojanmulak Hindi, Bhasha Prayukti Aur Anuvad | 4 | HN 421 | Anuvad Ka Vyavaharik Paksh | 4 |
| HN 412 | Hindi Bhasha Ki Sanvaidhanik Sthiti Aur Anuvad | 4 | HN 422 | Janasansar Madhyam Aur Anuvad | 4 |
| HN 413 | Anuvad Vigyan Aur Uska Sidhanta | 4 | HN 423 | Paribhashik Sabdavalee, Kosh Vigyan Aur Anuvad | 4 |
| HN414 | Karyalayee Hindi Aur Anuvad | 4 | HN 424 | Pariyojana Karya | 4 |

B. Courses offered in M.A.

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| HN 430 | आदिकालीन एवं निर्गुण काव्य | 4 | HN 435 | सगुण भक्ति एवं रीति काव्य | 4 |
| HN 431 | छायावादी काव्य | 4 | HN 436 | छायावादोत्तर काव्य | 4 |
| HN 432 | हिन्दी साहित्य का इतिहास: आदिकाल और मध्यकाल | 4 | HN 437 | हिन्दी साहित्य का इतिहास : आधुनिक काल | 4 |
| HN 433 | भारतीय काव्यशास्त्र | 4 | HN 438 | हिन्दी भाषा एवं लिपि | 4 |
| HN 434 | पाश्चात्य काव्यशास्त्र | 4 | Open elective | | 3 |

| Third Semester | | | Fourth Semester (Elective Courses) | | |
|----------------|--|-----|------------------------------------|--|-----|
| | | | Optional I प्रयोजनमूलकहिंदी | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| HN 540 | हिन्दी कथा साहित्य : उपन्यास एवं कहानी | 4 | HN 544 | प्रयोजनमूलक हिन्दी : सिद्धांत-संदर्भ | 04 |
| HN 541 | हिन्दी नाटक और निबंध | 4 | HN 545 | राजभाषा हिन्दी: संवैधानिक स्थिति एवं उसका अनुप्रयोगात्मकपक्ष | 04 |
| HN 542 | भाषा विज्ञान | 4 | HN 546 | हिन्दी पत्रकारिता और जनसंचार | 04 |
| HN 543 | हिन्दी आलोचना | 4 | HN 547 | अनुवाद विज्ञान : सिद्धान्त एवं अनुप्रयोग | 04 |

| | | | | | |
|---------------|--|---|--------|---------------------------------|----|
| Open elective | | 3 | HN 548 | लघु शोध-प्रबंध / परियोजना कार्य | 06 |
|---------------|--|---|--------|---------------------------------|----|

| Fourth Semester (Elective Courses) | | | Fourth Semester (Elective Courses) | | |
|------------------------------------|--------------------------------------|-----|---------------------------------------|---------------------------------|-----|
| Optional II (आधुनिकहिंदीसाहित्य) | | | Optional III (अनुप्रयुक्तभाषाविज्ञान) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| HN 549 | प्रेमचंद | 04 | HN 554 | भाषा शिक्षण | 04 |
| HN 550 | जयशंकर प्रसाद | 04 | HN 555 | शैलीविज्ञान | 04 |
| HN 551 | सूर्यकांत त्रिपाठी 'निराला' | 04 | HN 556 | समाज भाषाविज्ञान | 04 |
| HN 552 | सच्चिदानंद हीरानंद वात्सायन 'अज्ञेय' | 04 | HN 557 | कोश विज्ञान | 04 |
| HN 553 | लघु शोध-प्रबंध / परियोजना कार्य | 06 | HN 558 | लघु शोध-प्रबंध / परियोजना कार्य | 06 |

| Fourth Semester (Elective Courses) | | | Fourth Semester (Elective Courses) | | |
|------------------------------------|---|-----|------------------------------------|---------------------------------|-----|
| Optional IV (तुलनात्मकसाहित्य) | | | Optional V (लोक साहित्य) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| HN 559 | तुलनात्मक साहित्य:स्वरूप, उदभव और विकास | 04 | HN 564 | लोक साहित्य : सिद्धांत-संदर्भ | 04 |
| HN 560 | भारतीय साहित्य : अवधारणा और विशेषताएँ | 04 | HN 565 | लोकगीत और लोकगाथा | 04 |
| HN 561 | पूर्वोत्तर की संस्कृति और साहित्य | 04 | HN 566 | लोक कथा एवं लोक नाटक | 04 |
| HN 562 | असम की संस्कृति और साहित्य | 04 | HN 567 | लोक सुभाषित | 04 |
| HN 563 | लघु शोध-प्रबंध / परियोजना कार्य | 06 | HN 568 | लघु शोध-प्रबंध / परियोजना कार्य | 06 |

| Fourth Semester (Elective Courses) | | | Fourth Semester (Elective Courses) | | |
|------------------------------------|--------------------|-----|--|----------------------------|-----|
| Optional VI (विमर्शमूलक अध्ययन) | | | Optional VII (सिनेमा, साहित्य और समाज) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| HN 569 | अस्मितामूलक विमर्श | 04 | HN 574 | सिनेमा, साहित्य और समाज का | 04 |

| | | | | | |
|--------|---------------------------------|----|--------|---|----|
| | | | | अन्तः संबंध | |
| HN 570 | स्त्रीमूलक विमर्श | 04 | HN 575 | साहित्य का सिनेमाई रूपांतरण | 04 |
| HN 571 | दलितमूलक विमर्श | 04 | HN 576 | हिन्दी सिनेमा और अस्मितामूलक विमर्श | 04 |
| HN 572 | आदिवासीमूलक विमर्श | 04 | HN 577 | साहित्य और सिनेमा का भाषाई एवं सामाजिक परिप्रेक्ष्य | 04 |
| HN 573 | लघु शोध-प्रबंध / परियोजना कार्य | 06 | HN 578 | लघु शोध-प्रबंध / परियोजना कार्य | 06 |

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



LAW

(Year of Establishment: 2016)

Tezpur University has established the Department of Law in the session 2016-17 with the objective of making it a vibrant centre of legal education, particularly in the North-East India. Four faculties have already joined the Department. Initially the Two- Year LL.M. Programme will be started from the session 2018-19. The LL.M. programme has been designed in such a way that the students are exposed not only to the theoretical aspects but also to pedagogical and research aspects of socio-legal relevance. It is proposed to start subsequently the Five-Year B.A.LL.B.(Hons.), P.G. Diploma in Law and Ph.D. Programmes.

Programmes offered

Two-Year Master of Laws (LL.M.) with the following specializations:

1. Criminology and Criminal Law
2. Human Rights, International Humanitarian Law and Law Relating to Migrants

Faculty and Areas of Interest

| Professors | |
|---|---|
| Bhaskar Kumar Chakravarty Ph.D. (GU)-HoD | <i>Constitutional Law, Administrative Law, Human Rights, Family Law.</i> |
| Assistant Professors | |
| Angel Habamon Syiem, LL.M. (SIU) | <i>Human rights, International Law and Tribal issues</i> |
| Madhumita Acharjee, LL.M. (AU) | <i>Criminal Law, Criminology, Juvenile Justice, Rights of elderly persons</i> |
| Debajit Kumar Sarmah, LL.M. (IP) | <i>Criminology and Criminal Law</i> |

LEGENDS: GU-Gauhati University, SIU-Symbiosis International (Deemed) University, AU-Assam University, IP-Guru Gobind Singh Indraprastha University,
HoD- Head of the Department

Courses offered in Master of Laws

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LW 401 | Indian Constitutional Law and Emerging Challenges | 4 | LW 420 | Judicial Process | 4 |
| LW 402 | Research Methodology | 4 | - | ELECTIVE FROM GROUP A-1 or A-2 | 4 |
| | ELECTIVE FROM GROUP A-1 or A-2 | | LW 421 | General Principles of Criminal Law OR | 4 |
| | | | LW 422 | International Human Rights Law | |
| LW 403 | Criminology, Penology and Victimology OR | 4 | LW 423 | Law Relating to Cyber Crime OR | 4 |

| | | | | | |
|--------|----------------------------|---|--------|---|---|
| LW 404 | Human Rights Jurisprudence | | LW 424 | Protection and Enforcement of Human Rights | |
| LW 405 | Jurisprudence | 3 | LW 425 | Research Project- II | 4 |
| LW 406 | Research Project- I | 4 | - | Open Elective (to be chosen from other departments) | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|---|-----|-----------------|-------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| | ELECTIVE FROM GROUP B-1 OR B-2 | | LW 520 | Law and Social Transformation | 4 |
| LW 501 | Correctional Laws and Administration in India | 4 | LW 521 | Pedagogy in Law | 4 |
| LW 502 | OR International Humanitarian Law | | | | |
| LW 503 | Socio Economic Offences | 4 | LW 522 | Dissertation & Viva-Voce | 6 2 |
| LW 504 | OR Law Relating to Crimes Against Humanity | | | | |
| LW 505 | Comparative criminal procedure | 4 | | | |
| LW 506 | OR International Migration Law | | | | |
| LW 507 | Research Project- III | 4 | | | |
| - | Open Elective (to be chosen from other departments) | 3 | | | |

MASS COMMUNICATION AND JOURNALISM
(Year of Establishment: 2001)

The Department was established in 2001 primarily for teaching Media and Communication studies. Over the years it has grown as a nodal centre for teaching, training and research in Media Studies with national and international collaborations. An important feather in the cap of the Department is that it has achieved the top position among Indian universities in the Times Higher Education Asia University Ranking 2018 declared in February, 2018 in the Communication & Media Studies category. It is based on an assessment of 13 performance indicators. The Department, while focusing on the comprehensive MA in Mass Communication and Journalism (MCJ) programme, has also launched a specialized programme – MA in Communication for Development since 2016. The thrust areas of the Department are Community Communication and Mass Communication with a mission to impart quality training through innovative mix of classroom and field-based pedagogy. Our students regularly produce laboratory journals, audio programmes, web designs, corporate videos, TV news bulletins, and documentary films. They also develop alternative and community media productions like puppet shows and street plays as part of their academic curriculum. One major highlight of the department is that the campus placement scenario is looking up with 18 offers for the last two batches passing out in 2018 for both the programmes. Recruiters include reputed organizations like ETV Bharat, POSOCO (PSU in power sector), Drishti, Pradan among others. One company has already visited and selected a few students from the current MA in MCJ batch which will pass out in June, 2019. Further, the Ministry of Human Resources Development of Government of India has recognized the department as the National Resource Centre for preparing online Refresher Courses for teachers of the media and communication disciplines of the country which has been another major feather in the cap for the department.

Programmes offered

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

Faculty and Areas of Interest

| Professors | |
|------------|---|
| 1. | <p>Sunil Kanta Behera, Ph.D. (BU) Professor of Eminence</p> <p><i>Communication Theory and Research, Gender and Media</i></p> |

| | | |
|-----------------------------|-----------------------------------|--|
| 2. | Abhijit Bora,* Ph.D. (GU) – Head, | <i>Print Journalism, Community Radio, Specialized Reporting, Science Communication, Media Literacy</i> |
| Associate Professors | | |
| 1. | Perumal Anbarasan,* Ph.D. (JNU) | <i>Media Studies, Cultural and Subaltern Studies, International Communication, Film Studies</i> |
| 2. | Joya Chakraborty,* Ph.D. (UoH) | <i>ICT for Development, Communication for Social Change, Women and Media, Alternative and Community Media</i> |
| 3. | Uttam Kumar Pegu,* Ph.D. (JMI) | <i>ICT Implications on Society, Science Communication, Film Studies, Media Analysis</i> |
| Assistant Professors | | |
| 1. | Anjuman Borah, Ph.D. (TU) | <i>Development Communication, Television and Traditional Media</i> |
| 2. | Perosh Jimmy Daimari, Ph.D. (TU) | <i>Film Studies, Development Communication</i> |
| 3. | Kapou Malakar, Ph. D. (TU) | <i>New Media for Development, Multimedia Journalism, Political Communication, Online Journalism, Media Studies, Film Studies</i> |
| 4. | Manoj Deori, M.A. (TU) | <i>Online Journalism, Multimedia Productions, Media and Disaster Management</i> |
| 5. | Junali Deka Ph.D. (AU) | <i>Cultural Studies, Visual Communication, New Media and Society</i> |

***Recognized Supervisor**

LEGENDS:BU- Berhampur University Odisha, GU-Gauhati University, JNU-Jawaharlal Nehru University New Delhi, UoH-University of Hyderabad, JMI-Jamia Millia Islamia New Delhi, TU-Tezpur University, AU- Assam University, Silchar, HoD-Head of the Department.

Facilities

The Department has a spacious exclusive three-story building and is endowed with specialized equipment 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

- Number of papers published in the year 2017-18: 25

- Number of ongoing research projects : 2
- Number of current Ph.D. scholars:17

Selected Publications

- Pegu, Uttam (2017). Media in Conflict Transformation and Peace Process: An Academic Inquest in Mizoram University Journal of Literature and Cultural Studies, June 2017. P. 250-264.
- Chakraborty, Joya (2017). Communication for social change: Course, curriculum and development, in Dutta, A., Bharali, B. and Lahkar Goswami, A. (Eds) Decoding Communication for Development in India's Northeast. Pp. 26-38. Published by Dept. of Communication and Journalism Gauhati University in association with Communication for Development Section, UNICEF, Assam, India. ISBN 978-81-933588-3-2.
- Deori, Manoj (2017). Technology Mediated Media Education: A Case Study of E-Learning Initiatives in India. International Journal of Communication Research 7, no. 2.
- Bora, Abhijit (2018). A resurgent print media: regional languages to the fore. Media 360. Special publication of Indian Institute of Mass Communication, Dhenkanal (pa 27 – 31).

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

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MC 526 | Communication Theories | 3 | MC 532 | Writing for media | 3 |
| MC 527 | Principles of Journalism | 3 | MC 533 | Photo Journalism | 3 |
| MC 528 | Advertising | 3 | MC 534 | Broadcast Media : Television | 3 |
| MC 529 | Broadcast media: Radio | 3 | MC 535 | PR & Corporate communication | 3 |
| MC 530 | New Media: Evolution, principles & theory | 3 | | Elective I | 3 |
| MC 531 | Media in Northeast India | 3 | | Open Elective | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|---|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MC 541 | Communication research methods | 3 | MC 549 | Understanding cinema | 3 |
| MC 542 | Communication for social change and development | 3 | MC 550 | Science Communication | 3 |
| MC 543 | Media law and ethics | 3 | MC 551 | Political and International Communication | 3 |
| MC 544 | Internship | 3 | MC 552 | Communication research project | 5 |

| | | | | | |
|---|---------------|---|--|--------------|---|
| - | Elective II | 3 | | Elective III | 4 |
| | Open Elective | 3 | | | |

| Electives I (One to be chosen) | | | Electives II (One to be chosen) | | |
|--------------------------------|---------------------------------|-----|---------------------------------|---------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MC 536 | Media Management | 3 | MC 536 | Media Management | 3 |
| MC 537 | Graphic design for media | 3 | MC 537 | Graphic design for media | 3 |
| MC 538 | Health Communication | 3 | MC 538 | Health Communication | 3 |
| MC 539 | Film appreciation and criticism | 3 | MC 539 | Film appreciation and criticism | 3 |
| MC 540 | Digital Media Literacy | 3 | | | |

| Electives III (One to be chosen) | | |
|----------------------------------|------------------------|-----|
| Course Code | Course Title | Cr. |
| MC 553 | New media production | 4 |
| MC 554 | Documentary production | 4 |
| MC 555 | Community radio | 4 |

MA MCJ students shall opt for Open Electives in Semester II and III only.

This non-credited internship for students is voluntary and can be undertaken during the winter break after completion of the Third Semester.

Courses offered in M.A. in Communication for Development

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| DC 400 | Theories of Communication and Media | 4 | DC 404 | Communication Research Methods | 4 |
| DC 401 | Development Journalism | 5 | DC 405 | Radio for Development | 5 |
| DC 402 | Theories of Communication for Development | 4 | DC 406 | Participatory Video Production | 5 |
| DC 403 | Issues in Development | 4 | DC 407 | Information and Communication | 4 |

| | | | | | |
|---|------|---|---|----------------------------|---|
| | | | | Technology for Development | |
| - | CBCT | 3 | - | CBCT | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|-------------------------------|-----|---|--------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| DC 408 | Campaign Planning | 5 | DC 415 | Project * | 12 |
| DC 409 | Folk and Community Media | 5 | * Students would be attached to different governmental/non-governmental development agencies to carry out a semester long communication campaign. | | |
| DC 410 | Message Design and Evaluation | 4 | | | |
| DC 411 | Internship | 4 | | | |
| - | CBCT | 3 | | | |

| Elective Courses | | |
|------------------|--|-----|
| Course Code | Course Title | Cr. |
| DC 412 | NGO Participation and Management | 5 |
| DC 413 | Human Rights and Media | 5 |
| DC 414 | Northeast India: Demography, Culture, and Identity | 4 |

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

SOCIAL WORK (Year of Establishment: 2014)

The Department of Social Work was established in the year 2014 with the objective to create a just and equal society that ensures freedom from various forms of oppression and exploitation. It aims to develop competent human resources for effective professional social work practice. The Department engages with 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. It facilitates active involvement in the fields of social welfare, development, and allied areas through classroom teaching blended with the component of concurrent field work practice. This approach enables the students to develop knowledge, skills, attitudes and values appropriate to the practices of social work profession, besides cultivating critical thinking and the ability to apply theory to field experiences. This further contributes in evolving an interdisciplinary perspective which enhances the understanding of social problems and developmental issues with greater efficacy.

