

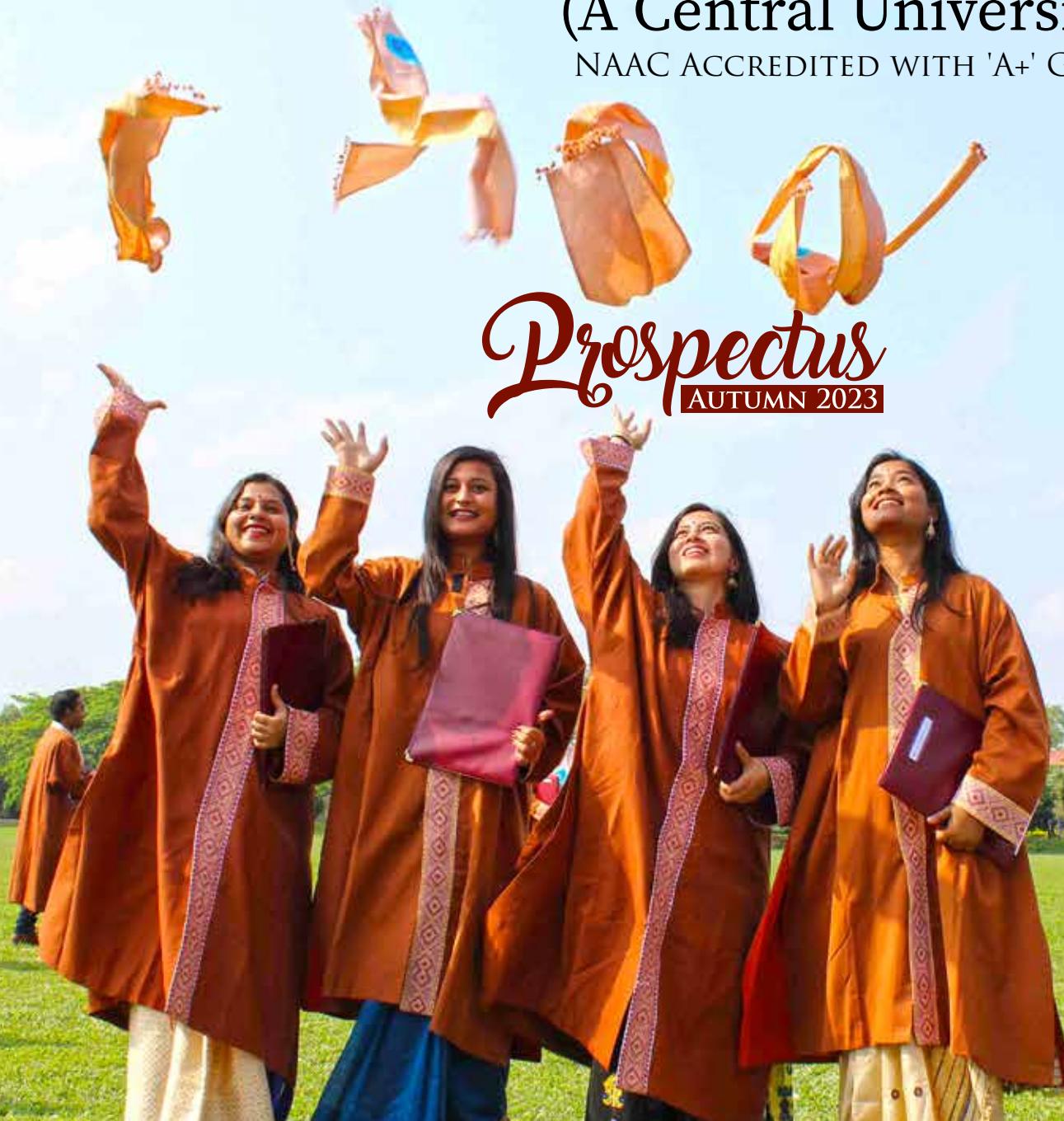
Tezpur University

(A Central University)

NAAC ACCREDITED WITH 'A+' GRADE



Prospectus
AUTUMN 2023





Prospectus

AUTUMN 2023



Tezpur University
(A Central University)





ADMISSION POLICY- 2023

Tezpur University shall follow this Admission Policy for the selection of students into different programmes offered for the Academic Year 2023-24. The programmes include Ph.D., PG (M.Tech., M.Des., M.Sc., M.A., MCA, M.Com., LL.M., MTTM. B.Ed.), Integrated programmes (M.Sc., M.A., M.Com., B.Sc.B.Ed.), UG (B.Tech., B.Tech. Lateral Entry), PG Diploma, and Certificate programmes. The details of all programmes along with the intakes and eligibility criteria are available in the prospectus. The University shall follow the Govt. of India reservation policy for admission. It is to be noted that admission to MBA (Full Time), MBA (Executive) programmes are already completed. The MBA admission process is already in place and the relevant application portal has already closed. For more details please contact the department.

MANDATORY REQUIREMENT

Candidates applying for admission in any of the academic programmes [except MBA (Full Time), MBA (Executive)] at Tezpur University must mandatorily register and fill the Admission cum Counselling Form (ACF) online at TU admission portal. Duly signed printout of the ACF along with all the required documents submitted (uploaded) in originals must be produced at the time of admission.

Candidates applying for any programme under CUET(UG) must read the eligibility criteria and select correct domain subject/test paper code carefully by referring to the information provided in the prospectus/information bulletin of NTA.

1. Ph.D. Programmes

Candidates will be selected on the basis of (i) Performance in MCQ/MCQ cum descriptive exam to be conducted by Tezpur University Entrance Examination (TUEE) Cell at 24 centres across India and (ii) Personal Interview (PI). However, candidates with UGC-(NET/JRF)/UGC-CSIR(NET/JRF)/DBT-JRF/ICMRJRF/ICAR-NET/GATE/ SLET / M.Phil. will be required to appear in PI only.

2. PG Programmes

a. M.Tech. Programmes

- i. GATE Candidates- Candidates with valid GATE score in relevant discipline will be admitted directly on merit basis.
- ii. Non-GATE Candidates- Some seats of the M.Tech. programmes will be filled up the performance in the TUEE (PG)-2023 conducted by Tezpur University. Registration can be done at www.tezuadmissions.in. GATE qualified candidates may still apply for non-GATE seats through TUEE (PG)-2023.

b. M.A./M.Sc./LL.M./MTTM/MCA/M.Com. Programmes

PG admissions will be through TUEE, 2023. The MA in Mass Communication and Journalism and MA in Social Work will hold Personal Interviews following TUEE. Registration can be done at www.tezuadmissions.in.

c. M.Des. Programme

M Des admissions will be based on either CEED/GATE/DAT 2023 score or TUEE 2023 score. The merit list will be prepared on the basis of CEED/GATE/DAT or TUEE score, portfolio and Personal Interview (PI).

d. M.Sc. (MBBT) Programme

Admission to M.Sc. in MBBT will be on the basis of valid GAT-B score. Details can be found in the prospectus.

e. MBA Programme

Candidates are admitted on the basis of (i) score obtained in CAT/MAT/CMAT/XAT/ATMA, (ii) Group Discussion, and (iii) Personal Interview. Details may be obtained from the prospectus/ University website. The MBA admission process is already in place and the relevant application portal has already closed. For more details please contact the department.



3. Integrated Programmes

Integrated M.Com./M.Sc./M.A./B.Sc.B.Ed.- Candidates will be selected on the basis of the performance in the CUET (UG)-2023 for UG programmes conducted by NTA. Candidate should apply for CUET (UG) at <https://cuet.samarth.ac.in>.

4. UG Programmes

a. B.Tech. Programmes

Candidates will be selected for admission to various B.Tech. programmes on the basis of All India Rank (CRL) of JEE (Main)-2023 conducted by the NTA.

Out of the total seats, 60% seats are reserved for permanent residents of Northeastern states to be filled up through the counselling conducted by the B.Tech. Screening and Selection Committee (BSSC) of the University and remaining 40% seats are open for filling up through the Central Counselling conducted by CSAB/JoSAA.

b. B.Tech. (Lateral Entry) Programmes

Depending on the availability of seats, candidates will be admitted on the basis of their performance in the TUEE to be conducted by TUEE Cell, Tezpur University.

c. B.Ed. Programmes

Candidates will be selected on the basis of the performance in the Tezpur University Entrance Examination for PG programmes, TUEE (PG)-2023 conducted by Tezpur University. Registration can be done at www.tezadmissions.in.

5. PG Diploma Programmes

Translation (Hindi)/ Women Studies- Candidates will be selected on the basis of the performance in the TUEE (PG)-2023 for PG programme conducted by Tezpur University. Registration can be done at www.tezadmissions.in.

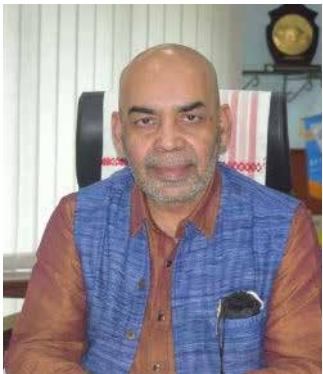
6. Certificate Programme

One Year Certificate Course in Chinese

Candidates will be selected on the basis of the performance in the CUET (UG)-2023 for UG programme conducted by NTA. Candidate should apply for CUET (UG) at <https://cuet.samarth.ac.in>.



VC's Welcome Note



My dear students,

Hope all is well with you!

I feel immensely happy to welcome you to Tezpur University. This prestigious institution of higher learning came into existence on 21 January 1994 by a special Act of parliament of India. It is a unitary university with a residential campus. The University has been committed to higher learning and research since its inception.

Spread over a lush green sprawling campus of 262 acres, the University provides an excellent ambience for the pursuit of research and education. The University is currently offering 76 academic programmes (UG, PG, Ph.D., Certificate & Diploma programmes) through 27 departments under 4 important Schools: Engineering, Humanities & Social Sciences, Management, and Sciences. In addition to this the University offers 7 programmes in open and distance mode under its Centre for Distance and Online Education. The academic programmes offered in the University have a distinct focus on Science, Technology, Humanities and Social Sciences, reflecting the very purpose and mandate of the University.

In addition to the state-of-the-art laboratories in the Departments the University has a Sophisticated and Analytical Instrumentation Centre (SAIC) housing a number of high end instruments. The Central Library is a knowledge repository and a learning centre with more than 1,12,888 documents comprising books, theses, journals/e-journals, conference proceedings, CDs, along with latest academic softwares. The Library is fully automated and is equipped with RFID system.

The student community at the University is quite vibrant with students coming in from different parts of the country. There is student representation from several foreign countries such as Bangladesh, Egypt, Ethiopia, Lesotho, Madagascar, Syria, Tanzania and Thailand. There are 6 hostels for men and 8 hostels for women, out of which two hostels are exclusive for PhD students and scholars. The diversity among students and the various co-curricular programmes dotting the year contributes to a spirit of camaraderie. The University takes good care of the students by providing hostel, sports, gymnasium, and other essential facilities. Special care is taken to cultivate the minds of the students through various healthy practices. Tezpur University has been consistently winning accolades at the regional and national events every year.

Admission to various programmes in the University is through national level tests like CUET, JEE, GATE, CEED, GAT-B, CAT, MAT, NET/JRF and TUEE-2023. Students under various schemes of Govt. of India like ICCR, Direct Admission of students Abroad (DASA), Prime Minister's Special Scholarship Scheme (PMSS), QIP and ADF (AICTE). are also admitted in the University. The talent & quality of the students can be gauged from the fact that the University students have been awarded the prestigious Gandhian Young Technological Innovation (GYTI) Awards four times (2017, 2018, 2019 & 2021) for their innovative ideas.

Our faculty members are equipped with respective domain competencies and quite capable of providing both

knowledge and skill-based education. They have brought many laurels to the University. To name a few, 7 faculty members of the University have featured in the list of the world's top 2% scientists prepared by a team of scientists at Stanford University, USA in 2020; the prestigious Visitor's Awards in research category in 2017 and in 2018; Visitor's Award for Technology Development in 2020. Four faculty members are already Fellows of the Royal Society of Chemistry (FRSC).

Tezpur University is working towards integrating the various aspects of NEP 2020 in its true nature and spirit. It has an academic architecture integrating processes aligned to the recommendations of NEP 2020. The University has already introduced the provision of lateral Entry in B.Tech programme, lateral exit in Integrated MA/M.Com/M.Sc programme and credit transfer system. Skill component is incorporated with the general education for each of the UG and PG programmes.

University has registered for Academic Bank of Credit through the Digi-locker NAD platform, for the effective implementation of NEP. Credits of the course work earned by the PhD students in other Universities/Institutions such as JNU, NEHU, NIT Silchar, Dibrugarh University, IUCAA and IIT Bombay, who joined this University are transferred and the students have been exempted from course work in the University.

To catalyse multidisciplinary research, the Centre for Multidisciplinary Research (CMDR) has been established in 2021 in the University to provide a platform to address societal problems through a multidisciplinary approach with focus in research areas relevant to 21st century, (viz. Big data analytics, AI, disease biology and human health, food processing, nutrition, clean energy, and climate change).

With the introduction of the Learning Outcome Based Curriculum Framework (LOCF) by the UGC, actions have been taken to transform the curriculum towards Outcome Based Assessment (OBA). The departments have developed Course Outcomes (COs) for the courses under various programmes which were mapped to Programme Outcomes (POs) and Programme Specific Outcomes (PSOs) of the programme.

With its transparent, participatory, and inclusive governance, Tezpur University has created a distinctively conducive environment leading to impressive achievements and awards, such as Visitor's Best University in 2016, THE Asian University Rankings 301-350 in 2021, NIRF Ranking 73 (overall) in 2021, QS Asia University Rankings 281-290 in 2023 and THE World University Ranking 1001-1200 in 2023.

Our system is designed to meet the aspirations of the new generation and at the same time; we continue to embrace values of inclusivity, tolerance, equality, and diversity. The prospectus provides detailed information on our programmes, fee structure, general rules, and eligibility criteria.

Looking forward to meeting you all,

With best wishes,

Vice Chancellor

SK
Shambhu Nath Singh
6/6/23

Vice-Chancellor
Professor Shambhu Nath Singh

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TEZPUR UNIVERSITY

তেজপুর বিশ্ববিদ্যালয়

তেজপুর
বিশ্ববিদ্যালয়

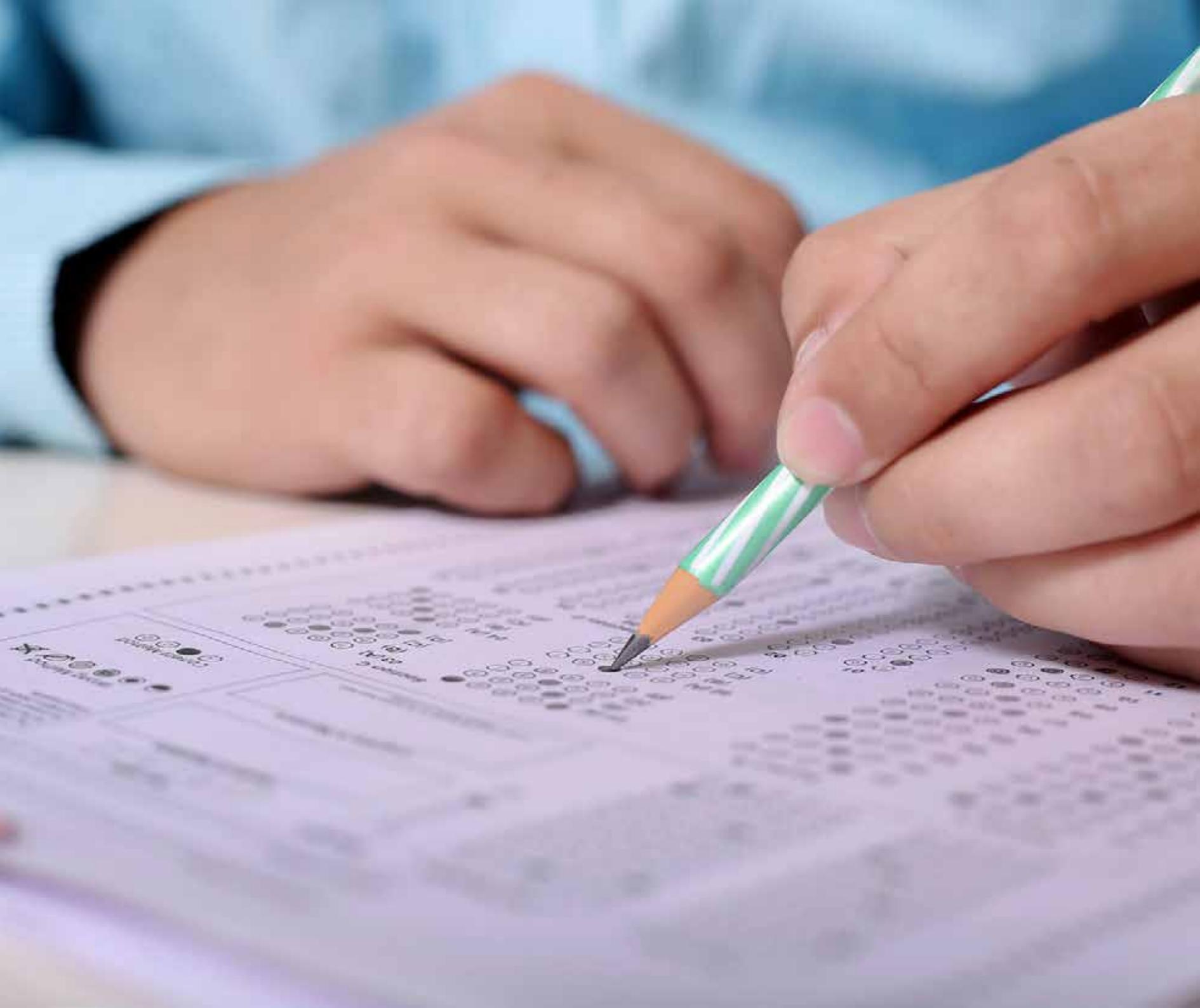




How to Apply at Tezpur University?

Candidate can check the prospectus Online for eligibility and intake of each academic programme.

- The Admission cum Counseling Form (ACF) will be available at TU admission portal.
- Candidates need to register online to get Login-id and Password.
- Candidate should fill up the Admission cum Counseling Form (ACF) and need to pay the required fee using login ID and Password.
- Candidates can apply for 3 programmes with a single application form.
- Candidates can apply for a maximum of two Ph.D. programmes at different departments.
- No candidates will receive any application form by post or courier.



EXAMINATION SCHEDULE

TEZPUR UNIVERSITY ENTRANCE EXAMINATION (TUEE- 2023)

May 26, 2023 (10 AM to 12 Noon)	Friday	May 26, 2023 (2 PM to 4 PM)	Friday
<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Food Engineering and Technology 2. B.Ed 3. P.G. Diploma in Translation (Hindi) 4. M.A. in Mass Communication and Journalism/M.A. in Communication for Development 5. Master of Design (M. Des) 6. M. Tech. in Food Engineering and Technology 7. M. Tech. in Energy Technology 8. Ph.D. in Social Work 9. Ph.D. in Computer Science and Engineering (CSE) 10. Ph.D. in Energy 11. Ph.D. in English 12. MTech in Bioelectronics 		<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Electronics and Communication Engineering 2. M.A. in Social Work 3. P.G. Diploma in Women Studies 4. Master of Computer Application (MCA) 5. Ph.D. in Mass Communication and Journalism 6. Ph.D. in Electrical Engineering 7. Ph.D. in Mathematical Sciences/ Ph.D. in Applied Science (Mathematics) 8. Ph.D. in Chemical Sciences/ Ph.D. in Applied Science (Chemistry) 9. Ph.D. in Business Administration 10. Ph.D. in Civil Engineering 	
May 27, 2023 (10 AM to 12 Noon)	Saturday	May 27, 2023 (2 PM to 4 PM)	Saturday
<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Mechanical Engineering 2. M.A. in Cultural Studies 3. Master of Laws (LLM) 4. M.Com 5. M. Tech. in Mechanical Engineering 6. Ph.D. in Sociology 7. Ph.D. in Education 8. Ph.D. in Physics/ Ph.D. in Applied Science (Physics) 9. Ph.D. in Food Engineering & Technology 10. Ph.D. in Linguistics and Language Technology 		<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Civil Engineering 2. M.A. in Sociology 3. MSc. in Environmental Science 4. M. Tech. in Civil Engineering 5. M. Tech. in Information Technology 6. M. Tech. in Electronics Design and Technology 7. Ph.D. in Mechanical Engineering 8. Ph.D. in Commerce 9. Ph.D. in Cultural Studies 10. Ph.D. in Environmental Science 	

May 28, 2023 (10 AM to 12 Noon)	Sunday
<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Electrical Engineering 2. M.A. in Linguistics and Language Technology 3. Master of Tourism and Travel Management (MTTM) 4. M.Sc. in Chemistry 5. M.Sc. in Physics 6. M.Sc. in Mathematics 7. Ph.D. in Multidisciplinary areas of research 	

May 28, 2023 (2 PM to 4 PM)	Sunday
<ol style="list-style-type: none"> 1. Lateral Entry to 2nd year of B. Tech. in Computer Science and Engineering 2. M.A. in English 3. M.A. in Education 4. M.A. in Hindi 5. M.A. in Assamese 6. M. Tech. in Computer Science and Engineering (CSE) 7. Ph.D. in Hindi 8. Ph.D. in Electronics and Communication Engineering 9. Ph.D. in Molecular Biology and Biotechnology 10. Ph.D. in Women Studies 	



Useful Contacts

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PROGRAMME NAME AND PROGRAMME CODE

UG level

Sl. No	Programme Name	Code	Sl.No	Programme Name	Code
1	Lateral Entry to 2 nd year of B.Tech. in Civil Engineering	101	4	Lateral Entry to 2 nd year of B. Tech. in Electronics and Communication Engineering(ECE)	104
2	Lateral Entry to 2nd year of B.Tech. in Computer Science and Engineering (CSE)	102	5	Lateral Entry to 2 nd year of B.Tech. in Food Engineering and Technology(FET)	105
3	Lateral Entry to 2nd year of B.Tech. Electrical Engineering (EE)	103	6	Lateral Entry to 2nd year of B.Tech. in Mechanical Engineering(ME),	106