Programme offered

1. M.A. in Social Work
2. Ph.D. in Social Work

Faculty and Areas of Interest

| Professor | | |
|----------------------|---|--|
| 1. | Chandan Kumar Sharma, Ph.D. (DU) – HoD | <i>Development; Environment; Urbanisation; Agrarian Structure; Social Movements; Ethnicity; Migration; Society and Politics of Northeastern India.</i> |
| Assistant Professors | | |
| 1. | 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> |
| 2. | Veda Yumnam, M.Phil. (JNU) | <i>Health Systems Research, Epidemiology of HIV / AIDS and Social Determinants of Health</i> |
| 3. | Rajesh Kalarivayil, Ph.D. (JNU) | <i>Biomedical Governance, Innovation Studies, Science and Technology in Rural Development</i> |
| 5. | Namami Sharma, M.Phil. (DU) | <i>Environment and Ecology, Tribal Studies, Community Development</i> |
| 6. | Prerana Banik, M.Phil. (TISS) | <i>Food Security, Gender and Livelihood, Labour rights, Inclusive policies and development, Marginalised group and social development</i> |

LEGENDS: **DU**– University of Delhi, **NIMHANS**-National Institute of Mental Health and Neurosciences Bangalore, **JNU**-Jawaharlal Nehru University New Delhi, **TISS**- Tata Institute of Social Sciences Mumbai, **HoD**-Head of the Department.

Selected Publications

- Banik P. Floods in Assam: a Post-Disaster Impact on Women and Livelihood, Journal of Exclusion Studies, 8(1), 2018.
- Nair S S. and Kalarivayil R. Has India's Surrogacy Bill Failed Women Who Become Surrogates? ANTYAJA : Indian Journal of Women and Social Change, 3(1), 2018.
- Saha A. Substance Abuse among Street Children: School Risk and Protective Factors, Social Defence Journal, 2, 2018.

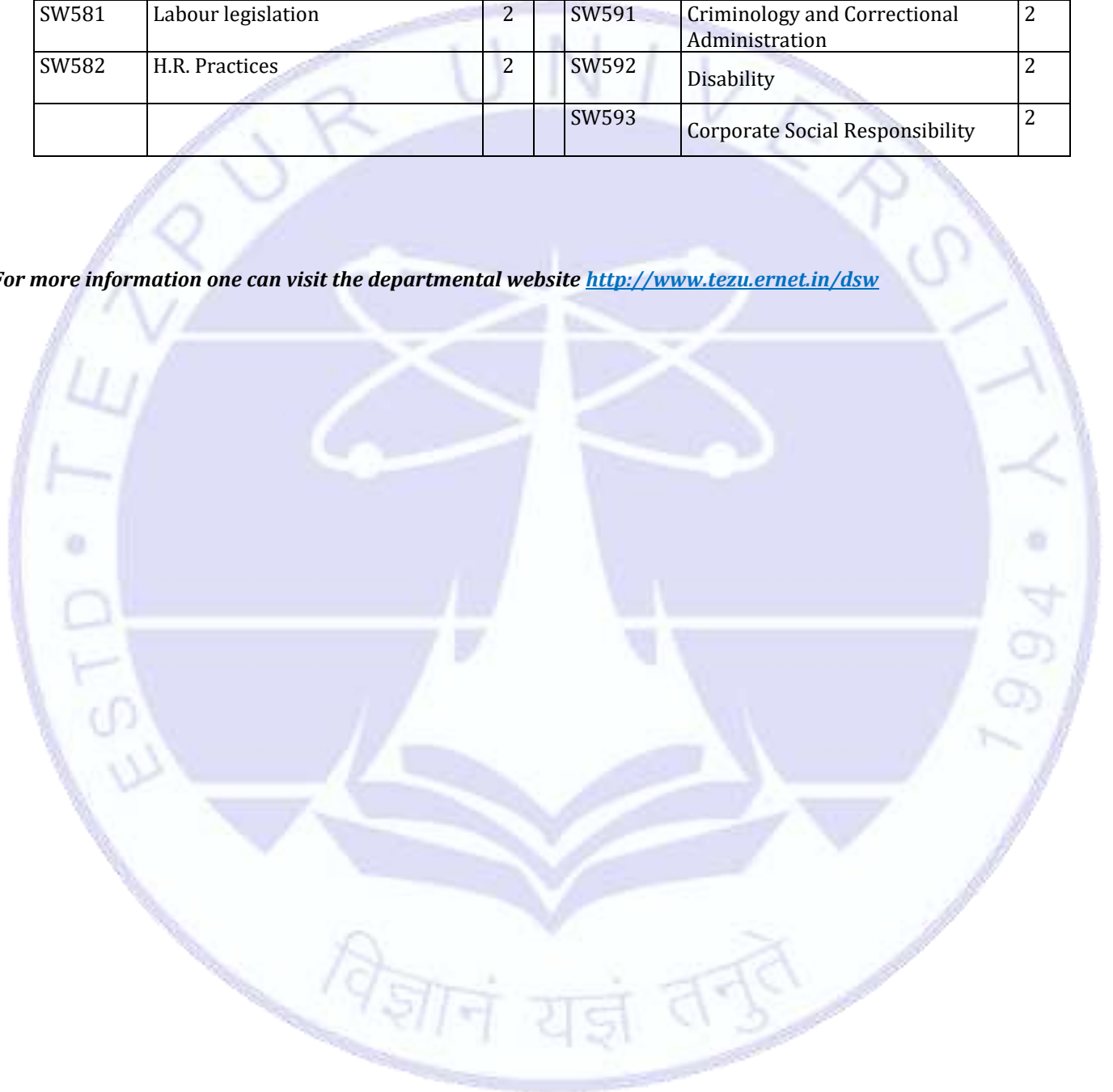
Courses offered in M.A in Social Work

| First Semester | | | Second Semester | | |
|---|--|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW401 | Understanding Society | 2 | SW431 | Social Work Method: Work with groups | 2 |
| SW402 | Human Behaviour and Social Environment | 2 | SW432 | Social Work methods: Work with communities | 2 |
| SW403 | Political Economy: State, Society and Development | 3 | SW433 | Research and Statistics | 4 |
| SW411 | Social work profession | 2 | SW434 | Development Administration and Governance | 2 |
| SW412 | Social Work methods: working with individuals and families | 2 | - | Open Elective | 3 |
| SW430 | Field Work | 8 | SW450 | Field Work | 8 |
| - | Elective I | 2 | - | Elective III | 2 |
| - | Elective II | 2 | - | Elective IV | 2 |
| Elective-I and Elective-II are to be chosen from the following courses | | | Elective-I and Elective-II are to be chosen from the following courses | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW421 | Community Health | 2 | SW441 | Gender, Women and Development | 4 |
| SW422 | Social Work with Children | 2 | SW442 | Environment and Ecology | 4 |
| SW423 | Literacy and Education | 2 | SW443 | Work with Older Persons | 4 |

| Third Semester | | | Fourth Semester | | |
|--|--|-----|---------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW501 | Management of Non-Profit Organizations | 2 | SW551 | Social Advocacy and Social Action | 2 |
| SW502 | Social Policy and Planning | 2 | SW598 | Continued Dissertation | 4 |
| SW549 | Dissertation | 2 | SW541 | Personality Development | 3 |
| SW550 | Field Work | 8 | SW599 | Field Work | 8 |
| - | Elective A/B/C | 2+2 | - | Elective A/B/C | 2+2 |
| - | Elective D | 2 | - | Elective D | 2+2 |
| - | Open Elective | 3 | | | |
| Both the Courses from any of Elective group A, B or C and any one course from Elective group D | | | | | |
| Elective Courses for the Third Semester (Any two) | | | | | |
| Elective (A) | | | Elective (B) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW511 | Social Work and Mental Health | 2 | SW521 | Urban Community Development | 2 |
| SW512 | HIV and Social Work Practice | 2 | SW522 | Rural and Tribal Community Development | 2 |
| Elective (C) | | | Elective (D) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW531 | Occupational Social Work | 2 | SW541 | Development Communication | 2 |
| SW532 | Organisational Behaviour | 2 | SW543 | Human Rights | 2 |
| Both the Courses from any of Elective group A, B or C and any two courses from Elective group D | | | | | |
| Elective Courses for the Fourth Semester (Any two) | | | | | |
| Elective (A) | | | Elective (B) | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW561 | Therapeutic Counseling | 2 | SW571 | Disaster Management | 2 |

| | | | | | |
|--------------------|-------------------------|------------|--------------------|---|------------|
| SW562 | Hospital Administration | 2 | SW572 | Peace education and Conflict Resolution | 2 |
| | Elective (C) | | | Elective (D) | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SW581 | Labour legislation | 2 | SW591 | Criminology and Correctional Administration | 2 |
| SW582 | H.R. Practices | 2 | SW592 | Disability | 2 |
| | | | SW593 | Corporate Social Responsibility | 2 |

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



SOCIOLOGY
(Year of Establishment: 2006)

The Department of Sociology 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 was awarded the the UGC-SAP (DRS-I) of University Grants Commission in 2016.

Programmes offered

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

Faculty and Areas of Interest

| Professors | |
|---|---|
| Virginius Xaxa, Ph.D. (IITK) (Gopinath Bardoloi Chair Professor) | <i>Agrarian Studies, Plantation Labour, Indigenous Peoples, Development Studies</i> |
| Chandan Kumar Sharma,* Ph.D. (DU^)-HoD | <i>Development, Environment, Migration, Agrarian Studies, Identity Politics, Social Movements, Urbanisation</i> |
| Kedilezo Kikhi,* Ph.D. (NEHU) | <i>Research Methodology, Gender and Society, Sociology of Northeast India, Tribal Studies</i> |
| Associate Professor | |
| Rabin Deka,* Ph.D. (DU) | <i>Sociological Theories, Sociology of Movement, Agrarian Sociology</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>Social Stigma and Exclusion, Sociology of Body, Sexuality</i> |

| | |
|---------------------------------|---|
| Nirmali Goswami,* Ph.D. (IITK) | <i>Sociology of Education, Identity of Politics, Multiculturalism</i> |
| Sarmistha Das, Ph.D (TU) | <i>Gender Studies, Sociology of North East India</i> |
| Subhadepta Ray, Ph.D. (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> |
| Pamidi Hagjer, M.A. (JNU) | <i>Ritual Studies, Kinship, Sociological Theories</i> |

* Recognized Supervisor

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

Facilities

The department has a library with selected books and photocopied materials. The classrooms are enabled with ICT facilities.

Research Activities

- No. of papers published in the year 2017-18:10
- No. of ongoing research projects: 3
- No of current Ph.D. scholars: 26

Selected Publications

- Xaxa, V. et. Al., (ed), *Employment and labour market in North-East India: Interrogating Structural Changes*. Routledge. 2018
- Das, A.K., "The Magic called Elections: Polls, Performance and Citizenship" in Devnath Pathak and Sasanka Perera (Ed) *Performative Communication: Culture and Politics in South Asia*, New Delhi, pp 136-151, Routledge. 2018
- Sharma, C.K. Dams, 'Development' and Popular Resistance in Northeast India", *Sociological Bulletin*, Vol. 67, No. 3, pp 317-333, Sage. 2018.

Courses offered in M.A. in Sociology

| First Semester | | | Second Semester | | |
|----------------|-----------------------------------|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SC 411 | Classical Sociological Traditions | 4 | SC 415 | Contemporary Theoretical Perspectives in Sociology | 4 |
| SC 412 | Research Methodology | 4 | SC 416 | Economic Sociology | 4 |
| SC 413 | Sociology of Family and Kinship | 4 | SC 417 | Social Stratification | 4 |
| SC 414 | Sociology of India | 4 | - | Elective - I | 3 |
| - | CBCT | 3 | - | CBCT | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|------------------------------|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SC 510 | Political Sociology | 4 | SC 513 | Sociology of Religion | 4 |
| SC 511 | Sociology of Development | 4 | SC 514 | Social Movements in India | 4 |
| SC 512 | Sociology of Northeast India | 4 | SC 515 | Research Project | 8 |
| - | Elective -II | 3 | - | Elective -III | 3 |
| - | CBCT | 3 | - | Elective -IV | 3 |
| | | | - | CBCT | 3 |

| Elective courses offered by the Department | | | | | |
|--|---------------------------------|-----|-------------|-------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| SC 431 | Fieldwork Practicum | 3 | SC 553 | Environmental Sociology | 3 |
| SC 432 | Social Statistics | 3 | SC 554 | Sociology of Culture and Mass Media | 3 |
| SC 433 | Population and Society | 3 | SC 555 | Sociology of Governance | 3 |
| SC 550 | Gender and Society | 3 | SC 556 | Sociology of Education | 3 |
| SC 551 | Industrial Sociology | 3 | SC 557 | Identity and Violence | 3 |
| SC 552 | Sociology of Health and Illness | 3 | SC 558 | Sociology of Science | 3 |

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

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 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, supramolecular chemistry, theoretical chemistry and green chemistry. Apart from externally funded projects, consultancy projects are also run by faculty members of the Department. The Department has received financial assistance under UGC-SAP (DRS II) and DST-FIST (Level II) special grants for strengthening teaching, research and training.

Programmes offered

1. Integrated B.Sc.B.Ed. (Chemistry Major)
2. Integrated dual B.Sc. & M.Sc. in Chemistry
3. M.Sc. in Chemistry
4. Ph.D.

Faculty and Areas of Interest

| Professors | |
|---|---|
| M. Lakshmi Kantam, Adjunct Professor, 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 S.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> |
| NiranjanKarak,* Ph.D. (IITKgp) | <i>Synthesis of Advanced Polymers, Polymer Nanocomposites and Nanomaterials</i> |
| Ramesh Chandra Deka,* Ph.D. (NCL), Dean, SoS | <i>Theoretical Chemistry, Catalysis and Drug Design</i> |
| AshimJyoti Thakur,* Ph.D. (NEIST)-HoD | <i>Heterocyclic Chemistry, Organic Synthesis and Molecular Container Chemistry</i> |
| Ashwini Kumar Phukan,* Ph.D. (UoHyd) | <i>Theoretical Inorganic and Organometallic Chemistry</i> |

| | |
|--|---|
| Ruli Borah,* Ph.D. (NEIST) | <i>Synthesis of Bioactive Molecule, Development of Green Methodologies for Organic Transformation</i> |
| Assistant Professors | |
| PanchananPuzari,* Ph.D. (IITG) | <i>Physical Chemistry, Biosensor</i> |
| Kusum Kumar Bania,* Ph.D. (TU) | <i>Heterogeneous Catalysis</i> |
| PankajBharali,* Ph.D. (IICT) | <i>Inorganic Materials, Catalysis, Adsorption</i> |
| NayanmoniGogoi,* Ph.D. (IITB) | <i>Molecular Magnet, Functional Metal Organic Framework</i> |
| BipulSarma,* 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> |
| SanjeevPranMahanta,* Ph.D. (UoHyd) | <i>Physical Chemistry, Molecular Engineering and Molecular Recognition</i> |
| HimangshuPrabalGoswami (Adhoc)Ph.D., (IISc), | <i>Theoretical Chemical Physics</i> |
| INSA Young Scientist | |
| Sanjay Pratihar,\$Ph.D. (IITKgp) | <i>Inorganic Chemistry, Organometallic Chemistry</i> |

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

LEGENDS: MKU- Madurai Kamaraj University Tamil Nadu, CU- Calcutta University, NCL- National Chemical Laboratory Pune, SoS- School of Sciences, 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, IISc- Indian Institute of Science, Bangalore.

Facilities

In addition to the laboratory facilities required for undergraduate-post graduate level studies and research in Chemical Sciences, the Department is equipped with sophisticated instrumentation facilities, like FT-IR spectrophotometer, 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, TEM, SEM, Raman spectrophotometer, Single crystal X-ray instrument, GC-MS, ICP-AES, GPC, HPLC, GC etc.

Research Activities

- No. of papers published in the year 2017-2018: 100
- No. of ongoing research projects: 24
- No. of current Ph.D. scholars: 78

Selected Publications

- Mohan, K., Bora, A. and Dolui, S. K., Efficient Way of Enhancing the Efficiency of a Quasi-Solid-State Dye-Sensitized Solar Cell by Harvesting the Unused Higher Energy Visible Light Using Carbon Dots, ACS Sustainable Chemistry and Engineering, 6, 10914-10922, 2018.
- Borthakur, B., Das, S., Phukan, A. K., Strategies toward Realization of Unsupported Transition Metal-Boron Donor-Acceptor Complexes: An Insight from Theory, Chemical Communications, 54, 4975-4978, 2018.
- Devi, R., Das, J., Sarma, B. and Das, S. K., Phenolate-induced intramolecular ring-opening cyclization of N-tosylaziridines: access to functionalized benzoxacycles, Organic and Biomolecular Chemistry, 16, 5846-5858, 2018.

Courses offered in Integrated B.Sc.B.Ed. (Chemistry major)

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CD 101 | Chemistry-I | 3 | CD 102 | Chemistry-II | 3 |
| PD 101 | Physics-I | 4 | PD 102 | Physics-II | 3 |
| MD101 | Mathematics-I | 3 | MD 102 | Mathematics-II | 3 |
| CD 103 | Chemistry Lab-1 | 3 | CD 104 | Chemistry Lab-II | 3 |
| ED 101 | Education: An Evolutionary Perspective | 3 | ES 103 | Environmental Science | 4 |
| ED 101 | Communicative English (Language Proficiency) | 3 | ED 102 | Education and Development | 3 |
| ED 105 | Basics in Computer Applications | 3 | NS 106 | National Service Scheme | 2 |
| | | | CD108 | Chemistry Laboratory (non-major) | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|---------------------------------|-----|-----------------|-------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CD 201 | Physical Chemistry-I | 3 | CD 202 | Physical Chemistry-II | 3 |
| CD 203 | Organic Chemistry-I | 3 | | | 3 |
| CD 205 | Inorganic Chemistry-I | 3 | CD 204 | Organic Chemistry-II | 3 |
| CD 209 | Chemistry Lab-III | 3 | | | 4 |
| MD 211 | Numerical methods and integrals | 3 | CD 206 | Inorganic Chemistry-II | 3 |
| PI 211 | Quantum Physics | 3 | | | 3 |
| ED 201 | Environmental Education | 3 | CD 208 | Chemistry Laboratory-IV | 3 |

| Fifth Semester | | | Sixth Semester | | |
|----------------|---------------------------------------|-----|-------------------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CD 301 | Physical Chemistry-III | 3 | CD 302 | Physical Chemistry-IV | 3 |
| CD303 | Organic Chemistry-III | 3 | CD 304 | Organic Chemistry-IV | 3 |
| CD 305 | Inorganic Chemistry-III | 3 | CD 306 | Principles of Spectroscopy | 3 |
| CD 309 | Quantum Chemistry | 3 | CD 308 | Inorganic Chemistry-IV | 3 |
| CD 311 | Chemistry Laboratory-V | 4 | CD 310 | Chemistry Laboratory-VI | 4 |
| ED 301 | Teaching Approaches and Strategies | 3 | ED 308 | Pedagogy A: Physical Science I | 3 |
| ED 302 | Classroom Organization and Management | 3 | ED 307 Or, ED 309 | Pedagogy B: Mathematics I Or, Pedagogy B: Bio Science I | 3 |
| | | | ED303 | School Education in NE India | 2 |

| Seventh Semester | | | Eighth Semester | | |
|-------------------------|---|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CD 401 | Principles of Inorganic Chemistry | 3 | CD 402 | Chemistry Laboratory-VIII | 4 |
| CD 407 | Principles of Organic Chemistry | 3 | ED405 | School Internship | 12 |
| ED408 | Pedagogy A: Physical Science II | 3 | CD 416 | History of Chemistry | 3 |
| ED 407 Or, ED 409 | Pedagogy B: Mathematics II Or, Pedagogy B: Bio Science II | 3 | | | |
| ED404 | Initial School Experience/ School Internship-I | 3 | | | |
| CD409 | Chemistry laboratory -VII | 3 | | | |

Courses offered in Integrated M.Sc. in Chemistry

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 101 | Chemistry-I | 3 | CI 102 | Chemistry-II | 3 |
| PI 101 | Physics-I | 3 | PI 102 | Physics-II | 3 |
| BI 101 | Biology-I | 3 | BI 102 | Biology-II | 3 |
| MI 101 | Mathematics-I | 3 | MI 102 | Mathematics-II | 3 |
| EG 101 | Communicative English (Language Proficiency) | 3 | ES 103 | Environmental Studies | 4 |
| CI 105 | Chemistry laboratory- I | 3 | CI 106 | Chemistry laboratory -II | 3 |

| | | | | | |
|--------|------------------------------------|---|--------|--|---|
| PI 197 | Physics laboratory | 3 | BI 107 | Biology Laboratory | 3 |
| CI 107 | Chemistry Laboratory (for Math) | 3 | CI 107 | Chemistry Laboratory (For Bio and Phys) | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|--------------------------------------|-----|-----------------|----------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 201 | Chemistry-III | 3 | CI 204 | Physical Chemistry-II | 3 |
| PI 201 | Physics-III | 3 | CI 206 | Organic Chemistry-II | 3 |
| MI 219 | Mathematics-III | 3 | CI 208 | Inorganic Chemistry-II | 3 |
| CI 203 | Physical Chemistry-I | 3 | CI 212 | Chemistry Laboratory-IV | 4 |
| CI 205 | Organic Chemistry-I | 3 | CI 214 | IT Skills for Chemists | 3 |
| CI 207 | Inorganic Chemistry-I | 3 | CI 216 | Basic Analytical Chemistry | 3 |
| CS 535 | Introduction to Scientific Computing | 3 | DM 101 | Disaster Management | 3 |
| CI 209 | Chemistry Laboratory -III | 3 | | | |
| NS 201 | NSS | 2 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|----------------------------|-----|----------------|----------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 301 | Physical Chemistry-III | 3 | CI 302 | Physical Chemistry-IV | 3 |
| CI 303 | Organic Chemistry-III | 3 | CI 304 | Organic Chemistry-IV | 3 |
| CI 305 | Inorganic Chemistry-III | 3 | CI 306 | Inorganic Chemistry-IV | 3 |
| CI 307 | Quantum Chemistry | 3 | CI 308 | Principles of Spectroscopy | 3 |
| CI 309 | Chemistry Laboratory-V | 4 | CI 310 | Chemistry Laboratory-VI | 4 |
| CI 311 | Green Methods in Chemistry | 3 | CI 312 | Polymer Chemistry | 3 |
| CI 313 | Industrial Chemistry | 3 | CI 314 | Seminar | 2 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|---|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 401 | Principles of Inorganic Chemistry | 3 | CI 406 | Organic Reactions and Mechanism | 3 |
| CI 403 | Chemical and Statistical Thermodynamics | 3 | CI 408 | Chemistry of Transition Elements | 3 |
| CI 407 | Principles of Organic Chemistry | 3 | CI 410 | Chemical Dynamics and Electrochemistry | 3 |
| CI 409 | Quantum Chemistry and Chemical Bonding-I | 3 | CI 414 | Quantum Chemistry and Chemical Bonding-II | 3 |
| CI 411 | Principles and Applications of Spectroscopy | 3 | CI 412 | Laboratory Course in Inorganic Chemistry | 6 |
| CI 405 | Laboratory Course in Organic Chemistry | 6 | CI 416 | History of Chemistry | 3 |

| Ninth Semester | | | Tenth Semester | | |
|----------------|---|-----|-------------------------|---------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 501 | Bio-Organic Chemistry | 3 | CI 506/508 / 528 | Elective I | 3 |
| CI 503 | Special Topics in Inorganic Chemistry | 3 | CI 512/514 /516/518/520 | Elective II | 3 |
| CI 519 | Physical Chemistry of Surface and Condensed Systems | 3 | CI 522/524 /526 | Elective III | 3 |
| CI 521 | Analytical Methods in Chemistry | 3 | CI 528 | Project Work* | 10 |
| CI 523 | Chemical Technology and Society | 3 | | | |
| CI525 | Organometallic Chemistry | 3 | | | |
| CI 505 | Laboratory Course in Physical Chemistry | 6 | | | |

Note: 1. CBCT-I to CBCT -VI are to be chosen from the list of CBCT courses given below

2. CBCT -VII to CBCT -IX are to be chosen from the general list of CBCT courses available for that particular semester.

| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
|-------------|--------------------------------------|-----|-------------|---------------------|-----|
| CS 535 | Introduction to Scientific Computing | 3 | CL 121 | Basic Chinese-I | 3 |
| EG 101 | Communicative English-I | 3 | CL 122 | Basic Chinese- II | 3 |
| EG 102 | Communicative English-II | 3 | FL 101 | Basic French-I | 3 |
| ES 102 | Elementary Environmental Science | 3 | FL 102 | Basic French-II | 3 |
| ES 542 | Laboratory Guidance and Safety | 3 | GL 101 | Basic German-I | 3 |
| SC 102 | Basic Sociology | 3 | GL 102 | Basic German-II | 3 |
| BM101 | Elementary Economics | 3 | DM 301 | Disaster Management | 3 |

| Elective I: Any one from the following group | | | Elective II: Any one from the following group | | |
|--|---|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CI 506 | Catalysis (Physical) | 3 | CI 512 | Chemistry of Materials | 3 |
| CI 528 | Special Topics in Inorganic Chemistry (Inorganic) | 3 | CI 514 | Biomolecular Chemistry | 3 |
| CI 508 | Methods in Organic Synthesis (Organic) | 3 | CI 516 | Computational Chemistry and Numerical Analysis | 3 |
| | | | CI 518 | Organic Solid States Chemistry | 3 |
| | | | CI 520 | Environmental and Green Chemistry | 3 |

| Elective III: Any one from the following group | | |
|--|---|-----|
| Course Code | Course Title | Cr. |
| CI 522 | Polymer Chemistry (Physical) | 3 |
| CI 524 | Heterocyclic Compounds and medicinal Applications (Organic) | 3 |
| CI 526 | Bio-inorganic Chemistry (Inorganic) | 3 |

Courses offered in M.Sc. in Chemistry

| First Semester | | | Second Semester | | |
|----------------|---|-----|------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CH 401 | Principles of Inorganic Chemistry | 3 | CH 406 | Organic Reactions and Mechanism | 3 |
| CH 403 | Chemical and Statistical Thermodynamics | 3 | CH 408 | Chemistry of Transition Elements | 3 |
| CH 407 | Principles of Organic Chemistry | 3 | CH 410 | Chemical Dynamics and Electrochemistry | 3 |
| CH 409 | Quantum Chemistry and Chemical Bonding-I | 3 | CH 414 | Quantum Chemistry and Chemical Bonding-II | 3 |
| CH 411 | Principles and Applications of Spectroscopy | 3 | CH 412 | Laboratory Course in Inorganic Chemistry | 6 |
| CH 405 | Laboratory Course in Organic Chemistry | 6 | CH 416 | History of Chemistry/ Chemistry in Everyday Life | 3 |
| Third Semester | | | Fourth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CH 501 | Bio-Organic Chemistry | 3 | CH 506/508/528 | Elective I | 3 |
| CH 503 | Special Topics in Inorganic Chemistry | 3 | CH 512/514/516/518/520 | Elective II | 3 |
| CH 519 | Physical Chemistry of Surface and Condensed Systems | 3 | CH 522/524/526 | Elective III | 3 |
| CH 521 | Analytical Methods in Chemistry | 3 | CH 528 | Project Work* | 10 |
| CH 523 | Chemical Technology and Society | 3 | | | |
| CH 525 | Organometallic Chemistry | 3 | | | |
| CH 505 | Laboratory Course in Physical Chemistry | 6 | | | |

| Elective I: Any one from the following group | | | Elective II: Any one from the following group | | |
|--|---|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CH 506 | Catalysis (Physical) | 3 | CH 512 | Chemistry of Materials | 3 |
| CH 528 | Special Topics in Inorganic Chemistry (Inorganic) | 3 | CH 514 | Biomolecular Chemistry | 3 |
| CH 508 | Methods in Organic Synthesis (Organic) | 3 | CH 516 | Computational Chemistry and Numerical Analysis | 3 |
| | | | CH 518 | Organic Solid States Chemistry | 3 |
| | | | CH 520 | Environmental and Green Chemistry | 3 |

| Elective III: Any one from the following group | | |
|--|---|-----|
| Course Code | Course Title | Cr. |
| CH 522 | Polymer Chemistry (Physical) | 3 |
| CH 524 | Heterocyclic Compounds and Medicinal Applications (Organic) | 3 |
| CH 526 | Bio-inorganic Chemistry (Inorganic) | 3 |

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

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, Geomorphology, Climate Atmospheric Processes, Vulnerability and Adaption, Hydrogeochemistry, Vermicomposting, Pollution Remediation, Biodiversity Conservation and Atmospheric System Modeling.

The Department is a recipient of grant under UGC-SAP and DST-FIST.

Programmes offered

1. M. Sc. in Environmental Science
2. Ph. D.
3. PG Diploma in Environment and Disaster Management (through CODL)

Faculty and Areas of Interest

| Professors | |
|--|--|
| Kali Prasad Sarma,* Ph.D. (NEHU) | <i>Water and Soil Pollution, Hydro-geochemistry& Remediation of Toxic Substances</i> |
| Raza RafiqulHoque,* Ph.D. (JNU) | <i>Air Pollution & Environmental Monitoring and Assessment</i> |
| Apurba Kumar Das,* Ph.D. (JNU) | <i>Geomorphology& Regional Climate</i> |
| Associate Professors | |
| Ashalata Devi,* Ph.D. (NEHU)-HoD | <i>Forest Ecology,Ecosystem Dynamics, &Wildlife and Biodiversity Conservation</i> |
| Assistant Professors | |
| NirmaliGogoi,* Ph.D. (DU) | <i>Stress Physiology & Biochemistry</i> |
| Satya Sundar Bhattacharya,* Ph.D. (VB) | <i>Vermiculture, Plant Nutrition and Soil Fertility Management, Soil C management, Plant products & Nano fertilizers</i> |
| Sumi Handique, Ph.D. (TU) | <i>Geochemistry of River Basins & Hydrogeochemistry</i> |
| Amit Prakash,* Ph.D. (JNU) | <i>Air pollution Meteorology, Noise Pollution Monitoring and Modelling , Environmental System Modelling& Urban Climate</i> |
| NayanmoniGogoi, Ph.D. (IITG) | <i>Ecosystem functions, Geochemistry and Hydrochemistry, Geostatistics, Pollution Indexing, Nanobiotechnology & Wetland Productivity</i> |
| Santa Kalita, Ph.D. (GU) | <i>Entomology & Environmental Physiology</i> |
| PratibhaDeka, Ph.D. (TU) | <i>Environmental Pollution– Air, Water and Soil& Human– Environment Interactions</i> |

* Recognized Supervisor

LEGENDS:NEHU-North Eastern Hill University, JNU-Jawaharlal Nehru University, DU-Dibrugarh University, TU- Tezpur University, VB- VisvaBharatiSantiniketan, IITG-Indian Institute of Technology Guwahati, GU- GauhatiUniversity, 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, ICP-MS, HPLC, CHNS, 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. The department also has GIS laboratory and Plant experimental site/shed.

Research Activities

- No. of papers published in the year 2017-18: 45
- No. of ongoing research projects: 08
- No of current Ph.D. scholars: 37

Selected Publications

- Das, P., Barua, S., Sarkar, S., Chatterjee, S.K., Mukherjee, S., Goswami, L., Das, S., Das, N., Das, A., Sarma, K.P. and Kumar, M. Provenance, prevalence and health perspective of co-occurrences of arsenic, fluoride and uranium in the aquifers of the Brahmaputra River floodplain. *Chemosphere*. 194: 755-77, 2018.
- Bhuyan, P., Deka, P., Prakash, A. and Hoque, R.R. Chemical characterization and source apportionment of aerosol over mid Brahmaputra Valley, India. *Environmental Pollution* 234:997-1010, 2018.
- Borah, M., Devi, A. and Kumar, A. Diet and feeding ecology of the western hoolock gibbon (*Hoolockhoolock*) in a tropical forest fragment of Northeast India *Primates*. 59, 2018.
- Sarma, D., Baruah, K. K., Baruah, R., Gogoi, N., Bora, A., Chakravorty, S. and Karipot, A. Carbon dioxide, water vapour and energy fluxes over a semi-evergreen forest in Assam, Northeast India. *Journal of Earth System Science*, 127(7), 2018.
- Bhattacharya, S., Karak, N. and Bhattacharya, S.S. Mechanism of toxicity and transformation of silver nanoparticles: inclusive assessment in earthworm-microbe-soil-plant system. *Geoderma*. 314, 2018.

Courses offered in M. Sc. in Environmental Science

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| ES551 | Fundamentals of Environmental Science | 2 | ES556 | Solid Waste Management and Technology | 3 |
| ES552 | Statistical Methods and Environmental Application | 3 | ES557 | Climatology and Meteorology | 2 |
| ES553 | Ecology and Ecosystem Dynamics | 3 | ES558 | Environmental Biology | 3 |
| ES554 | Earth Processes and Natural Hazards | 3 | ES559 | Environmental Physics | 3 |
| ES555 | Environmental Chemistry and Toxicology | 3 | ES560 | GIS-Remote Sensing and application | 2 |
| - | <i>*Open elective (one course)</i> | 3 | ES572 | Natural Resource and Biodiversity Conservation | 3 |
| | | | ES576 | Environmental System Analysis | 3 |
| | | | - | <i>*Open elective (one course)</i> | 3 |
| | | | - | Departmental Elective (<i>one course of 2 credit to be chooses from offered courses</i>) | 2 |

| Third Semester | | | Fourth Semester | | |
|----------------|--|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| ES562 | Analytical Methods | 3 | ES563 | Environmental Impact Assessment | 2 |
| ES564 | Agriculture and Environmental Sustainability | 2 | ES569 | Energy and Environment | 2 |
| ES565 | Environmental Pollution and Management | 3 | ES550 | Project | 14 |
| ES566 | Soil Science | 3 | - | Departmental Elective (<i>one course of 2 credit to be chooses from offered courses</i>) | 2 |
| ES567 | Environmental Plant Physiology and Biochemistry | 3 | | | |
| ES568 | Hydrogeochemical Processes | 2 | | | |
| ES573 | Environmental Extension and Field Survey | 1 | | | |
| - | <i>*Open elective (one course)</i> | 3 | | | |
| - | Departmental Elective (<i>one course of 2 credit to be chooses from offered courses</i>) | 2 | | | |

* Students are to choose a total of 06 Credits of Open Elective courses offered by other departments, preferably to be finished within 3rd semester.

| Discipline Centric Elective Courses | | | Open Elective Courses | | |
|-------------------------------------|---|-----|-----------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| ES545 | Human Population, Social issues and the Environment | 2 | ES 541 | Contemporary Environmental Issues | 3 |
| ES546 | Environmental Biotechnology | 2 | ES 542 | Laboratory Guidance and Safety | 3 |
| ES547 | Agro-Forestry and Forest Management | 2 | ES 543 | Environmental Economics and Management | 3 |
| ES548 | Environmental Economics | 2 | ES 544 | Introductory Air Pollution | 3 |
| ES574 | Laboratory Safety | 2 | ES 577 | Indoor Air Pollution and Human Health | 3 |
| ES575 | Atmospheric Chemistry | 2 | ES 578 | Environmental Pollution | 3 |
| ES570 | Environmental Laws and Policies | 2 | ES 579 | Plant Diversity and Taxonomy | 3 |
| ES571 | Climate Change and Its Impacts | 2 | | | |

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



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. So far 23 batches of students have successfully completed their M.Sc. in Mathematics, and 5 batches of students have successfully completed their Integrated M. Sc. in Mathematics from the department. Besides this, 49 scholars have done their Ph.D. in Mathematics from the department. The Department carries out research in the areas of Number theory, Operator theory, Fuzzy topology, Finite element method, Algebraic graph theory, Algebra (Group Theory and Ring Theory), Computational fluid dynamics, Probability distributions, Coding Theory etc. The Department is currently supported by the UGC under its SAP (DRS-II) scheme and DST-FIST grant.