PG level

Sl.No	Programme Name	Code	Sl. No	Programme Name	Code
1	M. Tech. in Civil Engineering	201	16	P.G. Diploma in Translation(Hindi)	216
2	M.Tech. in Computer Science and Engineering	202	17	M.A. in Hindi	217
3	M.Tech. in Information Technology	203	18	Master of Laws(LL. M.)	218
4	Master of Computer Applications (MCA)	204	19	M.A. in Linguistics and Language Technology	219
5	Master of Design (M. Des.)	205	20	M.A. in Mass Communication and Journalism/M.A. in Communication for Development	220
6	M.Tech. in Bioelectronics	206	21	M.A. in Social Work	221
7	M.Tech. in Electronics Design and Technology	207	22	M.A. in Sociology	222
8	M.Tech. in Energy Technology	208	23	M.Sc. in Chemistry	223
9	M.Tech. in Food Engineering and Technology	209	24	M.Sc. in Environmental Science	224
10	M.Tech. in Mechanical Engineering	210	25	M.Sc. in Mathematics	225
11	M.A. in Assamese	211	26	M.Sc. in Physics	226
12	M.A. in Cultural Studies	212	27	M. Com.	227

13	B. Ed.	213
14	M.A. in Education	214
15	M.A. in English	215

28	Master of Tourism and Travel Management(MTTM)	228
29	P.G. Diploma in Women Studies	229

(Ph.D.level)

Sl. No	Programme Name	Code
1	Ph.D. in Applied Sciences (Chemistry)*	318A
2	Ph.D. in Applied Sciences (Mathematics)*	320A
3	Ph.D. in Applied Sciences (Physics)*	322A
4	Ph.D. in Civil Engineering	301
5	Ph.D. in Computer Science and Engineering	302
6	Ph.D. in Electrical Engineering	303
7	Ph.D. in Electronics and Communication Engineering	304
8	Ph.D. in Energy	305
9	Ph.D. in Food Engineering and Technology	306
10	Ph.D. in Mechanical Engineering	307
11	Ph.D. in Cultural Studies	308
12	Ph.D. in Education	309
13	Ph.D. in English	310
14	Ph.D. in Hindi	311

Sl.No	Programme Name	Code
15	Ph.D. in Linguistics and Language Technology	312
16	Ph.D. in Mass Communication and Journalism	313
17	Ph.D. in Social work	314
18	Ph.D. in Sociology	315
19	Ph.D. in Business Administration	316
20	Ph.D. in Commerce	317
21	Ph.D. in Chemical Sciences	318
22	Ph.D. in Environmental Science	319
23	Ph.D. in Mathematical Sciences	320
24	Ph.D. in Molecular Biology and Biotechnology	321
25	Ph.D. in Physics	322
26	Ph.D. in Women Studies	323
27	Ph.D. in Multidisciplinary Areas of Research	324

*Examination for these programmes will be conducted with regular Ph.D. programmes for Chemical Scs.(318), Mathematical Scs.(320) and Physics(322).

Question pattern for TUEE 2023

Sl no	Program	MCQ	Descriptive
1	B.Ed.	60%	40%
2	Lateral Entry to 2 nd year of B. Tech. (All programs)	100%	-
3	LL.M.	60%	40%
4	M. Com.	100%	-
5	M. Tech. in Bioelectronics	100%	-
6	M. Tech. in Civil Engineering	100%	-
7	M. Tech. in CSE	100%	-
8	M. Tech. in Energy Technology	100%	-
9	M. Tech. in Food Engineering and Technology	100%	-
10	M. Tech. in Information Technology	100%	-
11	M.A. in Assamese	60%	40%
12	M.A. in Cultural Studies	60%	40%
13	M.A. in Education	60%	40%
14	M.A. in English	60%	40%
15	M.A. in Hindi	60%	40%
16	M.A. in Linguistics and Language Technology	60%	40%

Sl no	Program	MCQ	Descriptive
17	M.A. in Mass Communication and Journalism/M.A. in Communication for Development	60%	40%
18	M.A. in Social Work	60%	40%
19	M.A. in Sociology	60%	40%
20	M.Sc. in Chemistry	100%	-
21	M.Sc. in Environmental Science	100%	-
22	M.Sc. in Mathematical Sciences/ Ph.D. in Applied Science (Mathematics)	100%	-
23	M.Sc. in Physics	100%	-
24	M.Tech. in Electronics Design and Technology	100%	-
25	M.Tech. in Mechanical Engineering	100%	-
26	Master of Computer Application (MCA)	100%	-
27	Master of Design (M.Des)	100%	-
28	Master of Tourism and Travel Management (MTTM)	100%	-
29	P.G. Diploma in Translation (Hindi)	60%	40%
30	P.G. Diploma in Women Studies	60%	40%
31	Ph. D. in Social Work	40%	60%

Sl no	Program	MCQ	Descriptive
32	Ph.D. in Business Administration	100%	-
33	Ph.D. in Chemical Sciences/ Ph.D. in Applied Science (Chemistry)	100%	-
34	Ph.D. in Civil Engineering	100%	-
35	Ph.D. in Commerce	100%	-
36	Ph.D. in Computer Science and Engineering	100%	-
37	Ph.D. in Cultural Studies	40%	60%
38	Ph.D. in Education	40%	60%
39	Ph.D. in Electrical Engineering	100%	-
40	Ph.D. in Electronics and Communication Engineering	100%	-
41	Ph.D. in Energy	100%	-
42	Ph.D. in English	40%	60%
43	Ph.D. in Environmental Science	100%	-
44	Ph.D. in Food Engineering & Technology	100%	-
45	Ph.D. in Hindi	40%	60%
46	Ph.D. in Linguistics and Language Technology	40%	60%

Sl no	Program	MCQ	Descriptive
47	Ph.D. in Mass Communication and Journalism	40%	60%
48	Ph.D. in Mathematical Sciences	100%	-
49	Ph.D. in Mechanical Engineering	100%	-
50	Ph.D. in Molecular Biology and Biotechnology	100%	-
51	Ph.D. in Physics/ Ph.D. in Applied Science (Physics)	100%	-
52	Ph.D. in Sociology	40%	60%
53	Ph.D. in Women's Studies	40%	60%
54	PhD in Multidisciplinary areas of Research	100%	-

Syllabus and Eligibility Criteria for Tezpur University Entrance Examination(TUEE) 2023

Ph.D. programs

School of Humanities and Social Sciences			
Sl. No	Programmes	Eligibility	Syllabus
1	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.	General knowledge; matters of contemporary and historical social and cultural importance with particular reference to North East India, Cultural Studies as a discipline: its origin and evolution; theoretical legacies of the discipline of Cultural Studies; Cultural Memory; Cultural History of North East India; Oral History, Research Methods in general etc
2	Ph.D. in Education	Post Graduate in Education or in any allied discipline/ subjects with 55% marks.	<ul style="list-style-type: none"> ■ Research Methodology in Education- Concept of Educational Research, Methods of Research, Approaches of Research, Hypothesis, Synopsis, Sample-population, Designs of Research, Descriptive and Inferential Statistics, Research Report, Bibliography Etc. ■ Contemporary issues in Education- Educational scenario of India, Inclusive Education, RTE Act 2009, and Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc. ■ Perspectives in Education- Philosophical, Sociological and Psychological foundation of Education.
3	Ph.D. in English	M.A. in English (specialization may be in American Literature as well as in English Language Teaching, English Literature, Indian Writing in English, New Literature in English and Women's Writing in English).	<p>Div -I: English Language Teaching English in the global context, ELT in India in historical perspective. Principles and practice of ELT - Language acquisition, language learning- theories, principles; Language skills; Language teaching-different approaches (methods, techniques, procedures); Teaching of literature; Evaluation, testing. Syllabus designing and material production. English for Specific/Academic Purpose.</p> <p>Div -II: American Literature Research Methodology, Literary Theory and Criticism, American Literature</p> <p>Div -III: Indian Literature Research Methodology, Literary Theory and Criticism, Indian Writing in English</p> <p>Div -IV: Gender and Literature Research Methodology, Literary Theory and Criticism, Gender and Literature</p>

			<p>Div V: Life Writing, Travel Writing Research Methodology, Literary Theory and Criticism, Life Writing, Travel Writing</p> <p>Div VI; Film Adaption, Popular Culture Research Methodology, Literary Theory and Criticism, Life Writing, Travel Writing</p> <p>Div VII: Anglophone South Asian Literature, Ecocriticism Research Methodology, Literary Theory and Criticism, Life Writing, Travel Writing</p>
4	Ph.D. in Hindi	M.A. in Hindi	Hindi Bhasha evam Sahitya, Hindi Alochana, Hindi Patrakarita, Lok Sahitya, Tulnatmak Sahitya
5	Ph.D. in Linguistics and Language Technology	MA in Linguistics and Language Technology/MA in Linguistics/MA in Allied Subjects	Modern Linguistic theories (formal and functional, especially, Chomsky's generative theory, Cognitive Linguistics, Construction Grammar); Morphology; Phonetics and Phonology; Semantics and Pragmatics; Philosophy of Language (e.g. ordinary language philosophy; logical positivism); Sociolinguistics (e.g. bilingualism, multilingualism, politeness; Critical Discourse Analysis), Languages and linguistic situation of Northeast, Scheduled languages and non-scheduled languages, Language endangerment, Language policies and planning.
6	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.	Research methodology for social sciences, theoretical concepts of communication and media, a higher level of critical awareness about various important issues of mass media at national and international level.
7	Ph.D. in Social Work	M.A. in Social Work and allied Social Sciences such as Sociology, Psychology, Rural Development, Development Studies, Law, Public Health, Education and Management	<ul style="list-style-type: none"> ■ Social Work ■ Social work and allied social science theories ■ Social science research and statistics ■ General knowledge and aptitudes ■ Developmental issues ■ Civil society issues

8	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	<p>Research Methodology: Philosophy, science and research, Theory and field, Social research strategies, Research designs and sample designs, Planning a research project and formulating research questions, reviewing the literature, Ethics in social science research, Nature of quantitative research, Nature of qualitative research, participant observation and ethnography, Triangulation: mixed methods research, Problem of objectivity and subjectivity.</p> <p>Sociological Theory: Classical sociological traditions: Marx, Durkheim, Weber, Approaches to social reality: positivism, hermeneutics, post- structuralism, post-modernism, Functionalism and its critiques, neo- functionalism, Structuralism, social structure as model, structuration, Critical theory and Frankfurt School, Symbolic Interactionism, phenomenology, ethnomethodology, dramaturgy.</p> <p>Indian Society: Theories of Social Change in India, Caste, Varna and Class, Kinship systems, Secularism and Communalism, Nationalism, Nation Building, Regionalism.</p>
9	Ph.D. in Women studies	Masters degree with at least 55% marks in Women Studies/ Humanities/ Social Sciences with consistently good academic record. Candidates with Masters degree in Humanities and Social Sciences having one course in the area of women studies will be preferred.	Women's history, feminist research methodology, women and development, women and health.

School of Engineering			
Sl. No	Programmes	Eligibility	Syllabus
1	Ph.D. in Applied Sciences -Chemistry	1. M.Sc. in Chemistry/ Chemical Sciences/ Polymer Chemistry/Polymer Science/ Physics/ Nano Science/ Material Science/ Environmental Science or allied subjects OR 2. M.E./M.Tech in allied subjects (Chemical Engineering/ Polymer Technology/ Material Sciences/ Environmental Engineering/ Energy etc.)	Organic Chemistry, Inorganic Chemistry, Physical and Quantum Chemistry, Polymer Chemistry, Analytical Chemistry, Spectroscopy, Interdisciplinary topics from post graduate level curriculum of all leading Indian Universities.