Programmes offered

1. Integrated B.Sc. B.Ed. in Mathematics
2. Integrated dual B.Sc. & M.Sc. in Mathematics
3. M.Sc. in Mathematics
4. Ph.D.

Faculty and Areas of Interest

| Professors | |
|-----------------------------------|--|
| Nayandeep Deka 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) | <i>High Energy Astrophysics, Relativity</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 Partition, 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> |
| DeepjyotiGoswami, Ph.D. (IITB) | <i>Finite Element Method</i> |
| Pankaj Kumar Das, Ph.D. (DU [^]) | <i>Coding Theory</i> |

****All the faculty members of the department are recognized supervisors**

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

Facilities

The Department has a computer laboratory established with financial assistance from the DST and UGC. Various Mathematical software is 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.

Research Activities

- No. of papers published in the year 2017-2018: 48
- No. of ongoing research projects: 02
- No of current Ph.D. scholars: 30

Selected Publications

- Baruah, N. D. and Begum, N. M. On Exact generating functions for the number of partitions into distinct parts, Int. Journal of Number Theory, 14 (2018), no. 7, 1995-2011.
- Basnet, D. K., Dutta, J. and Nath, R. K. On Generalized Non-commuting Graph of a Finite Ring, Algebra Colloquium, 25 (2018), no.1, 149- 160.
- Dutta S. and Biswas, S. Nonparametric estimation of $100(1-p)\%$ expected shortfall: $p \rightarrow 0$ as sample size is increased, Communications in Statistics-Simulation and Computation, 47 (2018), no. 2, 338-352.

Courses offered in Integrated B.Sc. B.Ed. in Mathematics

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PD 101 | Physics-I | 3 | PD 102 | Physics-II | 3 |
| CD 101 | Chemistry-I | 3 | PD 197 | Physics-Lab | 3 |
| CD 107 | Chemistry-Lab | 3 | CD 102 | Chemistry-II | 3 |
| ED 105 | Basics in Computer Applications | 3 | ED 102 | Education and Development | 3 |
| ED 101 | Education: An Evolutionary Perspective | 3 | MD 104 | Real Analysis-II | 3 |
| MD 103 | Foundation of Mathematics | 3 | MD 106 | Group Theory | 3 |
| MD 105 | Real Analysis-I | 3 | NS 102 | National Service Scheme | 2 |
| EG 110 | Communicative English | 3 | ES 103 | Environmental Studies | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|---------------------------------------|-----|-----------------|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MD 221 | Introductory Statistics & Probability | 3 | MD 218 | Introductory ODE & PDE | 4 |
| MD 223 | Calculus-I | 4 | MD 220 | Linear Algebra-I | 4 |
| PD 211 | Physics-III | 3 | MD 222 | Co-ordinate Geometry | 4 |
| CD 201 | Chemistry-III | 3 | MD 224 | Numerical Methods and Boolean Algebra | 4 |
| ED 201 | Environmental Education | 3 | ED 203 | Contemporary Issues in Education | 3 |
| ED 202 | Learner and Learning | 3 | ED 204 | Assessment and Evaluation | 3 |
| DM 101 | Disaster Management | 3 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|---|-----|-------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MD 311 | Calculus-II | 4 | MD 318 | Introductory Topology | 4 |
| MD 313 | Programming Algorithm and Mathematical Software | 4 | MD 314 | Elementary Number Theory | 4 |
| MD 315 | Statics and Dynamics | 4 | MD 316 | Introduction to Optimization | 4 |
| MD 317 | Elementary Complex Analysis | 4 | ED 308 | Pedagogy A: Physical Science-I | 3 |
| ED 301 | Teaching Approaches and Strategies | 3 | ED 307/ ED 309 | Pedagogy B: Mathematics I/ Pedagogy B: Biological Science I | 3 |
| ED 302 | Classroom Organization and Management | 3 | ED 303 | School Education in North East India | 2 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|--|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MD 425 | Combinatorics | 4 | MD 422 | Elementary Coding and Information Theory | 4 |
| MD 414 | Computer Programming+ | 4 | ED 405 | School Internship | 12 |
| MD 421 | Computer Lab | 2 | | | |
| ED 408 | Pedagogy A: Physical Science-II | 3 | | | |
| ED 407/409 | Pedagogy B: Mathematics II/ Pedagogy B: Biological Science II | 3 | | | |
| ED 404 | Initial School Experience/ School Internship-I | 3 | | | |
| | Open Elective I# | 3 | | | |

Courses offered in Integrated dual B.Sc. & M.Sc. in Mathematics

| First Semester | | | Second Semester | | |
|----------------|---------------------------|-----|-----------------|-----------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 101 | Physics-I | 3 | PI 102 | Physics-II | 3 |
| CI 101 | Chemistry-I | 3 | PI 197 | Physics-Lab | 3 |
| CI 107 | Chemistry-Lab | 3 | CI 102 | Chemistry-II | 3 |
| BI 101 | Biology-I | 3 | BI 107 | Biology-Lab | 3 |
| MI 103 | Foundation of Mathematics | 3 | MI 104 | Real Analysis-II | 3 |
| MI 105 | Real Analysis-I | 3 | MI 106 | Group Theory | 3 |
| EG 110 | Communicative English | 3 | ES 103 | Environmental Studies | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|---------------------------------------|-----|-----------------|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MI 221 | Introductory Statistics & Probability | 3 | MI 218 | Introductory ODE & PDE | 4 |
| MI 223 | Calculus-I | 4 | MI 220 | Linear Algebra-I | 4 |
| MI 225 | Combinatorics | 4 | MI 222 | Co-ordinate Geometry | 4 |
| PI 201 | Physics-III | 3 | MI 224 | Numerical Methods and Boolean Algebra | 4 |
| CI 201 | Chemistry-III | 3 | MI 226 | Introductory Topology | 4 |
| CS 535 | Introduction to Scientific computing | 3 | DM 101 | Disaster Management | 3 |
| NS 102 | National Service Scheme | 2 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|--|-----|----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MI 311 | Calculus-II | 4 | MI 312 | Ring Theory | 3 |
| MI 313 | Programming, Algorithm and Mathematical Software | 4 | MI 314 | Elementary Number Theory | 4 |
| MI 315 | Statics and Dynamics | 4 | MI 316 | Introduction to Optimization | 4 |
| MI 317 | Elementary Complex Analysis | 4 | MI 318 | Elementary Integral Transforms and Special Functions | 4 |
| MI 319 | Graph Theory | 4 | MI 322 | Seminar | 4 |
| | | | MI 320 | Elementary Coding and Information Theory | 4 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|----------------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MI 412 | Abstract Algebra | 4 | MI 408 | Complex Analysis | 4 |
| MI 417 | Linear Algebra-II | 4 | MI 418 | Theory of Ordinary Differential Equations | 4 |
| MI 413 | Real Analysis-III | 4 | MI 419 | Topology | 4 |
| MI 414 | Computer Programming+ | 4 | MI 416 | Numerical Analysis+ | 4 |
| MI 415 | Lebesgue Measure and Integration | 4 | MI 424 | Computer Lab | 2 |
| MI 421 | Computer Lab | 2 | | Open Elective-I# | 3 |

| Ninth Semester | | | Tenth Semester | | |
|----------------|--|-----|----------------|----------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MI 507 | Partial Differential Equations | 4 | MI 599 | Probability Theory | 4 |
| MI 509 | Classical Mechanics | 4 | MI 508 | Mathematical Methods | 4 |
| MI 510 | Functional Analysis | 4 | | DSE-II | 4 |
| | DSE-I | 4 | | DSE-III | 4 |
| | Open Elective II# | 3 | MI 517 | Project | 8 |
| MI 517 | Project (to be continued to 10 th semester) | 0 | | | |

+ Course for which there is a separate practical unit assigned as Computer Laboratory

Note: #List to be notified by the CoE from time to time.

| Department Specific Electives (DSE) to be offered from the following courses | | | | | |
|--|---|-----|-------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MI 538 | Theory of Partial Differential Equation | 4 | MI 568 | Theory of Distribution and Sobolev Spaces | 4 |
| MI 539 | Advanced Numerical Analysis | 4 | MI 569 | Coding Theory-I | 4 |
| MI 541 | Fluid Mechanics | 4 | MI 570 | Coding Theory-II | 4 |
| MI 543 | Relativity | 4 | MI 572 | Operator Theory -II | 4 |
| MI 544 | Operations Research | 4 | MI 573 | Analytic Number Theory | 4 |
| MI 545 | Elliptic Curves | 4 | MI 574 | Galois Theory | 4 |
| MI 546 | Algebraic Number Theory | 4 | MI 581 | Stochastic Processes -II | 4 |
| MI 547 | Numerical Linear Algebra | 4 | MI 585 | Fuzzy Sets and Applications-II | 4 |
| MI 551 | Introduction to Category Theory | 4 | MI 587 | Finite Element Method | 4 |
| MI 552 | Operator Theory-I | 4 | MI 588 | Applied Matrix Theory | 4 |
| MI 554 | Commutative Algebra | 4 | MI 591 | Computational Fluid Dynamics | 4 |
| MI 558 | General Theory of Relativity | 4 | MI 594 | Advanced Topology-I | 4 |
| MI 561 | Stochastic processes-I | 4 | MI 595 | Numerical Solutions of ODE | 4 |
| MI 565 | Fuzzy Sets and Applications-I | 4 | MI 596 | Advanced Topology-II | 4 |
| MI 566 | Fourier Analysis | 4 | MI 597 | Numerical Solutions of PDE | 4 |
| MI 567 | Continuum Mechanics | 4 | MI 598 | Algebraic Geometry | 4 |

Courses offered in M. Sc. in Mathematics

| First Semester | | | Second Semester | | |
|----------------|----------------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 401 | Abstract Algebra | 4 | MS 406 | Complex Analysis | 4 |
| MS 403 | Linear Algebra | 4 | MS 414 | Theory of Ordinary Differential Equations | 4 |
| MS 405 | Real Analysis | 4 | MS 408 | Topology | 4 |
| MS 411 | Computer Programming+ | 4 | MS 416 | Numerical Analysis+ | 4 |
| MS 425 | Lebesgue Measure and Integration | 4 | MS 424 | Computer Lab | 2 |
| MS 421 | Computer Lab | 2 | | Open Elective-I# | 3 |

| Third Semester | | | Fourth Semester | | |
|----------------|--|-----|-----------------|---------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 507 | Partial Differential Equations | 4 | MS 599 | Probability Theory | 4 |
| MS 501 | Classical Mechanics | 4 | MS 508 | Mathematical Methods | 4 |
| MS 510 | Functional Analysis | 4 | | DSE-II | 4 |
| | DSE-I | 4 | | DSE-III | 4 |
| | Open Elective II# | 3 | MS 517 | Project(continuation of semester III) | 8 |
| MS 517 | Project (to be continued to semester IV) | 0 | | | |

List to be notified by the CoE from time to time

+Course for which there is a separate practical unit assigned as Computer Laboratory

| Department Specific Electives (DSE) to be offered from the following units | | | | | |
|--|---|-----|-------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| MS 538 | Theory of Partial Differential Equation | 4 | MS 568 | Theory of Distribution and Sobolev Spaces | 4 |
| MS 539 | Advanced Numerical Analysis | 4 | MS 569 | Coding Theory-I | 4 |
| MS 541 | Fluid Mechanics | 4 | MS 570 | Coding Theory-II | 4 |
| MS 543 | Relativity | 4 | MS 572 | Operator Theory -II | 4 |
| MS 544 | Operations Research | 4 | MS 573 | Analytic Number Theory | 4 |
| MS 545 | Elliptic Curves | 4 | MS 574 | Galois Theory | 4 |
| MS 546 | Algebraic Number Theory | 4 | MS 581 | Stochastic Processes -II | 4 |
| MS 547 | Numerical Linear Algebra | 4 | MS 585 | Fuzzy Sets and Applications-II | 4 |
| MS 549 | Graph Theory | 4 | MS 587 | Finite Element Method | 4 |
| MS 551 | Introduction to Category Theory | 4 | MS 588 | Applied Matrix Theory | 4 |
| MS 552 | Operator Theory-I | 4 | MS 591 | Computational Fluid Dynamics | 4 |
| MS 554 | Commutative Algebra | 4 | MS 594 | Advanced Topology-I | 4 |
| MS 558 | General Theory of Relativity | 4 | MS 595 | Numerical Solutions of ODE | 4 |
| MS 561 | Stochastic processes-I | 4 | MS 596 | Advanced Topology-II | 4 |
| MS 565 | Fuzzy Sets and Applications-I | 4 | MS 597 | Numerical Solutions of PDE | 4 |
| MS 566 | Fourier Analysis | 4 | MS 598 | Algebraic Geometry | 4 |
| MS 567 | Continuum Mechanics | 4 | | | |

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

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 and is supported by UGC-SAP (DRS-II) and DST-FIST. Department also houses ONGC-CPBT, which is a part of successful industry academia collaboration.

The current research activities in the Department are in diverse areas of biotechnology which includes human diseases/disorders, microbial and petroleum biotechnology, snake venom biochemistry, enzymology immunology, immune genetics and evolutionary genetics, computational biology, nano biotechnology, plant microbe interactions, cancer genetics and chemoprevention and virology.

Programmes offered

1. Integrated dual B.Sc. & M. Sc. in Life Science
2. M. Sc. in Molecular Biology and Biotechnology
3. Ph. D.

Faculty and Areas of Interest

| Professors | |
|---|---|
| Bolin Kumar Konwar,* Ph.D. (IC) | <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), Dean, R &D | <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> |
| Suvendra Kumar Ray,* Ph. D. (CCMB) | <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)- HoD | <i>Cancer Genetics and Chemoprevention</i> |
| Associate Professor | |
| Robin Doley,* Ph.D. (TU) | <i>Anti-haemostatic Proteins from Snake Venom and Hematophagous 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. Ponnampaluri,*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> |
| Mattaparthi V. Satish Kumar,* Ph.D. (IITG) | <i>Computational Biotechnology and Bioinformatics</i> |
| Jyoti Prasad Saikia, Ph. D (TU)- Ad-hoc | <i>Plant Biotechnology</i> |
| Aditya Kumar, Ph.D. (IISc) | <i>Computational Biophysics, Genomics and Bioinformatics</i> |
| Pankaj Barah, Ph.D. (NUST) | <i>Evolutionary Genomics , Systems Biology , Big-data in Biology , Structural Systems Biology , Systems Medicine</i> |

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

LEGENDS: *IC*-Imperial College London, *DU*-Dibrugarh University, *BU*-Burdwan University West Bengal, *R &D*- Research and Development, *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, *UoH*-University of Hyderabad, *IISc*-Indian Institute of Science Bangalore, *IACS*-Indian Association for the Cultivation of Science Kolkata, *JU*-Jadavpur University Kolkata, *VB*-VisvaBharati Santiniketan, *IITG*-Indian Institute of Technology Guwahati, *NUST*- Norwegian University of Science and Technology Norway, *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 2017-2018 :73
- No. of ongoing research projects: 42
- No of current Ph.D. Scholars: 72

Selected Publications

- Panigrahi, G. K., Ramteke, A., Birks, D., Ali, A.H. E., Venkataraman, S., Agarwal, C., Vibhaka, R., Miller, L. D., Agarwal, R., Zakaria Y. AbdElmageed., and Deep, G. Exosomal microRNA profiling to identify hypoxia-related biomarkers in prostate cancer. *Oncotarget*, 2018, Vol. 9, (No. 17), pp: 13894-13910.
- Yanik, M., Ponnampalani S.P.G., Wimmer, T., Trimborn, L., Müller, C., Gambert, I., Ginsberg, J., Janise A, Domicke, J., Wende, W., Lorenz, B., Stieger, K. Development of Reporter System to Explore MMEJ in the Context of Replacing Large Genomic Fragments. *Mol Ther Nucleic Acids*. 2018 Jun 1;11:407-415. PMID: 29858075.
- Das, P. P., & Medhi, T. (2018). Isolation and molecular identification of four culturable endophytes from TV22 clone of *Camellia sinensis* (L.). *Annals of Plant Sciences*, 7(4), 2119-2125.
- Mahanta, A., Ganguli, P., Barah, P., Sarkar, R. R., Sarmah, N., Phukan, S., Bora, M., Baruah, S. (2018). Integrative Approaches to Understand the Mastery in Manipulation of Host Cytokine Networks by Protozoan Parasites with Emphasis on Plasmodium and Leishmania Species. *Front. Immunol.*, 23 February 2018 | <https://doi.org/10.3389/fimmu.2018.00296>.
- Kalita, B., Patra, A., Das, A., Mukherjee, A. K. (2018) Proteomic analysis and immuno-profiling of eastern India Russell's viper (*Daboia russelii*) venom: Correlation between RVV composition and clinical manifestations post RV bite. *Journal of Proteome Research* (In press).

Courses offered in Integrated dual B.Sc & M.Sc. in Life Science

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|-------------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LI 101 | Biology Major I (Biodiversity (Microbes, Algae, Fungi and Archegoniate)) | 3 | LI 102 | Biology Major II (Animal Diversity) | 3 |
| LI 103 | Biology Major I Lab | 3 | LI 104 | Biology Major II Lab | 3 |
| PI 101 | Physics I | 3 | PI 102 | Physics II | 3 |
| CI 101 | Chemistry I | 3 | CI 102 | Chemistry II | 3 |
| MI 101 | Mathematics I | 3 | MI 102 | Mathematics II | 3 |
| PI 197 | Physics I Lab | 3 | CI 106 | Chemistry I Lab | 3 |
| EG 101 | Communicative English | 3 | ES 103 | Environmental Studies | 4 |
| Non-Biology | | | LI 106 | Biology II (GE for Non-Bio) | 3 |
| LI 105 | Biology I | 3 | LI 107 | Biology I Lab (for Chem, Math) | 3 |
| LI 107 | Biology I Lab | 3 | | | |
| Third Semester | | | Forth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LI 201 | Plant Ecology and Taxonomy | 3 | LI 202 | Genetics and Evolutionary Biology | 3 |
| LI 203 | Comparative anatomy of vertebrates | 3 | LI 204 | Microbiology | 3 |
| LI 205 | Plant Anatomy and Embryology | 3 | LI 206 | Cell Biology-I | 3 |
| LI 207 | Biology Major III Lab (Anatomy: Plant and animal) | 3 | LI 208 | Biochemistry I | 3 |
| LI 209 | Introduction to computing | 3 | LI 210 | Biology Lab-IV (Biochemistry) | 3 |
| PI 201 | Physics III | 3 | LI 212 | Biology lab V (Cell Biology) | 3 |
| CI 201 | Chemistry III | 3 | LI 214 | Seminar | 1 |
| NS 201 | NSS | 2 | DM 101 | Disaster Management | 3 |

| Fifth Semester | | | Sixth Semester | | |
|----------------|------------------------------------|-----|----------------|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LI 301 | Plant Physiology | 3 | LI 302 | Immunology I | 3 |
| LI 303 | Animal Physiology | 3 | LI 304 | Biocomputing & Biostatistics | 3 |
| LI 305 | Basic Bioinformatics | 3 | LI 306 | Developmental Biology | 3 |
| LI 307 | Molecular Biology | 3 | LI 308 | Analytical Techniques | 4 |
| LI 309 | Biology lab VI (Physiology) | 3 | LI 310 | Mini Project | 8 |
| LI 311 | Biology labVII (Molecular Biology) | 3 | | | |
| LI 313 | Public Health and Hygiene | 3 | | | |

| Seventh Semester | | | Eighth Semester | | |
|------------------|---------------------------------------|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LI 401 | Biochemistry - II | 3 | LI 402 | Biophysics & Structural Biology | 3 |
| LI 403 | Molecular Genetics | 3 | LI 404 | Genetic Engineering | 3 |
| LI 405 | Immunology II | 3 | LI 406 | Applied Microbiology and Bioprocess engineering | 3 |
| LI 407 | Biological Database Management System | 3 | LI 408 | Computational Biology | 3 |
| LI 409 | Cell Biology II | 3 | LI 410 | Cell & Tissue culture | 3 |
| LI 411 | Biology Lab VIII (Biochemistry) | 3 | LI 412 | Biology Lab X (Genetic Engineering) | 3 |
| LI 413 | Biology Lab -IX (Immunology) | 3 | LI 414 | Biology LabXI (Applied Microbiology) | 3 |

| Ninth Semester | | | Tenth Semester | | |
|----------------|-----------------------------------|-----|---------------------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| LI 501 | Genomics & Proteomics | 3 | LI 502 | Project - I (Dissertation/Project) | 15 |
| LI 503 | Bioinformaticsoftwares& algorithm | 3 | Elective(s) for Option I (DSE) | | |
| LI 505 | Lab on Advanced programming | 2 | LI522 | Evolutionary Biology | 3 |
| LI 507 | Biosafety and IPR | 2 | LI524 | Ethnomedicine& Herbal Technology | 3 |
| Option I | | | LI526 | Plant metabolism & secondary metabolites | 3 |
| LI 509 | Plant Biotechnology | 3 | LI528 | System Biology | 3 |
| LI 511 | Economic Botany | 3 | Elective(s) for Option II (DSE) | | |
| LI 513 | Biology Lab XII (Plant Sciences) | 4 | LI530 | Wild life & Animal Behavior | 3 |
| Option II | | | LI532 | Fish Biology | 3 |
| LI 515 | Animal Biotechnology | 3 | LI534 | Cancer Biology | 3 |
| LI 517 | Economic Zoology | 3 | LI536 | Pyschoneuroimmunology | 3 |
| LI 519 | Biology Lab XII (Animal Science) | 4 | LI538 | Insect vector and Diseases | 3 |
| | | | LI540 | Immunotechnology | 3 |
| | | | LI542 | Computer aided drug designing | 3 |

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

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BT 441 | Biochemistry | 3 | BT 440 | Molecular Biology | 3 |
| BT 443 | Cell Biology | 3 | BT 442 | Immunology | 3 |
| BT 445 | Microbiology | 3 | BT 444 | Developmental Biology | 3 |
| BT 447 | Genetics | 3 | BT 446 | Bioinformatics | 2 |
| BT 449 | Basics of Mathematics and Statistics | 2 | BT 448 | Genomics and Proteomics | 3 |
| BT 451 | Basics of Chemistry and Physics | 2 | BT 450 | Lab-III Molecular Biology | 3 |
| BT 453 | Lab-I Biochemistry and Analytical Techniques | 3 | BT 452 | Lab-IV Immunology | 3 |
| BT 455 | Lab-II Microbiology | 2 | BT 454 | Seminar | 1 |
| | Total | | | | |

| Third Semester | | | Fourth Semester | | |
|-------------------|--|-----|---|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| BT 457 | Genetic Engineering | 3 | BT 456/ BT 458/ BT 460/ BT 462 | Elective II Evolutionary genomics/ Nanobiotechnology/ Computation biology/ Environmental Biotechnology | 3 |
| BT 459 | Molecular Diagnostics | 3 | BT 464 | Project | 20 |
| BT 461 | Bioprocess Engineering and Technology | 3 | | | |
| BT 463/ BT 467 | Elective-I Plant and Animal Biotechnology /Microbial Biotechnology | 3 | | | |
| BT 469 | Intellectual Property Rights, Biosafety and Bioethics | 3 | | | |
| BT 471 | Lab-V Genetic Engineering | 3 | | | |
| BT 473 | Lab-VI Bioprocess Engineering and Technology | 2 | | | |
| BT 475 | Project proposal presentation | 1 | | | |

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

PHYSICS
(Year of Establishment: 1998)

Department of Physics was established in 1998. It offers studies in various fields of physics leading to postgraduate and doctoral degree. The faculty members of the department are engaged in various areas of physics such as condensed matter physics, photonics, high energy physics, microwaves, plasma physics, astrophysics, neutrino physics and nanoscience & technology. The Department has collaboration with 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 also supported by UGC-SAP, DST-FIST and ISRO. The department provides a conducive and rigorous research environment.

Programmes offered

1. Integrated B.Sc. B.Ed. in Physics
2. Integrated dual B.Sc. & M. Sc. in Physics
3. M. Sc. in Physics
4. Ph. D.

Faculty and Areas of Interest

| Professors | |
|--|---|
| 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)-HoD | <i>Dusty Plasma Physics, Laser-Plasma Interaction</i> |
| Pritam Deb,* Ph.D. (JU) | <i>Nanoscience and Nano Technology, Physics of Materials</i> |
| Associate Professors | |
| Gazi Ameen Ahmed,* Ph.D. (GU) | <i>Laser Physics, Optoelectronics</i> |
| Dambarudhar Mohanta,* Ph.D. (TU) | <i>Condensed Matter Physics, Nanoscience</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, Physics Beyond Standard Model, Neutrino Physics, BAU, Dark Matter</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> |
| Rupjyoti Gogoi,* Ph.D. (GU) | <i>Astrophysics</i> |
| Shyamal Kumar Das,* Ph.D. (IISc) | <i>Material Science</i> |
| Ritupan Sarmah,* Ph.D. (IISc) | <i>Computational Material Science</i> |
| Moon Moon Devi,* Ph.D. (TIFR) | <i>Experimental High Energy and Astro-particle Physics, Neutrino Physics UHE Cosmic Rays and Extensive Air Showers Detector Instrumentation and Data Acquisition</i> |
| DST Inspire Faculty | |
| Arup Jyoti Choudhury, Ph.D. (GU) | <i>Low Temperature Plasma Processing</i> |

Recognized Supervisor # Recognized Co-supervisor

LEGENDS: *IITK*-Indian Institute of Technology Kanpur, *GU*-Gauhati University, *DU*[^]-Delhi University, *JU*-Jadavpur University West Bengal, *TU*-Tezpur University, *DU*-Dibrugarh University, *GU*[^]-Gorakhpur University Uttar Pradesh, *IISc*-Indian Institute of Science Bangalore, *TIFR*- Tata Institute of Fundamental Research Mumbai, **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, 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. The department also offers its facilities to the students of other institutes and other departments within the University.

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

Research Activities

- Number of papers published in the year 2018 : 65
- Number. of ongoing research projects: 19
- Number of current Ph.D. scholars: 60

Selected Publications

- Rituraj Dutta, A. Kumar, Effect of IL incorporation on ionic transport in PVdF-HFP based polymer electrolyte nanocomposite doped with NiBTC-Metal-Organic Framework, *Journal of Solid State Electrochemistry*, 22 (9) 2945-2958 (2018).
- I. Hussain, A. J. Bora, D. Sarma, K. U. Ahmad, P. Nath, Design of a Smartphone Platform Compact Optical System Operational Both in Visible and Near Infrared Spectral Regime, *IEEE Sensors Journal*, 18(2), 4933-4939 (2018).

Courses offered in Integrated B.Sc. B.Ed. in Physics

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|---------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PD 101 | Physics-I | 3 | PD 102 | Physics-II | 3 |
| CD 101 | Chemistry-I | 3 | CD 102 | Chemistry-II | 3 |
| MD101 | Mathematics-I | 3 | MD 102 | Mathematics-II | 3 |
| PD 197 | Physics Lab-1 | 3 | PD 198 | Physics Lab-II | 3 |
| ED 106 | Education: An Evolutionary Perspective | 3 | CD 107 | Chemistry Laboratory | 3 |
| ED 104 | Communicative English (Language Proficiency) | 3 | ES 103 | Environmental Studies | 4 |
| ED 105 | Basics in Computer Applications | 3 | ED 102 | Education and Development | 3 |
| | | | NS 106 | National Service Scheme | 2 |

| Third Semester | | | Fourth Semester | | |
|----------------|-------------------------|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PD 203 | Classical Mechanics | 3 | PD 205 | Electromagnetism | 3 |
| PD 301 | Mathematical Physics-I | 3 | PD 214 | Electronics | 3 |
| CD 201 | Chemistry-III | 3 | PD 218 | Modern Physics | 3 |
| ED 201 | Environmental Education | 3 | PD 216 | Thermodynamics and Statistical Physics | 3 |
| ED 202 | Learner and Learning | 3 | ED 203 | Contemporary Issues in Education | 3 |
| MD219 | Mathematics-III | 3 | ED 204 | Assessment and Evaluation | 3 |
| PD 297 | Physics Lab-III | 4 | PD 298 | Physics Lab-IV | 4 |

| | | | | | |
|--------|-----------------------------|---|--|--|--|
| PD 201 | Physics III (for non-major) | 3 | | | |
| | Open Elective-I | 3 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|---------------------------------------|-----|------------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PD 303 | Physical and Geometrical Optics | 3 | PD 307 | Basic Material Science | 3 |
| PD 202 | Introductory QM | 3 | PD 317 | Basic Computation Techniques | 3 |
| PD 315 | Mathematical Physics II | 3 | PD 311 | Waves and Acoustics | 3 |
| PD 309 | Analog Electronics and Communications | 3 | ED 308 | Pedagogy A: Physical Science I | 3 |
| PD 204 | Atomic and Nuclear Physics | 4 | ED 307 or ED 309 | Pedagogy B: Mathematics I or Pedagogy B: Bio Science I | 3 |
| PD 399 | Physics Lab-V | 3 | ED 303 | School Education in NE India | 2 |
| ED 301 | Teaching Approaches and Strategies | 4 | PD 300 | Physics Lab-VI | 4 |
| ED 302 | Classroom Organization and Management | 3 | | Elective I | 3 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|--|-----|-----------------|---------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| ED 408 | Pedagogy A: Physical Science II | 3 | PD 314 | Measurement Physics | 3 |
| ED 407 or ED 409 | Pedagogy B: Mathematics II or Pedagogy B: Bio Science II | 3 | ED 405 | School Internship | 15 |
| ED 404 | Initial School Experience/School Internship-I | 3 | | | |
| PD 308 | Laser Physics | 3 | | | |
| PD 400 | Laboratory-VII | 4 | | | |
| | Open Elective-II | 3 | | | |

Courses offered in Integrated dual B.Sc. & M. Sc. in Physics

| First Semester | | | Second Semester | | |
|----------------|---------------|-----|-----------------|----------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 101 | Physics-I | 3 | PI 102 | Physics-II | 3 |
| CI 101 | Chemistry-I | 3 | CI 102 | Chemistry-II | 3 |
| MI 101 | Mathematics-I | 3 | BI 102 | Biology-II | 3 |
| BI 101 | Biology-I | 3 | MI 102 | Mathematics-II | 3 |

| | | | | | |
|--------|-----------------------|---|--------|-----------------------|---|
| PI 197 | Physics Lab -I | 3 | PI 198 | Physics Lab-II | 3 |
| BI 107 | Biology Laboratory | 3 | CI 105 | Chemistry Lab | 3 |
| EG 110 | Communicative English | 3 | ES 103 | Environmental Studies | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|--------------------------------------|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 203 | Classical Mechanics | 3 | PI 205 | Electromagnetism | 3 |
| PI 217 | Mathematical Physics-I | 3 | PI 214 | Electronics | 4 |
| CI 201 | Chemistry III | 3 | PI 325 | Thermodynamics and Statistical Physics | 3 |
| MI 201 | Mathematics III | 3 | PI 218 | Modern Physics | 3 |
| PI 297 | Physics Lab-III | 4 | PI 298 | Physics Lab-IV | 4 |
| NS 106 | NSS | 2 | | Elective I | 3 |
| CS 535 | Introduction to Scientific Computing | 3 | DM 101 | Disaster Management | 3 |
| PI 201 | Physics III (for Non-major) | 3 | | | |

| Fifth Semester | | | Sixth Semester | | |
|----------------|---------------------------------------|-----|----------------|------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 303 | Physical and Geometrical Optics | 3 | PI 307 | Basic Material Science | 3 |
| PI 202 | Introductory QM | 3 | PI 317 | Basic Computation Techniques | 3 |
| PI 315 | Mathematical Physics II | 3 | PI 314 | Measurement Physics | 3 |
| PI 309 | Analog Electronics and communications | 3 | | Elective II | 3 |
| PI 204 | Atomic and Nuclear Physics | 3 | PI 311 | Waves and Acoustics | 3 |
| PI 308 | Laser Physics | 3 | | Open Elective | 3 |
| PI 399 | Physics Lab-V | 4 | PI 300 | Project cum Physics Lab-VI | 4 |

| Seventh Semester | | | Eighth Semester | | |
|------------------|---|-----|-----------------|--------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 403 | Electromagnetic Theory I | 3 | PI 552 | Quantum Mechanics-II | 3 |
| PI 413 | Advanced Classical Mechanics | 3 | PI 310 | Statistical Physics | 3 |
| PI 414 | Quantum Mechanics -I | 3 | PI 551 | Electromagnetic Theory II | 3 |
| PI 416 | Condensed Matter Physics and Material Science | 3 | PI 417 | Advanced Mathematical Physics | 3 |
| PI 499 | Physics and Computational Lab | 4 | PI 302 | Analog and Digital Electronics | 4 |
| PI 405 | Semiconductor Devices | 3 | PI 450 | Seminar | 1 |
| PI 400 | Physics Lab-VII | 4 | PI 498 | Physics Lab-VIII | 4 |
| Ninth Semester | | | Tenth Semester | | |
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 559 | Project-1 | 6 | PI 500 | Project-II | 10 |
| PI 402 | Nuclear and Particle Physics | 3 | | Elective III | 3 |
| PI 553 | Atomic and Molecular Spectroscopy | 3 | | Elective IV | 3 |
| | Elective I | 3 | | Open Elective | 3 |
| | Elective II | 3 | | | |
| | Open Elective | 3 | | | |

| Elective Courses offered by the Department in Semester IX and X | | | | | |
|---|---|-----|-------------|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PI 412 | Plasma and Astrophysics | 3 | PI 518 | General Theory of Relativity | 3 |
| PI 501 | Quantum Field Theory | 3 | PI 519 | Surface Science | 3 |
| PI 502 | Quantum Electrodynamics | 3 | PI 520 | Nanostructures | 3 |
| PI 505 | Basic Astronomy and Astrophysics | 3 | PI 521 | Fundamentals of Plasma Physics | 3 |
| PI 506 | Introduction to Cosmology | 3 | PI 524 | Plasma Generation and Application | 3 |
| PI 507 | Digital Signal Processing | 3 | PI 525 | Non-linear Plasma Physics | 3 |
| PI 508 | Digital Communication Systems | 3 | PI 546 | Fourier Optics and Holography | 3 |
| PI 509 | Fiber Optics and Optoelectronics | 3 | PI 554 | Soft Condensed Matter Physics | 3 |
| PI 510 | Advanced Material Science | 3 | PI 555 | Particle Physics - I | 3 |
| PI 511 | Superconductivity and Critical Phenomena | 3 | PI 556 | Particle Physics - II | 3 |
| PI 513 | Physics of Thin Films | 3 | PI 557 | Photonics | 3 |
| PI 514 | Physics of Solid State Devices | 3 | PI 558 | Quantum Electronics | 3 |
| PI 515 | High Energy and Extragalactic Astrophysics | 3 | PI 559 | Nanophotonics | 3 |
| PI 516 | Microprocessors and Digital Signal Processing Based Systems | 3 | PI 560 | Nanobiophysics | 3 |
| PI 517 | Microwave Systems and Antenna Propagation | 3 | PI 561 | Nanomagnetism | 3 |