2	Ph.D. in Applied Sciences - Mathematics	<p>1. M.Sc./M.A./M.E./M.Tech./MS/BS - MS/ Integrated M. Sc. Degree in Mathematics/ Statistics/Engineering Mathematics / Mathematics and Computing/ Applied Mathematics/ Operations Research/ Mechanical Engg./ Industrial Engineering/ Computer Science and Engineering/ Information Technology/any allied subject with 55% marks in aggregate or equivalent CGPA.</p> <p style="text-align: center;">OR</p> <p>2. B.Tech. in Mathematics and Computing/any allied subjects 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.</p>	<p>Linear Algebra, Abstract Algebra, Real Analysis, Complex Analysis, Functional Analysis, Topology, Ordinary and Partial Differential Equations, Numerical Analysis, Measure Theory, Classical Mechanics, Probability and Statistics, Mathematical Programming, Number Theory, Special Functions, Integral Equations and Transforms, Calculus of Variation.</p>
3	Ph.D. in Applied Sciences - Physics	<p>1. M.Sc./Integrated M.Sc. in Physics/ Astrophysics/ Electronics/ Geophysics/ Material Science/ Applied Mathematics/ Nanoscience and Technology/ Biotechnology/Environmental Science and Chemical Science.</p> <p style="text-align: center;">OR</p> <p>2. M.Phil., M.Tech. in Solid State Material/ Material Science/ Electronics/ Energy/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Sciences.</p> <p style="text-align: center;">OR</p> <p>3. M.S Astronomy and Astrophysics.</p> <p style="text-align: center;">OR</p> <p>4. B.Tech. in Engineering Physics with 80% marks in aggregate or equivalent CGPA</p>	<p>M.Sc. Physics syllabus of any Indian University (Quantum Mechanics, Classical Mechanics, Mathematical Physics, Condensed matter Physics, Statistical Physics, Atomic and Molecular Physics, Nuclear and Particle Physics, Astrophysics, Electrodynamics, Electronics)</p>

4	Ph.D. in Civil Engineering	<p>(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.</p>	<p>Soil formation, Soil structure, Soil properties, Permeability and seepage, Stress distribution in soils, Compaction, Consolidation, Shear strength, Soil exploration & site investigation, Shallow foundations, Deep Foundations, Ground improvement techniques, Lateral earth pressure, Stability of slope, Introduction to soil dynamics & machine foundation, Liquefaction of soils, Pavement material.</p>
			<p>Water and Wastewater Quantity Estimation, Water Quality, Microbiology, Environmental Chemistry, Dissolved oxygen Model, Sewer Design, Type I and II suspensions, Sedimentation Tanks, Coagulation and Flocculation, Hydraulics of Filtration, Disinfection Methods, Ion exchange and Adsorption, Water Softening, Manganese and Iron Removal, Wastewater treatment, Septic tank, wastewater stabilization ponds, aerated ponds and oxidation ditches.</p> <p>Fluid properties, Application of the continuity, momentum and energy equations, Flow in pipes, Boundary Layer theory, forces on submerged bodies, hydrostatic forces on bodies, buoyancy, kinematics of flow, dynamics of fluid flow, Dimensional analysis; flow in open channel, hydraulic machines, Hydrologic cycle, precipitation and abstraction losses, hydrograph analysis, flood estimation, groundwater hydrology –well hydraulics, aquifers, Darcy's Law, irrigation systems and methods, Gravity Dams and Spillways</p>
5	Ph.D. in Computer Science and Engineering	<p>M.Tech. in Computer Science/ I.T./ Electronics, MCA, M.Sc. in Computer Science, I.T. 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.</p>	<ul style="list-style-type: none"> ■ Basic 10+2 mathematics ■ Data structures - Array, stack, queue, linked list, binary tree, heap, AVL tree. ■ Programming languages - Languages like C and C++. ■ Design and analysis of algorithms - Asymptotic notation, sorting, selection, searching. ■ Computer organization and architecture - Number representation, computer arithmetic, memory organization, I/O Organization. ■ Operating systems- Memory management, processor management, critical section problem, deadlocks.

			<ul style="list-style-type: none"> ■ Formal languages and automata theory - Finite automata and regular expressions, pushdown automata, context-free grammars, Turing machines, elements of undecidability. ■ Principles of Compiler Construction - Lexical analyzer, parser, syntax-directed translation, intermediate code generation. ■ Database management systems - Relational model, relational algebra, relational calculus, functional dependency, normalization (up to BCNF). ■ Computer networks - OSI, LAN technology - Bus/tree, Ring, Star; MAC protocols; WAN technology - circuit switching, packet switching; Data communications - data encoding, routing, flow control, error detection/correction, Internet working, TCP/IP networking including IPv4. ■ Switching Theory and Logic Design - Boolean algebra, minimization of Boolean functions, combinational and sequential circuit synthesis and design. MCA Syllabus for T
6	Ph.D. in Electrical Engineering	<p>ME/MTech in any relevant discipline in Engineering or MBBS with MD/MS or M.Sc. in any relevant science discipline, OR</p> <p>BE/BTech with 75% marks in aggregate or equivalent CGPA with a valid GATE Score.</p> <p>Minimum two recommendation Letters from the Institute/ University from where B.E./B.Tech degree was obtained.</p>	<p>Sensor fabrication for application in food industry, IoT and health monitoring, Green energy sensor.</p> <p>Control systems, smart energy system, Chaos, IoT, Waste water purification. Renewable energy, power system, Electric drives, Electrical vehicles. Power electronics and drives, Microgrids/Smart grids</p>
7	Ph.D. in Electronics and Communication Engineering	<p>M.E. / M.Tech. / M.Sc. Engg. /</p> <p>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. OR 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.</p>	<p>Section 1: Engineering Mathematics:</p> <p><i>Linear Algebra:</i> Vector space, basis, linear dependence and independence, matrix algebra, eigenvalues and eigenvectors, rank, solution of linear equations- existence and uniqueness</p> <p><i>Calculus:</i> Mean value theorems, theorems of integral calculus, evaluation of definite and improper integrals, partial derivatives, maxima and minima, multiple integrals, line, surface and volume integrals, Taylor series. <i>Differential Equations:</i> First order equations (linear and nonlinear), higher order linear differential equations, Cauchy's and Euler's equations, methods of solution using variation of parameters, complementary function and particular integral, partial differential equations, variable separable method, initial and boundary value problems.</p>

		<p><i>Vector Analysis:</i> Vectors in plane and space, vector operations, gradient, divergence and curl, Gauss's, Green's and Stokes' theorems. <i>Complex Analysis:</i> Analytic functions, Cauchy's integral theorem, Cauchy's integral formula, sequences, series, convergence tests, Taylor and Laurent series, residue theorem <i>Probability and Statistics:</i> Mean, median, mode, standard deviation, combinatorial probability, probability distributions, binomial distribution, Poisson distribution, exponential distribution, normal distribution, joint and conditional probability.</p> <p>Section 2: Networks, Signals and Systems</p> <p>Circuit analysis: Node and mesh analysis, superposition, Thevenin's theorem, Norton's theorem, reciprocity. Sinusoidal steady state analysis: phasors, complex power, maximum power transfer. Time and frequency domain analysis of linear circuits: RL, RC and RLC circuits, solution of network equations using Laplace transform. Linear 2-port network parameters, wye-delta transformation. Continuous-time signals: Fourier series and Fourier transform, sampling theorem and applications. Discrete-time signals: DTFT, DFT, z-transform, discrete-time processing of continuous-time signals. LTI systems: definition and properties, causality, stability, impulse response, convolution, poles and zeroes, frequency response, group delay, phase delay.</p> <p>Section 3: Electronic Devices:</p> <p>Energy bands in intrinsic and extrinsic semiconductors, equilibrium carrier concentration, direct and indirect band-gap semiconductors. Carrier transport: diffusion current, drift current, mobility and resistivity, generation and recombination of carriers, Poisson and continuity equations. P-N junction, Zener diode, BJT, MOS capacitor, MOSFET, LED, photo diode and solar cell.</p> <p>Section 4: Analog Circuits:</p> <p>Diode circuits: clipping, clamping and rectifiers, BJT and MOSFET amplifiers: biasing, ac coupling, small signal analysis, frequency response.</p> <p>Current mirrors and differential amplifiers. Op-amp circuits: Amplifiers, summers, differentiators, integrators, active filters, Schmitt triggers and oscillators.</p>
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Section 5: Digital Circuits and Microprocessor:

Number representations: binary, integer and floating-point-numbers. Combinatorial circuits: Boolean algebra, minimization of functions using Boolean identities and Karnaugh map, logic gates and their static CMOS implementations, arithmetic circuits, code converters, multiplexers, decoders sequential circuits: latches and flip-flops, counters, shift-registers, finite state machines, propagation delay, setup and hold time, critical path delay. Data converters: sample and hold circuits, ADCs and DACs. Semiconductor memories: ROM, SRAM, DRAM. 8085 Microprocessor: Programmers model, register structure, addressing modes and assembly languages, interrupts. Peripherals: Programmable interrupt controller (8259), programmable peripheral interface (8255), serial communication (8251), programmable timer and event counter (8254) and DMA controller (8257)

Section 6: Control Systems:

Basic control system components; Feedback principle; Transfer function; Block diagram representation; Signal flow graph; Transient and steady-state analysis of LTI systems; Frequency response; Routh-Hurwitz and Nyquist stability criteria; Bode and root-locus plots; Lag, lead and lag lead compensation; State variable model and solution of state equation of LTI systems.

Section 7: Communications and microwave:

Random processes: autocorrelation and power spectral density, properties of white noise, filtering of random signals through LTI systems. Analog communications: amplitude modulation and demodulation, angle modulation and demodulation, spectra of AM and FM, super heterodyne receivers. Information theory: entropy, mutual information and channel capacity theorem. Digital communications: PCM, DPCM, digital modulation schemes (ASK, PSK, FSK, QAM), bandwidth, inter-symbol interference, MAP, ML detection, matched filter receiver, SNR and BER. Fundamentals of error correction, Hamming codes, CRC. Passive Microwave Devices and Components - Reciprocal and non-reciprocal devices and their applications. Guided and Free Space Propagation. Active Microwave Devices - Tubes and Solid State Devices, their principles and applications. Measurement Systems and Measurement Techniques. Microwave Materials and their Properties

			<p>Section 8: Electromagnetics: Maxwell's equations: differential and integral forms and their interpretation, boundary conditions, wave equation, Poynting vector. Plane waves and properties: reflection and refraction, polarization, phase and group velocity, propagation through various media, skin depth. Transmission lines: equations, characteristic impedance, impedance matching, impedance transformation, S-parameters, Smith chart. Rectangular and circular waveguides, light propagation in optical fibers, dipole and monopole antennas, linear antenna arrays.</p> <p>Section 9: Electrical Machines: Single phase transformer: equivalent circuit, phasor diagram, open circuit and short circuit tests, regulation and efficiency; Three-phase transformers: connections, vector groups, parallel operation; Auto-transformer, Electromechanical energy conversion principles; DC machines: separately excited, series and shunt, motoring and generating mode of operation and their characteristics, speed control of dc motors; Three-phase induction machines: principle of operation, types, performance, torque-speed characteristics, no-load and blocked-rotor tests, equivalent circuit, starting and speed control; Operating principle of single-phase induction motors; Synchronous machines: cylindrical and salient pole machines, performance and characteristics, regulation and parallel operation of generators, starting of synchronous motors; Types of losses and efficiency calculations of electric machines</p>
8	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.	Energy conversion and Energy systems, Energy-Environment interaction.