Courses offered in M. Sc. in Physics

| First Semester | | | Second Semester | | |
|----------------|---|-----|-----------------|--------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PH 405 | Semiconductor Devices | 3 | PH 411 | Statistical Physics | 3 |
| PH 408 | Electromagnetic Theory I | 3 | PH 412 | Analog and Digital Electronics | 4 |
| PH 416 | Condensed Matter Physics and Material Science | 3 | PH 417 | Advanced Mathematical Physics | 3 |
| PH 417 | Advanced Classical Mechanics | 3 | PH 551 | Electromagnetic Theory II | 3 |
| PH 418 | Quantum Mechanics-I | 3 | PH 552 | Quantum Mechanics-II | 3 |
| PH 400 | Physics and Computational Lab | 4 | PH 455 | Seminar | 1 |
| PH 498 | Physics Lab-I | 4 | PH 499 | Physics Lab-II | 4 |

| Third Semester | | | Fourth Semester | | |
|----------------|-----------------------------------|-----|-----------------|------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PH 500 | Project I | 6 | PH 599 | Project-II | 10 |
| PH 415 | Nuclear and Particle Physics | 3 | | Elective III | 3 |
| PH 553 | Atomic and Molecular Spectroscopy | 3 | | Elective IV | 3 |
| | Elective I | 3 | | Open Elective II | 3 |
| | Elective II | 3 | | | |
| | Open Elective-I | 3 | | | |

| Electives Courses offered by the Department in Semester III and Semester IV | | | | | |
|---|---|-----|-------------|-----------------------------------|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| PH 506 | Physics of Thin Films | 3 | PH 541 | Plasma and Astrophysics | 3 |
| PH 510 | Fiber Optics and Optoelectronics | 3 | PH 542 | Nanostructures | 3 |
| PH 514 | Superconductivity and Critical Phenomena | 3 | PH 543 | Surface Science | 3 |
| PH 517 | Physics of Solid State Devices | 3 | PH 545 | Fundamentals of Plasma Physics | 3 |
| PH 519 | Quantum Field Theory | 3 | PH 546 | Plasma Generation and Application | 3 |
| PH 522 | Communication Systems | 3 | PH 547 | Nonlinear Plasma Physics | 3 |
| PH 523 | Microwave systems and Antenna Propagation | 3 | PH 548 | Nanobiophysics | 3 |
| PH 524 | Digital Signal Processing | 3 | PH 549 | Nanomagnetism | 3 |
| PH 525 | Microprocessors and Digital Signal | 3 | PH 554 | Soft Condensed Matter Physics | 3 |

| | | | | | |
|--------|--|---|--------|-------------------------------|---|
| | Processing Based Systems | | | | |
| PH 532 | Quantum Electrodynamics | 3 | PH 555 | Particle Physics-I | 3 |
| PH 533 | General Theory of Relativity | 3 | PH 556 | Particle Physics-II | 3 |
| PH 536 | Basic Astronomy and Astrophysics | 3 | PH 557 | Photonics | 3 |
| PH 537 | High Energy and Extragalactic Astrophysics | 3 | PH 558 | Quantum Electronics | 3 |
| PH 538 | Introduction to Cosmology | 3 | PH 559 | Nanophotonics | 3 |
| PH 539 | Advanced Condensed Matter Physics and Material Science | 3 | PH 603 | Fourier Optics and Holography | 3 |

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



CENTRE FOR ASSAMESE STUDIES

(Year of Establishment: 2011)

Centre for Assamese Studies was established in 2011. The prime aim of the Centre is to undertake and foster intensive and innovative study and research in Assamese Language, Literature and Culture in their varied dimensions adopting a wide perspective and all-encompassing worldview. The vision of the centre is to be a research centre of Assamese language, literature, culture and tradition.

Programme offered

1. Ph.D.

Faculty and Areas of Interest

| Professor & Head in Charge | | |
|----------------------------|-------------------------|--|
| 1. | Prasanta Kr. Das | <i>American Literature, Indian Writing in English</i> |
| Assistant Professor | | |
| 1. | Juri Dutta, Ph.D. (RGU) | <i>Regional Literatures of India, Translation Studies and Comparative Literature, Creative Writing</i> |

LEGENDS: RGU-Rajiv Gandhi University Arunachal Pradesh, HoD- Head of the Department

Research Activities

- No. of papers published in the year 2017- 2018: 03
- No. of current Ph.D. scholars: 02 (Dr. Bhupen Hazarika Fellows)

Facilities:

Departmental Library
Centre's Digital Archive

Research Activities:

- No. of papers published in the year 2017-18: 03
- No. of current Ph.D scholars: 02 (Dr. Bhupen Hazarika Fellows)

Selected Publications:

- Dutta, Juri. , July - August 2017. "Ideological Conflicts in Birendra Bhattacharya's fiction" in *Muse India* (No.74), ISSN: 0975-1815.
- Dutta, Juri. May 2017. "Translation of Literature and National Integration: A Re-appraisal" in *International Education and Research Journal* (E-ISSN: 2454-9916) – a peer-reviewed Multi-disciplinary International Research Journal, Volume 3 Issue 5.

- Dutta, J. April-September, 2017. *“Tathya aru Satyar Bistrrita Anusandhan: Alpana Sarkar Deakar Unabimsa Satikar Patabhumit Asamiya Nari, Eti Alocana”* in Aallap edited by Sanjib Pol Deka, Vol I, Pp 294-300, Bandhav.

Selection procedure for Ph.D programme (Dr. Bhupen Hazarika Fellowship):

- Separate advertisement for Dr. Bhupen Hazarika Fellowship will be published in the university website.
- General criteria as per UGC Guidelines for admission into Ph.D programme.
- Candidates shortlisted based on the written test shall be called for personal interview. The past academic background and research experience shall also be taken into consideration.



CENTRE FOR DISASTER MANAGEMENT

(Year of Establishment:1997)

The Centre for Disaster Management was established in 1997 under the Central Sector Scheme of NDM Division, Ministry of Agriculture and Cooperation, Government of India. The scheme has subsequently been transferred to the Ministry of Home Affairs, Government of India during 2002. At present the Centre is functioning under Tezpur University. The Centre is involved in conducting training, workshops, and conferences on different aspects of Disaster Management for different target groups.

The Centre is also offering optional courses on Disaster Management at UG and PG levels. One Post Graduate Diploma Programme on Environment and Disaster Management is being offered by the Centre in association with Department of Environmental Sciences under CODL of Tezpur University.

Faculty and Areas of Interest

| Assistant Professor | |
|---------------------|---|
| 1. | Dipak Nath, Ph. D. (GU) <i>Disaster Risk Assessment and Risk Mitigation Approaches</i> |

LEGENDS:GU-Gauhati University

Selected Publications

- Nath, R. D. and Nath, D, Women's Movement for Human Rights in India and Bangladesh: A Sociological Analysis, *Intellection: a bi-annual interdisciplinary research journal*, 3(1), 2015.
- Nath, R. D. and Nath, D, Comprehensive model for Health Risk Assessment with a case study on Three Rural Communities of Chachar District, Assam, India, *Journal of International Academic Research for Multidisciplinary*, 4(2),224-239, 2016.
- Deb Nath, R. and Nath, D. (2018) *Status of Tribal Women: A Case Study on Barman Women of Dhanipur Village, Cachar, Assam*, *Intellection: A bi-annual interdisciplinary research journal*, Vol. VI, No. I (ISSN: 2319-8192).

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

CENTRE FOR ENDANGERED LANGUAGES
(Year of Establishment: 2014)

The University was awarded with the Centre for Endangered Languages by the Ministry of Human Resource Development in 2014. This is the nodal centre for the consortium of North East India comprising Tezpur University, Rajiv Gandhi University and Sikkim University. Since the Department of English and Foreign Languages offers MA in Linguistics and Language Technology, the Centre has been attached to the Department.

Programmes offered

1. Certificate programme in Endangered Languages

Faculty and Areas of Interest

| Coordinator | | |
|----------------------|----------------------------------|--|
| 1. | MadhumitaBarbora,* Ph.D. (TU) | <i>Linguistics (Syntax, Psycholinguistics), Field Linguistics, Documentation</i> |
| Assistant Professors | | |
| 1. | BobitaSarangthem, Ph.D.(MU) | <i>Phonetics and phonology, Field Linguistics and Socio-linguistics</i> |
| 2. | MonaliLongmailai Ph.D. (NEHU) | <i>Morphology, Syntax, Typology, Historical Linguistics, Areal Linguistics and Tibeto-Burman Languages</i> |
| 3. | DhanapatiShougrakpam, Ph.D. (MU) | <i>Morphology, Semantics, Field Linguistics</i> |

* Recognized Supervisor

LEGENDS: **TU**– Tezpur University, **MU**-Manipur University, **NEHU**– North Eastern Hill University Shillong

Facilities

The Centre has the following equipment available with them to be used for the research work:

- Apple iMac Workstation for Recording & Editing; YAMAHA 12XU 12 Channel Professional Mixing Console; Denon DN-4SOR Professional Grade Installed Recording Device; PresonusAudiobox i2 Soundcard; PresonusHP4 Headphone Amplifier; Video Camera full HD recording (MODEL: HTC-MDH2M); Video Camera (MODEL: HC-X1000); Camera (MODEL: COOLPIX P900); Recorder - Olympus LS-100 & Mobile – Samsung

1. The Centre has two laboratories for various purposes

- Phonetic Lab (With 20 seat capacity)
- Documentation Lab (Recording and Editing Suite)

2. The Centre has three smart class rooms and a Multipurpose Hall, well equipped for Workshops, Seminars and Conferences etc.

3. The Centre has number of books available for use for the Masters and Ph.D students for references.

Research Activities

- No. of papers published in the year 2017- 2018: 5

Selected Publications

- The Centre published the First volume of Annual Technical Report, released by Professor MihirKanti Chaudhuri, Former Vice Chancellor, Tezpur University on 16 May, 2017
- 6 Learners book on the endangered languages that the staff have been working on, are in press.
- 3 volumes on Phonology, Morphology and Syntax (of these 7 endangered languages) are forthcoming.
- Proceedings of HLS23 are in the process of printing.

Outreach activities of the Centre as research work:

The faculty, research associates and field assistants of the Centre are divided into six (6) groups for collection of data from some of the endangered languages of the Northeast Region. Till date five (5) field works have been conducted by the 6 groups. The staff went for field work to Manipur, Nagaland and Dima Hasao Area and Tinsukia District of Assam for collection of data. The table below shows the details:

| Sl. No. | State | Groups | Chosen Endangered Language |
|---------|----------|---------------------------|----------------------------|
| 1 | Assam | 1. Dima Hasao Areas | Biate |
| | | 2. Dima Hasao Areas | Khelma |
| | | 3. Dima Hasao Areas | Hrangkhoh |
| 2 | Manipur | 4. Senapati District | Onaeme |
| | | 5. Kangpokpi District | Purum |
| 3 | Nagaland | 6. Tening, Peren District | Liangmai |
| | | 7. Tuensang District | Yimchunger |

- 6 Learner's Book written for the Biate, Khelma, Hrangkhoh, Onaeme, Purum, and Liangmai in 2017.
- Phonetic analysis, sound segmentation, language description and grammar are in process of completion.
- Publication of books and dictionaries are under process.

Courses offered by Centre for Endangered Languages, Tezpur University

Open Elective:

LE 223 Language, Society and Endangerment

LE 224 Language Policy, Education and Revitalization

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



CENTRE FOR INCLUSIVE DEVELOPMENT

(Year of Establishment: 2014)

As enshrined in the *Tezpur University Act 1993*, one of the prime objectives of the University is “to pay special attention to the improvement of the social and economic conditions and welfare of the people”. Further, the Eleventh Plan Document of the Planning Commission emphasizes how institutes of higher education ought to extend its resources and services towards community development. Towards achieving this, Tezpur University has established *The Centre for Inclusive Development (CID)* as an umbrella organization comprising the *Equal Opportunity Cell*, *ST/SC Cell*, and the *Training and Placement Cell* which have a good deal of functional commonality. It is envisioned that an invigorated approach to this purpose would be achieved by consolidating the activities and collating the humane and intellectual resources of these three cells. Headed by its Director, the Centre is intended to act as a catalyst to holistic development of students and an interface between Higher Education and Community Development.

Programmes offered

1. Certificate Course in Technical Writing
2. P.G. Diploma in Child Rights and Governance (in collaboration with UNICEF)

Faculty and Areas of Interest

| Director | | |
|---------------------|---|-----------------------------------|
| 1. | Rajeev Kumar Doley, Ph.D. (IITG) | <i>Sociolinguistics</i> |
| Assistant Professor | | |
| 1. | Subhrangshu Dhar, Ph.D. (VB) | <i>Child Rights, Human Rights</i> |
| 2. | Hoimawati Talukdar, MCJ (TU), MA (IITG) | <i>Governance</i> |

LEGENDS: IITG- Indian Institute of Technology Guwahati, DU- Dibrugarh University, VB- Vivas-Bharatai Santiniketan, TU- Tezpur University

Facilities

The Centre has well-equipped class rooms and a computer laboratory with internet connection and instructional audio-video aids. The Centre also has an air-conditioned presentation room and a seminar hall to facilitate student activities such as seminars, workshops, group discussions, etc.

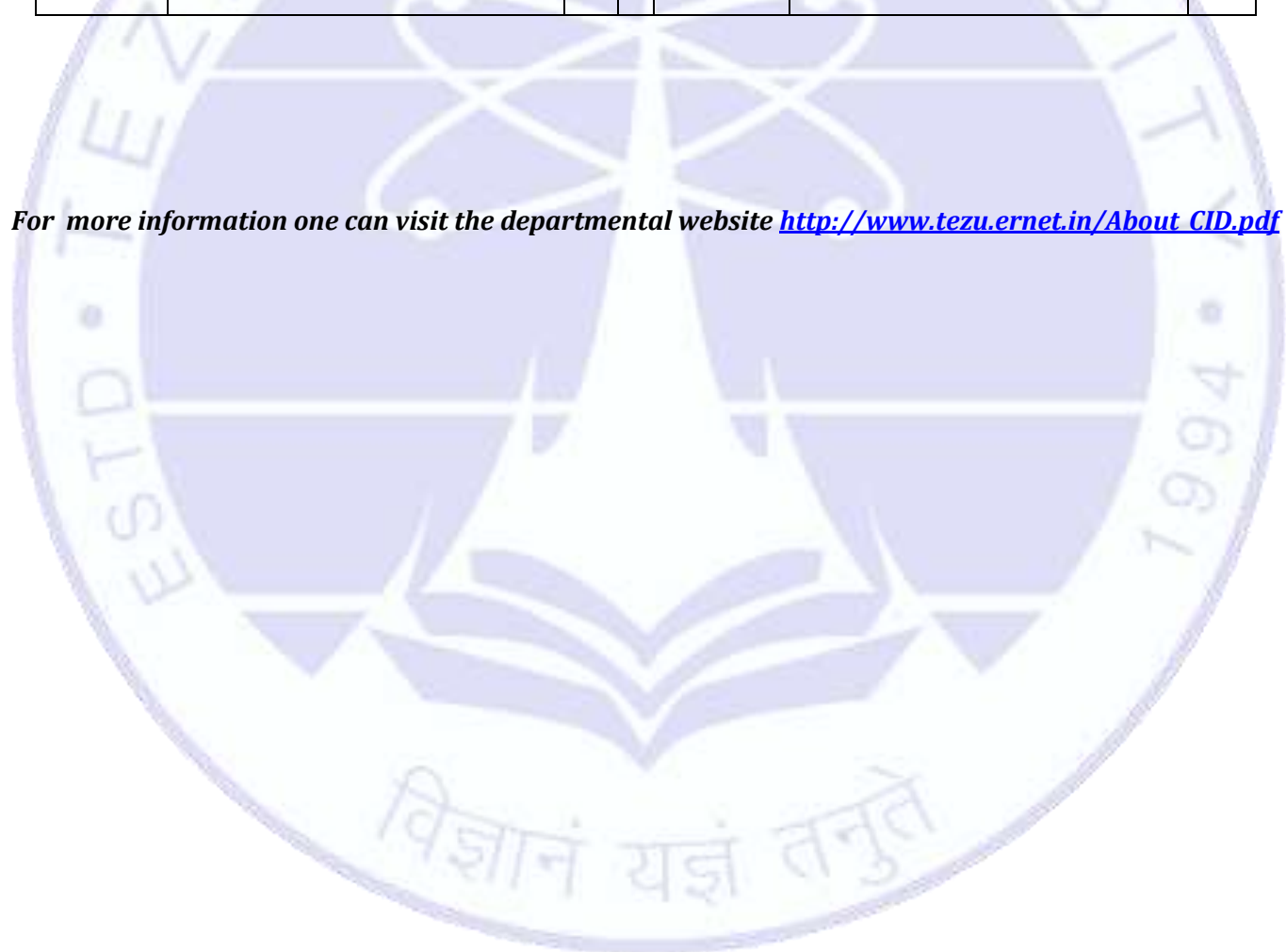
Research Activities

- No. of papers published in the year 2017- 2018: 1

Courses offered in P.G. Diploma in Child Rights and Governance

| First Semester | | | Second Semester | | |
|----------------|--|-----|-----------------|---|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| CG 401 | Understanding Childhood | 4 | CG 406 | Governance and Social Policy | 4 |
| CG 402 | Child Rights as Human Rights- Paper I | 4 | CG 407 | Child Rights as Human Rights- Paper II | 4 |
| CG 403 | Exclusion and Vulnerabilities of Children with special focus on North East | 4 | CG 408 | Doing Research in Child Rights | 4 |
| CG 404 | Governance and Child Rights | 4 | CG 409 | Project/Internship | 4 |
| CG 405 | Communication Skills (English) | 4 | | | |

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



CENTRE FOR OPEN AND DISTANCE LEARNING
(Year of Establishment: 2011)

The Centre for Open and Distance Learning (CODL) was established in 2011 with the aim of disseminating knowledge and imparting quality education through open and distance learning mode. The Centre offers various postgraduate, diploma and certificate programmes in emerging areas of science, social sciences, management and humanities with flexible system to cater to the needs of the learners who otherwise cannot avail the regular mode of education. The basic focus of the Centre is to prepare human resources of the region and the country by making them skilled and employable.