9	Ph.D. in Food Engineering and Technology	<p>M.Tech/ M.E./ Integrated M.Tech in Food Engineering and Technology/ Food and Dairy related other programme/ Mechanical Engineering/ Chemical Engineering/ Bio-process/ Bio-chemical/ Biotechnology or M.Sc/ Integrated M.Sc in Food Engineering and Technology/ Food and Dairy related other programme/ Applied Microbiology/ Microbiology/ Bio-Chemistry/ Chemistry/ Biotechnology/ Biosciences 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</p>	<p>Food Engineering; Food Chemistry & Nutrition; Food Microbiology; Food Product technology (As per the outline of GATE syllabus for Food Technology)</p>
10	Ph.D. in Mechanical Engineering	<p>“M.E. / M.Tech. / M.Sc. (Engg.) in Mechanical Engineering or any other relevant Engineering branches including Chemical Engineering and Materials Science Engineering. Or, M.Sc Degree in any relevant discipline with CSIR-UGC JRF/NET Qualified certificate or a valid GATE score. Candidates other than those with M.Sc. Mathematics must have studied Mathematics up to BSc level. Or, B.E. / B.Tech degree 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”</p>	<p>Engineering Mathematics</p> <p>Linear Algebra: Matrix algebra, systems of linear equations, eigenvalues and eigenvectors.</p> <p>Calculus: Functions of single variable, limit, continuity and differentiability, mean value theorems, indeterminate forms; evaluation of definite and improper integrals; double and triple integrals; partial derivatives, total derivative, Taylor series (in one and two variables), maxima and minima, Fourier series; gradient, divergence and curl, vector identities, directional derivatives, line, surface and volume integrals, applications of Gauss, Stokes and Green’s theorems.</p> <p>Differential equations: First order equations (linear and nonlinear); higher order linear differential equations with constant coefficients; Euler-Cauchy equation; initial and boundary value problems; Laplace transforms; solutions of heat, wave and Laplace’s equations.</p> <p>Complex variables: Analytic functions; Cauchy-Riemann equations; Cauchy’s integral theorem and integral formula; Taylor and Laurent series.</p> <p>Probability and Statistics: Definitions of probability, sampling theorems, conditional probability; mean, median, mode and standard deviation; random variables, binomial, Poisson and normal distributions.,</p>

		<p>Numerical Methods: Numerical solutions of linear and non-linear algebraic equations; integration by trapezoidal and Simpson's rules; single and multi-step methods for differential equations.</p> <p>Applied Mechanics and Design</p> <p>Engineering Mechanics: Free-body diagrams and equilibrium; friction and its applications including rolling friction, belt-pulley brakes, clutches, screw jack, wedge, vehicles, etc.; trusses and frames; virtual work; kinematics and dynamics of rigid bodies in plane motion; impulse and momentum (linear and angular) and energy formulations; Lagrange's equation.</p> <p>Mechanics of Materials: Stress and strain, elastic constants, Poisson's ratio; Mohr's circle for plane stress and plane strain; thin cylinders; shear force and bending moment diagrams; bending and shear stresses; concept of shear centre; deflection of beams; torsion of circular shafts; Euler's theory of columns; energy methods; thermal stresses; strain gauges and rosettes; testing of materials with universal testing machine; testing of hardness and impact strength.</p> <p>Theory of Machines: Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of linkages; cams; gears and gear trains; flywheels and governors; balancing of reciprocating and rotating masses; gyroscope.</p> <p>Vibrations: Free and forced vibration of single degree of freedom systems, effect of damping; vibration isolation; resonance; critical speeds of shafts.</p> <p>Machine Design: Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; principles of the design of machine elements such as bolted, riveted and welded joints; shafts, gears, rolling and sliding contact bearings, brakes and clutches, springs.</p> <p>Fluid Mechanics and Thermal Sciences</p> <p>Fluid Mechanics: Fluid properties; fluid statics, forces on submerged bodies, stability of floating bodies; control-volume analysis of mass, momentum and energy; fluid acceleration; differential equations of continuity and momentum; Bernoulli's equation; dimensional analysis; viscous flow of incompressible fluids, boundary layer, elementary turbulent flow, flow through pipes, head losses in pipes, bends and fittings; basics of compressible fluid flow.</p>
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School of Engineering			
Sl. No	Programmes	Eligibility	Syllabus
1	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.).	Organic Chemistry, Inorganic Chemistry, Physical and Quantum Chemistry, Polymer Chemistry, Analytical Chemistry, Spectroscopy, Interdisciplinary topics from post graduate level curriculum of all leading Indian Universities.
2	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.	Botany, Zoology, Agriculture, Physics, Chemistry, Mathematics, Statistics, Earth and Environmental Science from master's level curriculum of Indian Universities.

3	Ph.D. in Mathematical Sciences	M.A. / M.Sc. in Mathematics or M.A./M.Sc. in Statistics with requisite background in Mathematics.	Linear Algebra, Abstract Algebra, Real Analysis, Complex Analysis, Functional Analysis, Topology, Ordinary and Partial Differential Equations, Numerical Analysis, Measure Theory, Classical Mechanics, Probability and Statistics, Mathematical Programming, Number Theory, Special Functions, Integral Equations and Transforms, Calculus of Variation.
4	Ph.D. in Molecular Biology and Biotechnology	Masters in any branches of Life Sciences/ Physical Sciences/ Chemical Sciences/ Mathematical Sciences/ Agricultural Sciences / Veterinary or Sciences / Engineering Sciences /Medical Sciences or in any allied field. B.Tech./ B. E. degree with 80% marks in CGPA (with GATE score > 90.00 percentile) in Chemical Engineering/ Chemical Sciences/ Bioinformatics or any allied field. 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.	Master (MSc/MTech)/B.Sc (Graduation) level Life Science (includes Botany, Zoology, Microbiology, Biochemistry, Cell Biology, Physiology, Genetics etc.), basic bioinformatics, and Higher Secondary level Physics, Chemistry and Mathematics.
5	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.	M.Sc. Physics syllabus of any Indian University (Quantum Mechanics, Classical Mechanics, Mathematical Physics, Condensed matter Physics, Statistical Physics, Atomic and Molecular Physics, Nuclear and Particle Physics, Astrophysics, Electrodynamics, Electronics)

School of Management Sciences

Sl. No	Programmes	Eligibility	Syllabus
1	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.	<p>General Awareness: National and international economic environment, conceptual background and applications in economic theory.</p> <p>General English: Basic English grammar</p> <p>General Reasoning: Basic arithmetic and mathematics, Quantitative and alphabetic reasoning, pictorial reasoning.</p> <p>Research Methodology: Basic statistical tools: Measures of Central Tendency, Measures of Dispersion, Correlation, Index Numbers, Time series</p>

			analysis. Basics of Sampling: Sample Vs. Census; Probabilistic Sampling Techniques: Simple Random Sampling, Stratified Random Sampling, Cluster Sampling; Non- Probabilistic Sampling Techniques: Convenience Sampling, Judgement Sampling, Quota Sampling and Snowball Sampling. Basics of Hypothesis Testing: Null and alternative hypothesis, Type I error, Type II error. Style of Referencing: American Psychological Association (APA) 6th Edition style.
2	Ph.D. in Commerce	1. M.Com., 2. M.A./M.Sc. in Economics, 3. FCA/ FCMA/ FCS.	<ol style="list-style-type: none"> 1. Research Methodology 2. Accounting (PG and NET Standard) 3. Finance (PG and NET Standard) 4. Economics (including Indian Economy)

Centre for Multidisciplinary Research			
Sl. No	Programmes	Eligibility	Syllabus
1	Ph.D. in Multidisciplinary Areas of Research	<p>Master's degree in any discipline with minimum 55% or equivalent grade from a recognized University in India or equivalent degree from abroad with a good academic career.</p> <p>Candidates with GATE, UGC/CSIR –JRF, UGC/CSIR-NET or NE-SET will be given preference.</p> <p>B.Tech/BE with minimum 75% or equivalent grade will also be considered eligible for Ph.D. admission. For candidates having more than 10 years of industrial experience, minimum marks may be relaxed.</p>	<p>General aptitude in research as evidenced by comprehensive knowledge on issues related to scientific thinking, research ethics (Good Academic Research Practices), sustainability, development, economy, technology, environment, peace, conflict, and harmony.</p> <p>Comprehensive understanding of programmes and policies of Government of India related to welfare and development, food security, access to education including provisions of NEP2020.</p> <p>Basic understanding of major challenges faced by mankind including global, national, and regional initiatives to combat such challenge (for example, not limited to, modern lifestyle vis-à-vis mental health, exploitation of natural resources vis-à-vis climate change) including SDG and Net Zero targeting.</p> <p>Fundamental knowledge in mathematics, science, statistics, history, creative arts subjects and geography. Working knowledge on ethical use of ICT, and of Language and communication, basic understanding on education as a mean of attaining higher order thinking skills and a driver of self-directed learning.</p>

For PG programs

School of Humanities and Social Sciences		
Sl. No	Programmes	Syllabus
1.	B.Ed.	<ul style="list-style-type: none"> ■ General Awareness-Current affairs, important facts, politics, education, geography, economics etc. Teaching Aptitude-Teaching-Learning, Teacher's role, Classroom communication etc. ■ Contemporary Issues in Education- Educational scenario of India, Inclusive Education, RTE Act 2009, Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc. ■ ICT in Education- Online Learning Platforms, Massive Open and Online Courses, classroom communication, teaching learning aids, Educational technology, Web 2.0 Technologies etc. ■ Perspectives in Education-Philosophical, Sociological and Psychological.
2.	M.A. in Assamese	<p>Assamese Literature</p> <ul style="list-style-type: none"> a. A brief history of Assamese Literature (From beginning to present times) <p>Assamese Language and Script</p> <ul style="list-style-type: none"> a. A brief history of Assamese Language (From beginning to present times) b. Evolution of Assamese Script c. Dialectology and dialects of Assamese Language d. Assamese Phonology and Morphology <p>Assamese Culture</p> <ul style="list-style-type: none"> a. Assamese Folklore b. Cultural History of Assam c. Fairs and Festivals of Assam d. Ethnic groups of Assam and their cultural contributions <p>Critical Theory (Eastern and Western)</p>
3.	M.A. in Communication for Development	<ul style="list-style-type: none"> ■ English language and grammar, Current affairs, General knowledge, general idea about developmental issues and policies internationally and in India, basic awareness about mass media at national and international level for objective type questions. ■ Observational, analytical and creative writing skills for descriptive questions.
4.	M.A. in Cultural Studies	Issues related to North East India, History, Culture, Folklore, Society Performing Arts, Literature of NE India, Matters of Contemporary Importance, Film, Sports, Indian Literature, Indian Culture etc.
5	M.A. in Education	<ul style="list-style-type: none"> ■ Philosophical Perspective in Education: Philosophy and Education, Idealism, Naturalism, Pragmatism, Educational Practices – Kindergarten, Montessori, Dalton Plan, Project Method etc. ■ Sociological Perspective in Education: Education in relation to Society, Agencies of Socialization, Social Change, Social mobility and stratification etc.

	M.A. in Education	<ul style="list-style-type: none"> ■ Psychological Perspective in Education: Educational Psychology and Theories, Learning, intelligence, personality, child's growth and development etc. ■ Educational Technology: Concept and scope of Educational Technology, Educational Communication, Emerging technologies in education- ICT in Education, Technology based learning, MOOCs, SWAYAM, smart classroom etc. ■ Contemporary Issues in Education: Educational scenario of India, Inclusive Education, RTE Act 2009, Education for peace, yoga and gender, Constitutional Provisions, Environmental Education etc.
6.	M.A. in English	<ul style="list-style-type: none"> ■ BA Honours/Major level syllabi taught in Indian universities - Reading Literature (Genres, Movements, Schools, Terms), History of English Literature, English Poetry: Chaucer to Dryden, British Drama: Beginning to Shakespeare, Fiction: Early English Novels, English Poetry: The Augustans and the Romantics, Literary Theory and Criticism, Drama: Jacobean to Eighteenth Century, Fiction: Victorian and Modern, Poetry: Victorian to Modern, The English Essay, English Non-fictional Prose, Drama: Nineteenth and Twentieth Century, English for Communication, Phonetics of English and ELT, Postcolonial Literature. ■ English grammar, composition, comprehension, vocabulary, phrases and idioms, current affairs, great authors, books, prizes.
7.	M.A. in Hindi	Hindi Vyakaran, Hindi Bhasha, Hindi Sahitya, Bharatiya Aur Paschatya Kavya-Shastra, Hindi Patrakarita.
8.	Master of Laws (LLM)	<ul style="list-style-type: none"> ■ Constitutional Law: Preamble, Salient features of the Indian Constitution, Citizenship, Fundamental Rights, Writ Jurisdiction, Directive Principles of State Policy and Fundamental Duties, Judiciary, Executive, Parliament and State Legislatures, Amending Process of the Constitution, Union State Relationship and Emergency Provisions. ■ Jurisprudence: Nature and Sources of Law, Schools and Concepts of Jurisprudence. ■ Law of Crimes: Fundamental elements of crime, stages of crime, general explanations and exceptions, abetment, conspiracy and attempt, punishments, offences against state, offences affecting common well-being, offences affecting the human body, offences against property, offences relating to marriage and offences affecting reputation. ■ Family Law: Concepts in Family Law, Sources of Family Law in India, Marriage and Dissolution of Marriage, Adoption and Guardianship, Succession, Maintenance, Matrimonial Remedies ■ and Uniform Civil Code ■ Public International Law and Human Rights: Nature and definition of international law, Sources of International Law, Relationship between international law and municipal law, State recognition and state succession, Treaties: Formation, application, termination and reservation, UNO and its organs, Concept and Development of Human Rights, International Bill of Human Rights and Implementation of Human Rights in India. ■ Current Legal Affairs.
9.	M.A. in Linguistics and Language Technology	Basic grammar (syntax, morphology, phonetics, semantics), language and animal communication, English grammar (+12 level), sociolinguistics, language and society, bilingualism, multilingualism, languages and linguistic situation of Northeast, scheduled languages and non-scheduled languages, language endangerment, language policies and planning.

10.	M.A. in Mass Communication and Journalism	English language and grammar, Current affairs, General knowledge, a basic level of awareness about various aspects of mass media at national and international level for objective type questions. Observational, analytical and creative writing skills for descriptive questions.
11.	M.A. in Social Work	Current affairs, Logical Reasoning, Awareness on Social welfare schemes, Social Reform movements, Contemporary Social Issues, Rights Based Issues, Quantitative aptitude, Indian Constitution, Basic Concepts in Social Work, Social Legislations, Human Resource Management, English Language Proficiency, Basic Concepts in Social Science (Sociology, Economics, Political Science, Psychology, Research Methods in Social Sciences, Issues in North East India, Environmental and Ecological Issues
12.	M.A. in Sociology	<ul style="list-style-type: none"> ■ Sociology - Concepts and Principles: Definition and Emergence, Basic Concepts, Basic understanding of the works of Marx, Weber, Tonnies, Durkheim, Parsons and Merton, Basic kinship terminologies. ■ Indian Society: Basic Concepts: Caste, Varna, village, region, religion, Processes of Social Change: Sanskritisation, Westernisation, Modernisation, Development and Change, Nation, Nationalism and nation Building. ■ Northeast India: Basic understanding of the Region: Geography, Economy, Polity, Society, Language and Culture, Ethnicity and Identity Politics. ■ General Awareness: National and International: Current Affairs, Basic knowledge of culture, politics, geography, history and science, Basic information about the Indian Constitution.
13.	Post Graduate Diploma in Translation (Hindi)	Hindi Vyakaran, Hindi Bhasha, Hindi Sahitya
14.	Post Graduate Diploma in Women Studies	Women and society, woman's in Indian history, women in media, general aptitude, current affairs and computer aptitude.

School of Management Sciences

Sl. No	Programmes	Syllabus
1.	M.Com.	Accounting and Financial Management, Economics, Business Mathematics and Statistics, Banking, Insurance, Taxation, Management, Business Laws, General Business Awareness.
2.	Master of Tourism and Travel Management (MTTM)	<ul style="list-style-type: none"> ■ General Knowledge - Tourism destinations of Northeast India, India and the world. ■ History and mythology of Northeast India and India. ■ Current Affairs. ■ English - English Grammar; Sentence formation. ■ Reasoning.

School of Sciences		
Sl. No	Programmes	Syllabus
1.	M.Sc. in Chemistry	Inorganic Chemistry, Quantum Chemistry & Chemical Bonding, Organic Chemistry, Physical Chemistry, Spectroscopy from Undergraduate level curriculum of all leading Indian Universities.
2.	M.Sc. in Environmental Science	Botany, Zoology, Agriculture, Physics, Chemistry, Mathematics, Statistics, Earth and Environmental Science from Undergraduate level curriculum of Indian Universities.
3.	M.Sc. in Mathematics	<ul style="list-style-type: none"> ■ Classical Algebra: Inequalities. Sequences and series. Roots and their multiplicity. Descartes rule of sign, Sturm's theorem. Relation between the roots and coefficients of a general polynomial equation. Solution of cubic and biquadratic equations. Matrices, elementary operations on matrices, Determinants and its properties, Rank of a matrix, System of linear equations and their solutions. ■ Calculus: Rules of differentiation, Successive differentiation, Leibnitz theorem. Tangents and normal, Concavity and points of inflection, curvature of plane curves, Asymptotes. Properties of definite integrals. Rectification, Quadrature, volume and surface area of solids of revolution. Improper Integrals. Line integral, Double integral, triple integral, Jacobian, Surface integral and their applications. ■ Co-ordinate Geometry: Transformation of co-ordinate axes. Pair of straight lines. General equation of second degree and conic sections. Polar equation of a conic. Plane, straight line, Sphere, Cone and Cylinder. Central Conicoids. ■ Vectors: Algebra of vectors, Differentiation of vector point functions, Gradient, Divergence, Curl, Vector integration, Green, Gauss and Stokes Theorem. ■ Differential Equations: Ordinary differential equations(ODE) upto second order. ■ Mechanics: Parallel forces, Couples, coplanar forces. Centre of gravity, Friction, Principle of virtual work . Velocity and acceleration, Rectilinear motion with variable acceleration, Simple harmonic motion. Motion in resisting medium. Motion of particles of varying mass. Motion of a projectile. Central orbit and Kepler's laws of planetary motion. Moments and products of inertia. ■ Real Analysis: Real Numbers as a complete ordered field, Continuity and differentiability, Rolle's theorem, Mean value theorems , Taylor's theorem, expansion of functions by Maclaurin's theorem. Functions of two or more variables: Limit, Continuity, Partial derivatives, Euler's theorem on homogeneous functions, Differentiability, Chain rule, Directional derivatives, Gradient vectors and Tangent planes, Criteria for Maxima/Minima/Saddle points, Lagrange's method of multipliers. Sequences and series of functions, uniform convergence. Riemann integrals. ■ Abstract Algebra: Binary operation, group, subgroup, normal subgroup and quotient group. Cyclic group, symmetric group and alternating group. Homomorphism and isomorphism of groups. Ring, integral domain, field. Homomorphism and isomorphism of rings.

	M.Sc. in Mathematics	<ul style="list-style-type: none"> ■ Numerical Methods: Finite differences, divided differences and their properties. Interpolation, Hermite interpolation. Error associated interpolation. Roots of algebraic and transcendental equations: bisection method, Newton-Raphson method, secant method. Numerical integration: Trapezoidal rule, Simpson's 1/3rd and 3/8th rule of integration. Probability and Statistics: Measures of location, Measures of dispersion, Correlation and regression. Classical definition of probability, Random variables, Discrete and continuous probability distributions. Mathematical expectation. ■ Linear Algebra: Vector space, Subspace. Linear transformation, Eigenvalues and eigenvectors, Characteristic polynomial, Cayley-Hamilton Theorem. Inner product spaces. ■ Linear Programming: General linear programming problems, Graphical and simplex methods for solution of L.P.P. ■ Topology and Functional Analysis: Metric spaces, completeness. Uniform continuity. Topological spaces, basis, continuity, open functions, homeomorphisms. Normed linear spaces, Banach spaces. ■ Number Theory: Divisibility, Euclidean Algorithm. Prime numbers and fundamental theorem of arithmetic. Concept of congruence and its elementary properties, Chinese remainder theorem. ■ Complex Analysis: Complex numbers, Geometric representation of complex numbers. Continuity and differentiability of complex functions, Analytic functions, Cauchy-Riemann equations, harmonic functions. Complex integration, Cauchy-Goursat theorem, Cauchy integral formula and its applications
4.	M.Sc. in Physics	B.Sc. level syllabus of any Indian University (Classical Mechanics, Properties of matter, Quantum Mechanics, Atomic Physics, Solid State Physics, Nuclear Physics, Mathematical Physics, Thermodynamics and Statistical Physics, Electricity and Magnetism, Electronics)

School of Engineering		
Sl. No	Programmes	Syllabus
1.	M.Tech. in Bioelectronics	<ul style="list-style-type: none"> ■ B.E/B.Tech. level courses in Electronics Engineering, Electrical Engineering, Instrumentation Engineering, Communication Engineering, Biomedical Engineering, Chemical Engineering, Bioengineering, Computer Science and Engineering, Biotechnology. ■ M.Sc. level courses on Chemistry, Biophysics, Molecular Biology, Cell Biology and Molecular Biology and Biotechnology.
2.	M.Tech. in Civil Engineering	B.E/B.Tech. level courses in Civil Engineering
3.	M.Tech. in Computer Sc and Engineering (CSE)	<ul style="list-style-type: none"> ■ Analytical Reasoning. ■ Data Structures: Array, Stack, Queue, Linked List, Binary Tree, Heap, Graphs, AVL Tree, B-tree. ■ Graph Theory: Paths and Cycles, Connected Components, Trees, Digraphs.