Faculty and Areas of Interest

| Professor and Director | | |
|---------------------------------------|----------------------------------|---|
| 1. | Debabrata Das,* Ph.D. (RGU) | <i>Management(Financial Management, Development Finance Financial Markets and BFSI)</i> |
| Associate Professor(Part-time) | | |
| 1. | Sanjib Sahoo,* Ph.D. (TU) | <i>English(Indian Writing in English, Eco Criticism)</i> |
| Assistant Professor | | |
| 1. | Suchibrata Goswami, Ph.D. (DU) | <i>English (American Literature, Post-Colonial Writing)</i> |
| 2. | Ankita Bhattacharya, M.A. (TU) | <i>Sociology(Sociology of Health and Illness)</i> |
| 3. | Mridusmita Baruah,M.A.(TU) | <i>Mass Communication(Advertising and Public Relation)</i> |
| Programme Coordinators | | Programmes |
| 1. | Uttam Kumar Pegu*, Ph.D. (JMI) | <i>M.A. in Mass Communication</i> |
| 2. | Amiya Kumar Das*, Ph.D. (TU) | <i>M.A Sociology</i> |
| 3. | Pallavi Jha, Ph.D. (UoH) | <i>M.A English</i> |
| 4. | Suryakant Tripathi*, Ph.D. (BHU) | <i>P.G. Diploma in Functional Hindi</i> |
| 5. | Runumi Das*, Ph.D. (GU) | <i>P.G. Diploma in Human Resource Management</i> |
| 6. | Dipak Nath, Ph.D. (GU) | |
| 7. | Nirmali Gogoi*, Ph.D. (DU) | <i>P.G. Diploma in Environmental and Disaster Management</i> |
| 8. | Shuvam Sen*, Ph.D. (IITG) | <i>M.A/ M.Sc. in Mathematics</i> |

| | | |
|-----|--|---|
| 9. | Sadhan Mahapatra, Ph.D.(IISc.) | <i>P.G. Diploma in Renewable Energy and Energy Management</i> |
| 10. | Subhragshu Dhar, Ph.D(Visva-Bharati, W.B). | <i>P.G. Diploma in Child Rights and Governance</i> |

*** Recognized Supervisor**

LEGENDS: **RGU**-Rajiv Gandhi University Arunachal Pradesh, **TU**- Tezpur University, **JMI**-Jamia Millia Islamia New Delhi, **UoH**- University of Hyderabad, **BHU**- Banaras Hindu University Uttar Pradesh, **GU**- Gauhati University, **DU**-Dibrugarh University, **IITG**- Indian Institute of Technology Guwahati, **IISc**- Indian Institute of Science Bangalore

Administrative Officer

| Name | Designation |
|------------------------------|---------------------|
| ParthaPratimKalita, MBA (TU) | Assistant Registrar |

Study Centres of CODL

| (a) Tezpur | (b) Guwahati | (c) Dibrugarh |
|--|--|---|
| Tezpur University CODL, Napaam, Sonitpur - 784028 Contact: 03712 - 275350/57 Mobile: 7002247087 | B. Barooah College, Ulubari Guwahati- 781007 Contact: 8638167719 | DHSK College , Dibrugarh— 786001 Contact: 99544-81785 |

Academic Session

The Academic Session for the programmes under Distance Education commence twice a year usually in January and July, respectively. All the programmes under the Centre of Open and Distance Learning (CODL) may not be offered in each of the sessions.

Admission

(a) Admission notice: Notice for admission into the different academic programmes of the open and distance learning programmes of the University shall be issued by the Director, Centre for Open and Distance Learning separately. The same shall also be put in the official website: http://www.tezu.ernet.in./tu_codl

(b) Fees: The fees and other charges payable by the candidates shall be decided by the Academic Council from time to time.

Degree and Diploma Programmes offered by CODL

| Sl. No. | Programme | Eligibility | Department and School | Fees in Rupees (Under revision) | Duration (Number of semesters) | |
|---------|--|--|--|----------------------------------|--------------------------------|-----|
| | | | | | Min | Max |
| 1 | M.A. in Mass Communication | Bachelor's degree in any discipline | Mass Communication and Journalism (School of Humanities and Social Sciences) | 12,500/- | 4 | 8 |
| 2 | M.A in English | Bachelor's degree in any discipline | English and Foreign Languages (School of Humanities and Social Sciences) | 12,000/- | 4 | 8 |
| 3 | M.A in Sociology | Bachelor's degree in any discipline | Sociology (School of Humanities and Social Sciences) | 12,000/- | 4 | 8 |
| 4 | P.G. Diploma in Human Resource Management | Bachelor's degree in any discipline | Business Administration (School of Management Sciences) | 7,500/- | 2 | 4 |
| 5 | P.G. Diploma in Renewable Energy and Energy Management | BE/ B. Tech or MSc in Physics or Chemistry | Energy (School of Engineering) | 8,500/- | 2 | 4 |
| 6 | P.G. Diploma in Environmental and Disaster Management | Bachelor's degree in any discipline | Environment Science (School of Sciences) and Business Administration (School of Management Sciences) | 8,500/- | 2 | 4 |
| 7 | P.G. Diploma in Child Rights and Governance | Bachelor's degree in any discipline | Centre for Inclusive Development | 8,500/- | 2 | 4 |

All the programmes offered by CODL are permitted and recognized by University Grants Commission, New Delhi.

For more information one can visit the Centre website at http://www.tezu.ernet.in/tu_codl

TEACHING LEARNING CENTRE
(Year of Establishment: 2016)

The Teaching Learning Centre (TLC), Tezpur University was inaugurated in January, 2016 as a Centre of Excellence for Curriculum and Pedagogy under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMMNMTT) scheme. The scheme is funded by Department of Higher Education, MHRD, GoI. TLC envisages developing and promoting a responsive and relevant teaching-learning system for higher education communities and contributing to excellence in teaching and learning as an innovative and resourceful Centre through the optimal use of technology.

Among the objectives of the TLC are:

- To organize workshops and seminars to facilitate capacity building and professional development of teachers.
- To provide assistance and support for promoting best practices in teaching learning environment through research and dissemination of already generated knowledge.
- To generate and maintain learning materials and resources for easy access to learners and teachers.
- To develop discipline specific (pedagogy, language and social sciences) curricular framework for professional development Programme
- To prepare an outline of different pedagogy and scheme of assessment and evaluation method of different disciplines.

The target group of TLC, Tezpur University are College and University Level Teachers and Researchers and PG Students.

Faculty and Areas of Interest

| Director-in-Charge | | |
|---------------------|------------------------------------|---|
| 1. | Prof. M. K. Sarma, PhD (TU) | Research Methodology, Services Marketing, Tourism Marketing |
| Assistant Professor | | |
| 1. | Swapnarani Bora, PhD (DU) | <i>Folklore, Sociolinguistics, Assamese Studies</i> |
| 2. | Ikbal Hussain Ahmed, M.Phil. (DU*) | <i>Evolutionary Ethics, Environmental Ethics, Symbolic Logic, Philosophy of Education</i> |
| Research Associate | | |
| 1 | Bhushita Patowari, PhD (GU) | <i>Survey Sampling & Statistical Epidemiology</i> |

LEGENDS: TU-Tezpur University, DU-Dibrugarh University, DU- Delhi University, GU- Gauhati University*

Major facility: One ICT Lab.

Teachers trained: Total 61

CHANDRAPRABHA SAIKIANI CENTRE FOR WOMEN'S STUDIES

(Year of Establishment: 2009)

Chandraprabha Saikiani Centre for Women Studies (CSCWS), Tezpur University was established in the year 2009. The University Grants Commission (UGC), New Delhi approved the proposal no. F.No7-1/2012(W.S) dated 6th of March 2012 for continuation of Women Study Centre (WSC) at Tezpur University. The UGC has also revised the pattern of positions and financial assistance for WSC, Tezpur University. The centre supports redistribution of women power and control of resources in favour of women. The vision of Chandraprabha Saikiani Centre for Women Studies, Tezpur University is to provide a platform and promote studies on women belonging to the diverse socio-cultural milieu of North- East India. The priority of CSCWS is to build a body of information and knowledge resource pool regarding women of this region. The Centre is running CBCT Courses from 2012.

Programme offered

1. P.G. Diploma in Women Studies

Faculty and Areas of Interest

| Associate Professor | | |
|---------------------|---------------------------------------|--|
| 1. | Madhurima Goswami, Ph.D. (TU)- HoD | <i>Gender Studies, Critical Theory, Performance Studies</i> |
| Assistant Professor | | |
| 1. | Mousumi Mahanta, Ph.D. (TU) | <i>Women Studies, Women and Mental Health, Feminist Research Methodology</i> |

LEGENDS: TU- Tezpur University, HoD -Head of the Department

Research Activities

- No. of papers published in the year 2017- 2018: 10
- No. of ongoing research projects: 1

Selected Publications

- Goswami, Madhurima. (2018), Food Culture: A Space for Creativity, Protest and Negotiation, International Journal of Economics and Social Sciences, ISSN 2249-7382.
- Goswami, Madhurima (2018), The Northeast Indian Women: Issues of Displacement, Violence, Media and Law, CSCWS, Tezpur University. ISBN- 978-93-87035-23.
- Goswami, Madhurima (2018), Staging of Rituals: Role of a Ritual Priestess, The Northeast Indian Women: Issues of Displacement, Violence, Media and Law, CSCWS, Tezpur University. ISBN- 978-93-87035-23
- Mahanta, Mousumi. (2018), Women and Mental Health, The Northeast Indian Women: Issues of

Displacement, Violence, Media and Law, edited by MadhurimaGoswami, CSCWS, Tezpur University. ISBN- 978-93-87035-23

- Daimary Ivy. (2018), Bodo Women in Conflict Situation, The Northeast Indian Women: Issues of Displacement, Violence, Media and Law, edited by MadhurimaGoswami, CSCWS, Tezpur University. ISBN- 978-93-87035-23
- Boro, Sonali, (2018) Women Trade in Assam: An Analysis, The Northeast Indian Women: Issues of Displacement, Violence, Media and Law, edited by MadhurimaGoswami, CSCWS, Tezpur University. ISBN- 978-93-87035-23
- Mahanta.Mousumi, Boro. Sonali, (2018) Panchayati Raj and Women of Rural Assam, DeshVikas, ISSN-2394-1782, Vol-4 Issue-4
- Boro. Sonali, (2018) Women's Participation in Agriculture and The Urbanization Process of North East India, MahilaPratishtha, ISSN- 2494-7891 Vol-3 Issue-3
- Boro. Sonali, (2018) Power game of Witch Hunting in Assam: An Analysis, International Journal for research in Social Science and Humanities, ISSN-2208-2107 Vol 4 Issue 2.
- Goswami, Madhurima (2017), Hegemonic Masculinity: Rethinking of the Concept in Art. Indian Journal of Arts, ISSN 2320-6659, 7(21), 59-64

Courses offered in P.G. Diploma in Women Studies

| First Semester | | | Second Semester | | |
|----------------|-----------------------------|-----|-----------------|--|-----|
| Course Code | Course Title | Cr. | Course Code | Course Title | Cr. |
| WS 103 | Women's Movement in India | 4 | WS 107 | Women's Studies and Research Methodology | 4 |
| WS 104 | Introducing Women's Studies | 4 | WS 108 | Women and Law | 3 |
| WS 105 | Women in Media | 4 | WS 109 | Women and Development | 3 |
| WS 106 | Women and Health | 4 | WS 110 | Project Work/Dissertation | 6 |

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

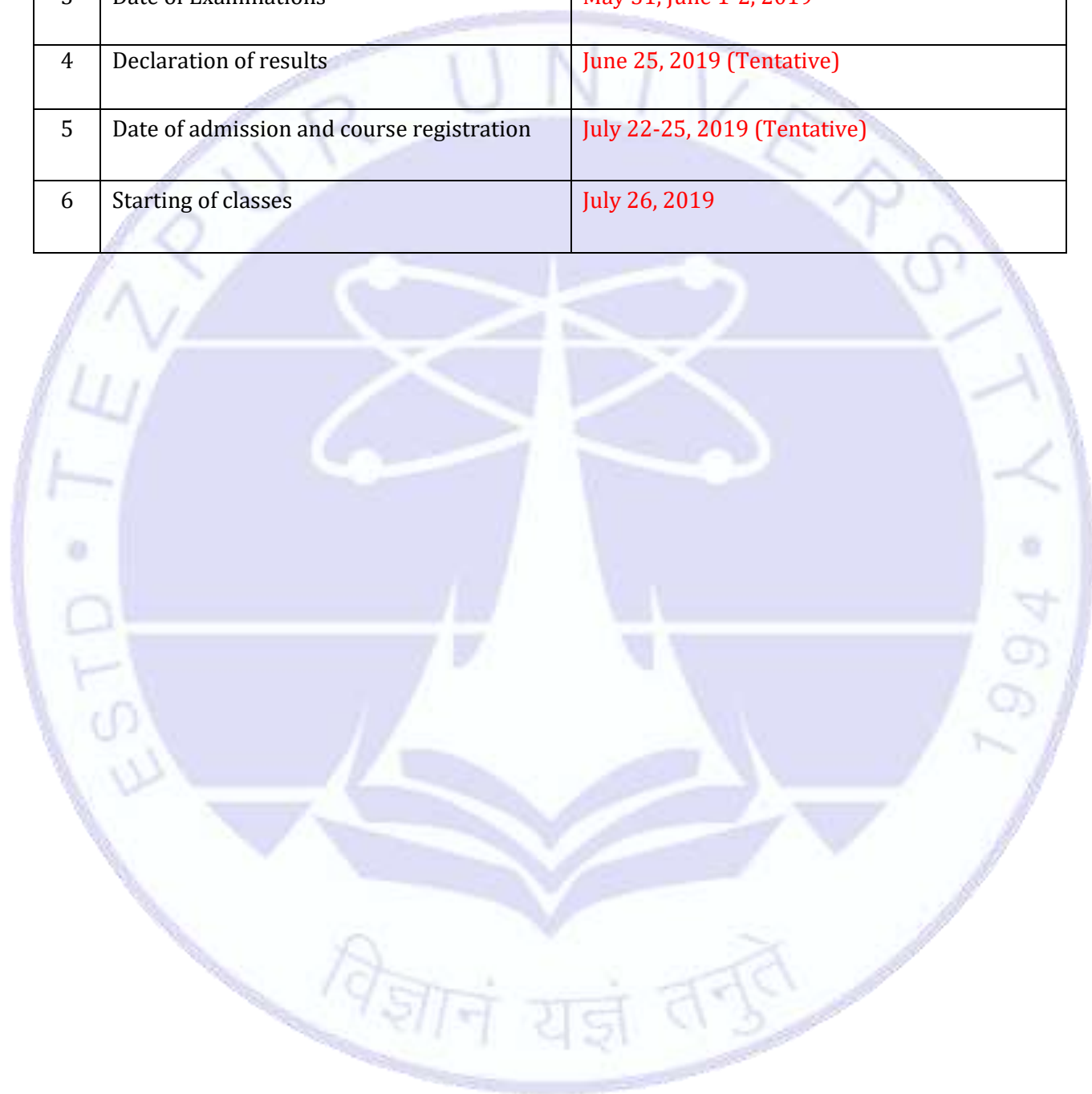
The logo of Tezpur University is a circular emblem. It features a central atomic symbol with three elliptical orbits. The text 'TEZPUR UNIVERSITY' is written in a semi-circle above the emblem, and 'ESTD. 1971' is written in a semi-circle below it. The entire logo is rendered in a light purple color.