	M.Tech. in Computer Sc and Engineering (CSE)	<ul style="list-style-type: none"> ■ Discrete Mathematics: Sets and Sequences Counting, Logic & Proofs, Recurrence Relations. Algebra of Matrices, Determinant, Eigenvalues and Eigenvectors of Matrices, ■ Design and Analysis of Algorithms: Asymptotic Notation, Searching, Sorting, Selection, Graph Traversal, Minimum Spanning Tree. ■ Formal Languages and Automata Theory: Finite Automata and Regular Expressions, Pushdown Automata, Context-free Grammar, Turing Machine, Elements of Undecidability. ■ Digital Logic Design: Boolean Algebra, Minimization of Boolean Functions, Combinational and Sequential Circuits - Synthesis and Design. ■ Computer Organization and Architecture: Number Representation, Computer Arithmetic, Memory Organization, I/O Organization. ■ Operating Systems: Memory Management, Processor Management, Device Management, File Systems. ■ Database Management Systems: Relational Model, Relational Algebra, Relational Calculus, Functional Dependency, Normalisation (2NF, 3NF and BCNF). ■ Principles of programming: types of programming languages, language, processors, program linking, program memory allocation, code optimization. ■ Computer Networks: OSI, LAN Technology - Bus / Tree, Ring, Star; MAC Protocols; WAN Technology - Circuit Switching, Packet Switching; Data Communications - Data Encoding, Routing, Flow Control, Error Detection/Correction, Inter-networking, TCP/IP Networking including IPv4.
4.	M.Tech. in Electronics Design and Technology	B.E. or equivalent level courses on Electronics and Communication Engineering, Electrical Engineering/ AMIE level courses in Electronics/Instrumentation Engineering.
5.	M.Tech. in Energy Technology	Energy sources and Energy conservation, Graduate level courses in Science and Engineering.
6.	M.Tech. in Food Engineering and Technology	<p>Part-I: Mathematics and General Engineering (weightage: 20%)</p> <ul style="list-style-type: none"> • Mathematics at the level of B. Tech. 1st and 2nd Semester • General Engineering: Thermodynamics; Fluid Mechanics; and Heat & Mass Transfer <p>Part-II: Food Engineering & Technology (weightage: 80%)</p> <ul style="list-style-type: none"> • Food Engineering; Food Chemistry & Nutrition; Food Microbiology; Food Product technology (As per the outline of GATE syllabus for Food Technology, copy attached)
7.	M.Tech. in Information Technology	<ul style="list-style-type: none"> ■ Analytical Reasoning ■ Discrete Mathematics: Permutations and Combinations, Recurrence Relations. Algebra of Matrices, Determinant, Rank and Inverse of a Matrix, Functions and Relations. ■ Discrete Probability Theory: Combinatorial Probability, Conditional Probability, and Bayes Theorem. Discrete Random Variables. Expectation and Variance of Discrete Random Variables.

	M.Tech. in Information Technology	<ul style="list-style-type: none"> ■ Graph Theory: Graphs, Adjacency Matrix and Adjacency List representations of Graphs, Subgraphs, Connectivity, Trees and their Properties, Vertex Coloring, Planar Graphs. ■ Algorithmic Thinking: Asymptotic Notations, Searching, Sorting, Selection, Graph Traversal, Minimum Spanning Tree. ■ Basic Programming Concepts using C/C++ ■ Data Structures: Array, Stack, Queue, Linked List, Binary Tree, Heap, AVL Tree, B-tree. ■ Computer Organization and Architecture: Number Representation, Computer Arithmetic, Memory Organization, I/O Organization, ■ Operating Systems: Memory Management, Processor Management, Device Management, File Systems. ■ Database Management Systems: Relational Model, SQL, Functional Dependency, Normalisation (2NF, 3NF and BCNF). ■ Computer Networks: OSI, LAN Technology, MAC Protocols, WAN Technology - Circuit Switching, Packet Switching, Routing, Flow Control, Inter-networking, TCP/IP Networking including IPv4.
8.	M.Tech. in Mechanical Engineering <i>(Specialization: 1. Machine Design; 2. Thermo Fluids)</i>	<ul style="list-style-type: none"> ■ Engineering Mathematics ■ Linear Algebra: Matrix algebra, systems of linear equations, eigenvalues and eigenvectors. ■ Calculus: Functions of single variable, limit, continuity and differentiability, mean value theorems, indeterminate forms; evaluation of definite and improper integrals; double and triple integrals; partial derivatives, total derivative, Taylor series (in one and two variables), maxima and minima, Fourier series; gradient, divergence and curl, vector identities, directional derivatives, line, surface and volume integrals, applications of Gauss, Stokes and Green's theorems. ■ Differential equations: First order equations (linear and nonlinear); higher order linear differential equations with constant coefficients; Euler- Cauchy equation; initial and boundary value problems; Laplace transforms; solutions of heat, wave and Laplace's equations. ■ Complex variables: Analytic functions; Cauchy-Riemann equations; Cauchy's integral theorem and integral formula; Taylor and Laurent series. ■ Probability and Statistics: Definitions of probability, sampling theorems, conditional probability; mean, median, mode and standard deviation; random variables, binomial, Poisson and normal distributions. ■ Numerical Methods: Numerical solutions of linear and non-linear algebraic equations; integration by trapezoidal and Simpson's rules; single and multi-step methods for differential equations. ■ Applied Mechanics and Design ■ Engineering Mechanics: Free-body diagrams and equilibrium; friction and its applications including rolling friction, belt-pulley, brakes, clutches, screw jack, wedge, vehicles, etc.; trusses and frames; virtual work; kinematics and dynamics of rigid bodies in plane motion; impulse and momentum (linear and angular) and energy formulations; Lagrange's equation.

<p>M.Tech. in Mechanical Engineering (Specialization: 1. Machine Design; 2. Thermo Fluids)</p>	<ul style="list-style-type: none"> ■ Mechanics of Materials: Stress and strain, elastic constants, Poisson's ratio; Mohr's circle for plane stress and plane strain; thin cylinders; shear force and bending moment diagrams; bending and shear stresses; concept of shear centre; deflection of beams; torsion of circular shafts; Euler's theory of columns; energy methods; thermal stresses; strain gauges and rosettes; testing of materials with universal testing machine; testing of hardness and impact strength. ■ Theory of Machines: Displacement, velocity and acceleration analysis of plane mechanisms; dynamic analysis of linkages; cams; gears and gear trains; flywheels and governors; balancing of reciprocating and rotating masses; gyroscope. ■ Vibrations: Free and forced vibration of single degree of freedom systems, effect of damping; vibration isolation; resonance; critical speeds of shafts. ■ Machine Design: Design for static and dynamic loading; failure theories; fatigue strength and the S-N diagram; principles of the design of machine elements such as bolted, riveted and welded joints; shafts, gears, rolling and sliding contact bearings, brakes and clutches, springs. ■ Fluid Mechanics and Thermal Sciences ■ Fluid Mechanics: Fluid properties; fluid statics, forces on submerged bodies, stability of floating bodies; control-volume analysis of mass, momentum and energy; fluid acceleration; differential equations of continuity and momentum; Bernoulli's equation; dimensional analysis; viscous flow of incompressible fluids, boundary layer, elementary turbulent flow, flow through pipes, head losses in pipes, bends and fittings; basics of compressible fluid flow. ■ Heat-Transfer: Modes of heat transfer; one dimensional heat conduction, resistance concept and electrical analogy, heat transfer through fins; unsteady heat conduction, lumped parameter system, Heisler's charts; thermal boundary layer, dimensionless parameters in free and forced convective heat transfer, heat transfer correlations for flow over flat plates and through pipes, effect of turbulence; heat exchanger performance, LMTD and NTU methods; radiative heat transfer, Stefan-Boltzmann law, Wien's displacement law, black and grey surfaces, view factors, radiation network analysis ■ Thermodynamics: Thermodynamic systems and processes; properties of pure substances, behavior of ideal and real gases; zeroth and first laws of thermodynamics, calculation of work and heat in various processes; second law of thermodynamics; thermodynamic property charts and tables, availability and irreversibility; thermodynamic relations. <p>Applications:</p> <ul style="list-style-type: none"> ■ <i>Power Engineering:</i> Air and gas compressors; vapour and gas power cycles, concepts of regeneration and reheat. <i>I.C. Engines:</i> Air-standard Otto, Diesel and dual cycles. ■ <i>Refrigeration and air-conditioning:</i> Vapour and gas refrigeration and heat pump cycles; properties of moist air, psychrometric chart, basic psychrometric processes. ■ <i>Turbomachinery:</i> Impulse and reaction principles, velocity diagrams, Pelton-wheel, Francis and Kaplan turbines; steam and gas turbines.
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	M.Tech. in Mechanical Engineering (Specialization: 1. Machine Design; 2. Thermo Fluids)	<p>Materials, Manufacturing and Industrial Engineering</p> <ul style="list-style-type: none"> ■ Engineering Materials: Structure and properties of engineering materials, phase diagrams, heat treatment, stress-strain diagrams for engineering materials. ■ Casting, Forming and Joining Processes: Different types of castings, design of patterns, moulds and cores; solidification and cooling; riser and gating design. Plastic deformation and yield criteria; fundamentals of hot and cold working processes; load estimation for bulk (forging, rolling, extrusion, drawing) and sheet (shearing, deep drawing, bending) metal forming processes; principles of powder metallurgy. Principles of welding, brazing, soldering and adhesive bonding. ■ Machining and Machine Tool Operations: Mechanics of machining; basic machine tools; single and multi-point cutting tools, tool geometry and materials, tool life and wear; economics of machining; principles of non-traditional machining processes; principles of work holding, jigs and fixtures; abrasive machining processes; NC/CNC machines and CNC programming. ■ Metrology and Inspection: Limits, fits and tolerances; linear and angular measurements; comparators; interferometry; form and finish measurement; alignment and testing methods; tolerance analysis in manufacturing and assembly; concepts of coordinate-measuring machine (CMM). ■ Computer Integrated Manufacturing: Basic concepts of CAD/CAM and their integration tools; additive manufacturing. ■ Production Planning and Control: Forecasting models, aggregate production planning, scheduling, materials requirement planning; lean manufacturing. ■ Inventory Control: Deterministic models; safety stock inventory control systems. ■ Operations Research: Linear programming, simplex method, transportation, assignment, network flow models, simple queuing models, PERT and CPM.
9.	Master of Computer Application M.C.A.)	Logical Reasoning, Basic Mathematical Ability, Mathematics (10+2 Level), Fundamentals of Computer Science, Fundamental programming concepts, English Vocabulary and composition.
10.	Master of Design (M. Des.)	<ol style="list-style-type: none"> 1. Visualization and spatial ability - Pictorial and diagrammatic questions to scrutinize students' capability of transformation/ manipulation of 2D shapes and 3D objects followed by their spatial relationships. 2. Environmental and social awareness - General awareness related to environmental factors, such as climate, population, water, vegetation, pollution, weather, natural resources, and their implications on the design of products, images, infrastructure, and environment. Design terminologies, social and cultural connection with the design, the history of the designed artifact, and socially responsible and environmentally sustainable design responses. 3. Analytical and logical reasoning – To have ability to probe the opinions, arguments, or solutions against relevant norms. Logical and structured thinking to deduce from a short passage, which statements are apt responses to the posed question.