SECTION- V

Important dates, fee structure, forms and contact details

1. [Important Dates](#)
2. [Fee Structure](#)
3. [Fee structure \(Self Supported Scheme\)](#)
4. [Format of OBC\(NCL\) certificate](#)
5. [Format of Sponsorship/ NOC certificate](#)
6. [Format of PRC](#)
7. [Contact Details](#)
8. [Entrance Examination Schedule](#)

| | | |
|---|---|------------------------------|
| 1 | Online portal opens on | February 27, 2019 |
| 2 | Online application closes on | April 30, 2019 |
| 3 | Date of Examinations | May 31, June 1-2, 2019 |
| 4 | Declaration of results | June 25, 2019 (Tentative) |
| 5 | Date of admission and course registration | July 22-25, 2019 (Tentative) |
| 6 | Starting of classes | July 26, 2019 |



Semester wise fee For the students to be admitted in 2019

| Particulars | 1 st Semester | 2 nd Semester | 3 rd Semester | 4 th Semester | 5 th Semester | 6 th Semester | 7 th Semester | 8 th Semester | 9 th Semester | 10 th Semester | Refundable (included in the fees of 1 st semester) |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---|
| Integrated M.Com | 18360.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 6500.00 |
| Integrated M. A. | 18360.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 6500.00 |
| Integrated M. Sc. (Physics, Mathematics) | 20860.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 6500.00 |
| Integrated M. Sc. (Chemistry, Bioscience & Bioinformatics) | 22060.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 6500.00 |
| Integrated B.A.B.Ed. | 18360.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | 10060.00 | - | - | 6500.00 |
| Integrated B.Sc.B.Ed. (Physics, Mathematics) | 20860.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | - | - | 6500.00 |
| Integrated B.Sc.B.Ed. (Chemistry) | 22060.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | 13760.00 | - | - | 6500.00 |
| B. Tech. (CSE, ECE, ME, CE, EE) | 32360.00 | 24060.00 | 24060.00 | 24060.00 | 24060.00 | 24060.00 | 24060.00 | 24060.00 | - | - | 6500.00 |
| B. Tech. (FET) | 33560.00 | 25260.00 | 25260.00 | 25260.00 | 25260.00 | 25260.00 | 25260.00 | 25260.00 | - | - | 6500.00 |
| B. Voc. | 20860.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | 12560.00 | - | - | - | - | 6500.00 |
| Master of Computer Application | 23860.00 | 15560.00 | 15560.00 | 15560.00 | 15560.00 | 15560.00 | - | - | - | - | 6500.00 |
| B.Ed. | 19860.00 | 11560.00 | 11560.00 | 11560.00 | - | - | - | - | - | - | 6500.00 |
| M. A. (except M.A. in Mass Communication & Journalism) | 18360.00 | 10060.00 | 10060.00 | 10060.00 | - | - | - | - | - | - | 6500.00 |
| M. Com. | 18360.00 | 10060.00 | 10060.00 | 10060.00 | - | - | - | - | - | - | 6500.00 |
| M. Sc. (Physics, Mathematics) | 19060.00 | 10760.00 | 10760.00 | 10760.00 | - | - | - | - | - | - | 6500.00 |
| M. Sc. (Chemistry, MBBT, Environmental Science) | 20260.00 | 11960.00 | 11960.00 | 11960.00 | - | - | - | - | - | - | 6500.00 |
| M. Tech. (ME, IT, ELDT, Bioelectronics) | 27860.00 | 19560.00 | 19560.00 | 19560.00 | - | - | - | - | - | - | 6500.00 |
| M. Tech. (FET, Polymer Science & Technology, Energy Technology) | 29060.00 | 20760.00 | 20760.00 | 20760.00 | - | - | - | - | - | - | 6500.00 |
| M. A. in Mass Communication & Journalism | 28860.00 | 19560.00 | 19560.00 | 19560.00 | - | - | - | - | - | - | 6500.00 |
| Master of Tourism & Travel Management | 22860.00 | 14560.00 | 14560.00 | 14560.00 | - | - | - | - | - | - | 6500.00 |
| Certificate in Chinese | 16660.00 | 8860.00 | - | - | - | - | - | - | - | - | 6500.00 |
| PG Diploma in Translation | 16860.00 | 9060.00 | - | - | - | - | - | - | - | - | 6500.00 |
| PG Diploma in Women's Studies | 22860.00 | 14560.00 | - | - | - | - | - | - | - | - | 6500.00 |
| PG Diploma in Child Rights & Governance | 22860.00 | 14560.00 | - | - | - | - | - | - | - | - | 6500.00 |

* Fee is subject to change at any time. ** Fee structure for the LL.M. programme will be notified later.

**Semester wise fee under Self Supporting Scheme (sss) for the students to be admitted in
2019**

| Particulars | 1 st Semester | 2 nd Semester | 3 rd Semester | 4 th Semester | 5 th Semester | 6 th Semester | 7 th Semester | 8 th Semester | 9 th Semester | 10 th Semester | Refundable (included in the fees of 1 st semester) |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---|
| Integrated M.Com | 32810.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 6500.00 |
| Integrated M.A. | 32810.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 6500.00 |
| Integrated M. Sc. (Physics, Mathematics) | 46310.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 6500.00 |
| Integrated M. Sc. (Chemistry, Bioscience & Bioinformatics) | 52310.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 6500.00 |
| Integrated B.A.B.Ed. | 32810.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | 23910.00 | - | - | 6500.00 |
| Integrated B.Sc.B.Ed. (Physics, Mathematics) | 46310.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | - | - | 6500.00 |
| Integrated B.Sc.B.Ed. (Chemistry) | 52310.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | 43410.00 | - | - | 6500.00 |
| B. Tech. (CSE, ECE, ME, CE, EE) | 82560.00 | 73660.00 | 73660.00 | 73660.00 | 73660.00 | 73660.00 | 73660.00 | 73660.00 | - | - | 6500.00 |
| B. Tech. (FET) | 88560.00 | 79660.00 | 79660.00 | 79660.00 | 79660.00 | 79660.00 | 79660.00 | 79660.00 | - | - | 6500.00 |
| B. Voc. | 46310.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | 37410.00 | - | - | - | - | 6500.00 |
| Master of Computer Application | 39310.00 | 30410.00 | 30410.00 | 30410.00 | 30410.00 | 30410.00 | - | - | - | - | 6500.00 |
| M. A. (except M.A. in Mass Communication & Journalism) | 32810.00 | 23910.00 | 23910.00 | 23910.00 | - | - | - | - | - | - | 6500.00 |
| M. Com. | 32810.00 | 23910.00 | 23910.00 | 23910.00 | - | - | - | - | - | - | 6500.00 |
| M. Sc. (Physics, Mathematics) | 35310.00 | 26410.00 | 26410.00 | 26410.00 | - | - | - | - | - | - | 6500.00 |
| M. Sc. (Chemistry, MBBT, Environmental Science) | 41310.00 | 32410.00 | 32410.00 | 32410.00 | - | - | - | - | - | - | 6500.00 |
| M. Tech. (ME, IT, ELDT, Bioelectronics) | 39310.00 | 30410.00 | 30410.00 | 30410.00 | - | - | - | - | - | - | 6500.00 |
| M. Tech. (FET, Polymer Science & Technology, Energy Technology) | 45310.00 | 36410.00 | 36410.00 | 36410.00 | - | - | - | - | - | - | 6500.00 |
| M. A. in Mass Communication & Journalism | 59060.00 | 49160.00 | 49160.00 | 49160.00 | - | - | - | - | - | - | 6500.00 |
| Master of Tourism & Travel Management | 37810.00 | 28910.00 | 28910.00 | 28910.00 | - | - | - | - | - | - | 6500.00 |
| Certificate in Chinese | 26810.00 | 18410.00 | - | - | - | - | - | - | - | - | 6500.00 |
| PG Diploma in Women's Studies | 37810.00 | 28910.00 | - | - | - | - | - | - | - | - | 6500.00 |
| PG Diploma in Child Rights & Governance | 37810.00 | 28910.00 | - | - | - | - | - | - | - | - | 6500.00 |

* Fee is subject to change at any time ** Fee structure for the LL.M. programme will be notified later.

Fee structure for Ph.D. students to be admitted in spring semester, 2019

| Particular Fee | Mode | Full Time (Hosteller) | Full Time: (Non-hosteller) | Part Time | TU Employee |
|--|---|--------------------------|-------------------------------|--------------|----------------|
| Admission | Once on admission | 500 | 500 | 500 | 500 |
| Registration | Once on admission | 150 | 150 | 150 | 150 |
| Identity card | Once on admission | 50 | 50 | 50 | 50 |
| Convocation | Once on admission | 500 | 500 | 500 | 500 |
| Provisional certificate | Once on admission | 100 | 100 | 100 | 100 |
| Alumni Association | Once on admission | 500 | 500 | 500 | 500 |
| Caution deposit (Library and Laboratory) | Once on admission | 2000 | 2000 | 2000 | 2000 |
| Hostel Caution deposit | Once on admission | 3000 | - | - | - |
| Hostel Mess Advance | Once on admission (in case of Hostel boarder) | 1500 | - | - | - |
| * Hostel admission/re- admission (Single seater for Ph.D. students) | Per semester (in case of Hostel boarder) | 3000 | - | - | - |
| Tuition | Per semester | 1500 | 1500 | 2000 | 2000 |
| Library | Per semester | 350 | 350 | 350 | |
| Students' activity | Per semester | 500 | 500 | 500 | 500 |
| Medical | Per Semester | 250 | 250 | 250 | |
| Transport | Per semester | 1000 | 1000 | 1000 | |
| Laboratory (including computer usage) | Per semester | 1000 | 1000 | 1000 | 1000 |
| Research Fee | Per semester | 3000 | 3000 | 4000 | 4000 |
| Infrastructure and amenity | Per semester | 1000 | 1000 | 1000 | 1000 |
| Fan, Electricity and Water charge | Per semester | 300 | 300 | 300 | 300 |
| Students' Welfare Fund | Per semester | 150 | 150 | 150 | 150 |
| Development Fund | Per semester | 1500 | 1500 | 1500 | 1500 |
| ** Consumable Charge | Per semester | 2000 | 2000 | 2000 | 2000 |
| Menial Charge | Per Semester | 1500 | - | - | - |
| *** Health Insurance | Per semester | 143 | 143 | - | - |
| Total fee to be paid by the students of the Dept. of Chemical Sc./MBBT//FET/ Environmental Sc. at the time of admission | | 25493 | 16493 | 17850 | 16250 |
| Total fee to be paid by the students of other departments at the time of admission. | | 23493 | 14493 | 15850 | 14250 |

* SC/ ST candidates are exempted from the paying the hostel seat rent of Rs. 675/-.

** Consumable Charge is to be paid by the Ph.D. students admitted in the Dept. of Chemical Science/MBBT//FET/ Environmental Science.

*** Students above 30 years of age are not covered in this scheme.

Controller of Examinations

Prescribed Format of OBC(NCL) Certificate/As per Govt. format

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 / 93BCC(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 / 94BCC 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 / 94BCC 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 / 97BCC dated 03 / 12 / 97.
- (vii) Resolution No. 12012 / 99 / 94BCC dated 11 / 12 / 97.
- (viii) Resolution No. 12012 / 68 / 98BCC dated 27 / 10 / 99.
- (ix) Resolution No. 12012 / 88 / 98BCC 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 / 99BCC 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 / 99BCC dated 21 / 09 / 2000 published in the Gazette of India Extraordinary

Par-I Section-I No. 210 dated 21 / 09 / 2000.

(xii) Resolution No. 12015 / 9 / 2000BCC dated 06 / 09 / 2001.

(xiii) Resolution No. 12012 / 1 / 2001BCC dated 19 / 06 / 2003.

(xiv) Resolution No. 12012 / 4 / 2002BCC 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 ofstate. 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.36012/22/93Estt.(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/SubDivisional 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) SubDivisional Officer of the area where the candidate and/or his family resides.

Prescribed Format of Sponsorship/ No Objection Certificate for Ph. D. programme

(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.

The employee will be relieved of his/her duties in the organization to join in the Ph.D. programme if he/she is selected as part time/full time candidate (not applicable to project fellow). The part time candidate will be allowed to stay on the campus for pursuing the course work (only for part time candidate)

Date: _____ Signature _____

Place: _____ Name _____

Official Seal of the employer

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

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

2. Recommended/Not Recommended

Signature:

Name:

Chairperson, Selection Committee

Head, Department of

Date.....

(In letter head of the employer)

Format for No Objection Certificate (for other than Ph.D. programme)

This is to certify that Shri/Smt.....(Name and Address).....is an employee of(Organization and Department) and he/she is presently holding the post of.....as regular/temporary employee. He/She has been working in this Department since.....till date.

This is to certify that we have no objection to Shri/Smt.....applying for the programmein Tezpur University as a full time candidate. In the event of his/her selection for the said programme Shri/Smt.....shall be relieved from his/her duties.

Place

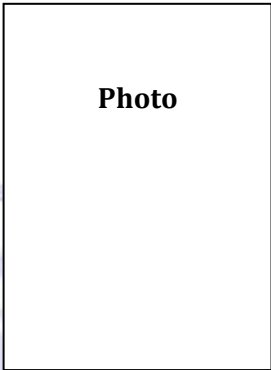
Signature of Officer

Date

Office

Office Seal

Prescribed Format of PRC/As per Government Format



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

Seal of the issuing
office

Ref Petition No.

Date:.....

PERMANENT RESIDENCE CERTIFICATE

Certified

.....
son/daughter ofand

.....of Village/Path/Street

..... under

Mauza/Circle.....under.....Police station

is the permanent resident ofdistrict in the state of Assam

(India).

Seal

Deputy Commissioner

CONTACT DETAILS

For any query related to the admission to an Academic Programme in 2019, the concern Department/Centre may be contacted on the following contact number/E-mail ID:

| Department/Office | Office Number* | Mobile Number** (HoD) | E-mail ID |
|---|----------------|-----------------------|-------------------------|
| Business Administration | 275000 | 94353-80862 | hod_ba@tezu.ernet.in |
| Centre for Assamese Studies | 273240 | 94350-82113 | cas@tezu.ernet.in |
| Centre for Inclusive Development | 273252 | 99544-49475 | rkdoley@tezu.ernet.in |
| Centre for Open and Distance Learning | 275350 | 94350-15074 | codl@tezu.ernet.in |
| Chandraprabha Saikiani Centre for Women's Studies | 273235 | 98542-64780 | wsctu@tezu.ernet.in |
| Chemical Sciences | 275050 | 94351-81464 | hod_chem@tezu.ernet.in |
| Civil Engineering | 275950 | 98640-60200 | hod_civil@tezu.ernet.in |
| Commerce | 273290 | 94350-81446 | hod_com@tezu.ernet.in |
| Computer Science and Engineering | 275100 | 94350-84063 | hod_cse@tezu.ernet.in |
| Cultural Studies | 275150 | 94351-85424 | hod_cul@tezu.ernet.in |
| Education | 275650 | 70762-96461 | hod_edu@tezu.ernet.in |
| Electrical Engineering | 275256 | 99547-07774 | jitend@tezu.ernet.in |
| Electronics and Communication Engineering | 275250 | 90851-80623 | hod_ece@tezu.ernet.in |
| Energy | 275300 | 94353-80921 | hod_ene@tezu.ernet.in |
| English and Foreign Languages | 275200 | 94016-40135 | hod_efl@tezu.ernet.in |
| Environmental Science | 275600 | 94357-49354 | hod_env@tezu.ernet.in |
| Food Engineering and Technology | 275700 | 94351-81352 | hod_fet@tezu.ernet.in |
| Hindi | 275750 | 94353-84799 | hod_hin@tezu.ernet.in |
| Law | 275780 | 94350-12901 | bkcy@tezu.ernet.in |
| Mass Communication and Journalism | 275450 | 98640-72390 | hod_mcyj@tezu.ernet.in |
| Mathematical Sciences | 275500 | 94351-80666 | hod_ms@tezu.ernet.in |
| Mechanical Engineering | 275850 | 96784-01587 | hod_mech@tezu.ernet.in |
| Molecular Biology and Biotechnology | 275400 | 99546-78888 | hod_mbbt@tezu.ernet.in |
| Physics | 275550 | 94350-45696 | hod_phy@tezu.ernet.in |
| Social Work | 275830 | 94351-44482 | hod_sw@tezu.ernet.in |
| Sociology | 275800 | 94351-44482 | hod_soc@tezu.ernet.in |
| Teaching and Learning Centre | 275680 | 94350-80384 | tlc@tezu.ernet.in |

* **Contact must be made during Office hours only.**

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

ENTRANCE EXAMINATIONS SCHEDULE

| | |
|---|---|
| May 31, 2019 (10 AM to 12 Noon) | May 31, 2019 (2 PM to 4 PM) |
| <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Mathematics/Integrated B.Sc. B.Ed. (Mathematics major) 2) M.A. in Social Work 3) P.G. Diploma in Translation (Hindi) 4) B.Ed. 5) M.Tech. in Food Engineering and Technology 6) LL.M. 7) Ph.D. in Business Administration 8) Ph.D. in Chemical Sciences 9) Ph.D. in Civil Engineering | <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Physics/Integrated B.Sc. B.Ed. (Physics major) 2) M.Tech. in Bioelectronics 3) Master of Tourism and Travel Management(MTTM) 4) M.Sc. in Chemistry 5) M.Sc. in Mathematics 6) M.A. in Sociology 7) Ph.D. in Cultural studies 8) Ph.D. in Environmental Science |
| June 1, 2019 (10 AM to 12 Noon) | June 1, 2019 (2 PM to 4 PM) |
| <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Chemistry/Integrated B.Sc. B.Ed.(Chemistry major) 2) P.G. Diploma in Child Rights and Governance 3) M.Tech. in Mechanical Engineering 4) M.A. in Hindi 5) M.A. in Mass Communication and Journalism 6) Certificate in Chinese 7) M.Tech. in Electronics Design and Technology 8) Ph.D. in Education 9) Ph.D. in Physics 10) Ph.D. in Food Engineering & Technology | <ol style="list-style-type: none"> 1) Integrated dual B.Sc. & M.Sc. in Life Science 2) M.Sc. in Environmental Science 3) M.Com. 4) MTech. in Civil Engineering 5) M.A. in Cultural Studies 6) Ph.D. in Sociology 7) Ph.D. in Molecular Biology and Biotechnology 8) Ph.D. in Mathematical Sciences 9) Ph.D. in Mechanical Engineering |
| June 2, 2019 (10 AM to 12 Noon) | June 2, 2019 (2 PM to 4 PM) |
| <ol style="list-style-type: none"> 1) Integrated dual B.A. & M.A. in English 2) M.A. in Linguistics and Language Technology 3) M.A. in Education 4) M.Tech. in Energy Technology 5) P.G. Diploma in Women's Studies 6) M.A. in Communication for Development 7) M.Sc. in Physics 8) Ph.D. in Electronics and Communication Technology 9) Ph.D. in English and Foreign Languages 10) Ph.D. in Mass Communication and Journalism | <ol style="list-style-type: none"> 1) M.Tech. in Information Technology/M.Tech. in CSE 2) Master of Computer Application (MCA) 3) M.Sc. in Molecular Biology and Biotechnology 4) Integrated dual B.Com. & M. Com. 5) Lateral Entry to 2nd year of B.Tech. 6) M.A. in English 7) Ph.D. in Computer Science and Engineering 8) Ph.D. in Energy 9) Ph.D. in Hindi 10) Ph. D. in Social Work |