	Master of Design (M. Des.)	<p>4. Language and creativity - To understand the passages in a commonly used English language. Candidates must think creatively in the matter of alternatives, facility to differentiate innovative options, and think out of the box.</p> <p>5. Design thinking and problem solving – To understand the context, the user, and the constraints and select the most relevant solution for the given design problem.</p> <p>6. Observation and design sensitivity - Ability to observe the hidden properties in day-to-day life and think rigorously about them. To have capability to notify the variance in visual properties and aesthetic outcomes.</p>
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Eligibility Criteria and Syllabus for the B.Tech. (Lateral Entry) programs

School of Engineering			
Sl. No	Programmes	Eligibility	Syllabus
1.	Lateral Entry to B.Tech. in Civil Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category SC/ST) in any branch of Engineering and Technology.	<p>Mathematics Complex Numbers, Partial fractions, Permutation and combination, Binomial Theorem, Series, Trigonometric Ratios, Properties of Triangle, Volume and Surface Area, Co-ordinate Geometry, Functions, Differentiation, Integration, General aptitude and reasoning.</p> <p>Civil Engineering Building Construction & Materials, Civil Engineering Drawing, Surveying, Structural Mechanics, Hydraulics, Concrete Technology, Transportation Engineering, Design of RCC Structure, Geotechnical Engineering, Design of Steel Structure, Environmental Engineering & Pollution Control, Water Resources Engineering</p>

2.	Lateral Entry to B.Tech. in Computer Science and Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category SC/ST) in any branch of Engineering and Technology.	<ol style="list-style-type: none"> 1. 10+2 level Physics and Mathematics 2. C/C++ programming 3. Algorithms and Data Structures <ul style="list-style-type: none"> - Array, stack, queue, linked list, sorting, selection, searching. 4. Basic Electronics and Digital Logic <ul style="list-style-type: none"> - Digital circuits and signals, Logic Families, Logic Gates and Boolean algebra, Number Systems. 5. Computer Networks <ul style="list-style-type: none"> - Basic concepts, Network Classifications, Network topology, OSI model, Basics of TCP/IP. 6. Database Management Systems <ul style="list-style-type: none"> - Basic concepts, ER model, Relational model, Query languages. 7. Communicative English
3.	Lateral Entry to B.Tech. in Electrical Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks(40% marks in case of candidates belonging to reserved category SC/ST)in any branch of Engineering and Technology.	<p>CORE ELECTRICAL</p> <ul style="list-style-type: none"> ■ DC Circuit Analysis: Electric Circuits Laws: Basic electric circuit terminology, Ohm's law, Kirchhoff's current law (KCL) and Kirchhoff's Voltage law (KVL), circuit parameters (resistance, Inductance and capacitance), series and parallel combinations of resistance, Inductance and capacitance , Nodal analysis. Energy Source, Ideal and Practical voltage and current sources and their transformation, Dependent voltage sources and dependent current sources, D.C. Circuit Analysis, Power and energy relations, Analysis of series and parallel DCcircuits, ■ Loop and Nodal methods of circuit analysis, Superposition theorem, Thevenin's and Norton's theorems, maximum Power theorem, Delta - star (Y) Transformation. ■ A.C. Circuit Analysis: Basic terminology and definitions, Phasor and complex number representation, solutions of sinusoidally excited RLC circuits, Power and energy relations in A.C. circuits, Applications of network theorems to A.C. circuits, Resonance in series and parallel circuits, Concepts of active & reactive powers. ■ Steady State A.C three phases Circuits: Concept of a 3-phase voltage, wye (Y) circuits. Delta (Δ) circuits, Current and voltage relations in Y and Δ Circuits, Characteristics of a 3 -phase system, Magnetically Coupled circuits, Mutual inductance. ■ Single Phase Transformers: Introduction, classification, construction, electromotive force (e. m. f.) equation, Equivalent circuit model, Phasor diagrams, Losses and efficiency, Voltage regulation, Transformer tests (polarity test, open circuit test and short circuit test), Auto-transformers

			<ul style="list-style-type: none"> ■ Direct current Generators: General introduction, principles of operation of D.C Generators, construction of D.C Generators, Types of DC Generators, e.m.f equation, Types of windings, power stages and efficiency, commutation and armature reaction, characteristics of D.C Generators. ■ Direct current Motors: Principles of operation of D.C Motors, construction of D.C Motors, Types of DC Motors, Back e.m.f and Torque equation, torque and speed of D.C Motors, characteristics of various types of D.C motors, speed control of D.C motors. ■ Induction Motors: Construction and working principle of 3 phase Induction motors, types of rotors, rotating magnetic field, slip, effect of slip on rotor parameters, torque equation, torque-speed characteristics, effect of rotor resistance on torque-speed characteristics, Single phase induction motors, starting and applications. <p>PHYSICS: Vector Analysis, Collision of particles, Vibration and acoustics, Electromagnetic Theory, Maxwell's equations, Quantum mechanics, Solid state physics, Superconductivity, Diffraction, Special Theory of Relativity. MATHEMATICS: Differential Calculus, ordinary, linear and non-linear differential equations, Partial Differential Equations, Fourier series, Matrices.</p>
4.	Lateral Entry to B.Tech. in Electronics and Communication Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category SC/ST) in any branch of Engineering and Technology.	<ol style="list-style-type: none"> 1. Materials and Components: Structure and properties of Electrical Engineering materials: Conductors, Semiconductors and Insulators, Magnetic, Ferroelectric, Piezoelectric, Ceramic, Optical and Super conducting materials. Passive components and characteristics Resistors, Capacitors and Inductors; Ferrites, Quartz crystal Ceramic resonators, Electromagnetic and Electromechanical components. 2. Physical Electronics Electron Devices and ICs: Electrons and holes in semiconductors, Carrier Statistics, Mechanism of current flow in a semiconductor, working principle and basic structure of BJTs and FETs. 3. Network Theory: Network analysis, Loop Analysis, Mesh Analysis; Network Theorems, Superposition Theorem, Thevenin's Theorem, Norton's Theorem, Reciprocity Theorem, Millman's Theorem, Star-Delta Connections, Two port networks. 4. Electronic Measurement sand Instrumentation: Basic concepts, standards and error analysis; Measurements of basic electrical quantities and parameters; Electronic measuring instruments and their principles of working; analog and digital, comparison, characteristics, application Transducers; Electronic measurements of non-electrical quantities like temperature, pressure, humidity, etc. 5. Analog Electronic Circuits: Transistors biasing and stabilization, small signal analysis, power amplifiers, frequency response, wide banding techniques, feedback amplifiers, Tuned amplifiers, Oscillators, Rectifiers and power supplies, Op Amp.

			<p>6. Digital Electronic Circuits: Binary number system, Octal, Hexadecimal and BCD numbers system, Boolean algebra, simplification of Boolean functions, Karnaugh map and applications, IC logic, Combination logic circuits, Halfadder, Full adder, Digital comparator, Multiplexer, De multiplexer, Flip Flops, R-S, J-K, D and T flip - flops, different types of counters and registers, A/D and D/A converters, semiconductor memories.</p> <p>7. Control Systems: Types of Control system, Open Loop and Closed Loop Control system, Effect of feedback on stability and sensitivity; Block Diagram Reduction Technique, Signal Flow Graph, Stability Analysis, Routh's Stability Criterion.</p> <p>8. Communication System: Basic Mathematical Tools like Fourier Series, Modulation and detection in analogue and digital system; Sampling and data reconstructions; Propagation of signals at HF, VHF, UHF and microwave frequency.</p> <p>9. Computer Engineering: Number system, Data representation Programming; Elements of a high level programming language PASCAL/C, use of basic data structures, Fundamentals of computer architecture, processor design, control unit design, memory organization, I/O system organization, microprocessors, architecture and instruction set of microprocessors 8085, Assembly language programming.</p>
5.	Lateral Entry to B.Tech. in Mechanical Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category SC/ST) in any branch of Engineering and Technology.	<p>Engineering Mechanics: Force systems, force, moment of a force about a point and about an axis, couple moment as a free vector, equivalent force systems; Equilibrium, free body diagram, equations of equilibrium, problems in two and three dimensions; Kinematics and Kinetics of particles, particle dynamics in rectangular coordinates and in terms of path variables, Newton's law for rectangular coordinates, Newton's law for path variables, central force motion; Energy, kinetic energy, potential Energy, conservation of energy.</p> <p>Solid Mechanics: Introduction, stress at a point, types of stress, strain, shear and normal strain, stress-strain diagram, true stress and true strain, Hooke's law, Poisson's ratio, material properties for isotropic materials and their relations, generalized Hooke's law, stress-strain relationship; Elastic constants, Young's modulus, shear modulus, Poisson's ratio, relationships between elastic constants.</p> <p>Machine Design: Static and dynamic loading, threaded joints, riveted joints, welded joints, design of gears, belt drives, brakes, bearings.</p> <p>Theory of Machines: Mechanism and machines, flywheel, friction, gears, kinematic analysis.</p> <p>Thermodynamics: Basic definitions, thermodynamic systems and properties, thermodynamic processes and cycles; Different types of work and heat transfer; First law of thermodynamics, internal energy, enthalpy, non-flow and flow processes; steady state, steady flow energy equation (SFEE); Second law of thermodynamics, Kelvin Plank and Clausius statement, irreversibility, Carnot cycle and Carnot's theorem, applications of second</p>

	<p>Lateral Entry to B.Tech. in Mechanical Engineering</p>	<p>law to closed and open systems, heat engine, heat pump and refrigerator, entropy, Clausius theorem, Clausius inequality, entropy principle and its application, entropy generation in closed and open system, absolute entropy; Available energy; Vapour power cycles.</p> <p>Heat Transfer: Steady state heat conduction, 1-D heat conduction equations in plane wall, heat generation, conduction through multilayer walls, heat conduction in cylinders and spheres, critical radius of insulation, heat transfer through extended surfaces, fin efficiency; Radiation heat transfer, radiation intensity, emissive power etc., radiation shield, shape factor; Convection heat transfer: introduction to natural and forced convection, internal and external flow, various dimensionless numbers; Heat exchangers: parallel flow, counter flow, cross flow heat exchangers, multipass shell and tube exchangers, phase change heat exchangers, LMTD and NTU methods; Introduction to mass transfer, Fick's law of mass diffusion.</p> <p>Fluid Mechanics: Concept of fluid and fluid properties, Newton's Law of viscosity; Fluid Statics, forces on fluid element, different types of pressure and measuring instruments, hydrostatic forces on plane and curved surfaces, buoyancy and stability of submerged and floating bodies; Fluid kinematics, steady, unsteady, uniform and non-uniform flow, laminar and turbulent flow, streamline, path line, streak line; Equations for conservation of mass, momentum and energy, Euler's and Bernoulli's equation, measurement of flow through pipes and different flow measuring devices; Dimensional analysis, kinematic and dynamic similarity, various dimensionless numbers; Potential flow, stream function, vorticity, velocity potential, uniform flow, major and minor losses, friction factor; Boundary layer equations, the flat plate boundary layer; Introduction to compressible flow;; Impulse and reaction turbine, Pelton wheel, Francis and Kaplan turbine, Rotodynamic and positive displacement pumps, reciprocating pump, centrifugal pump, specific speed, cavitation.</p> <p>IC Engine: Construction and working principle of SI and CI engines, Construction and working principle offour stroke and two stroke engines, theoretical cycles used in IC engines, performance analysis of IC engines.</p> <p>Materials Science: Classification and properties of engineering materials,bonds in solids and characteristics of metallic bonding, general classifications, properties and applications of alloy steel, stainless steel, cast iron and non-ferrous materials; Crystal systems and imperfections, crystallography, Miller Indices for directions and planes, voids in crystals, packing density, crystal imperfections, point, line, surface and volume defects; Phase Diagrams and Phase Rules, principles and various types of phase diagrams, Fe- Fe₃C diagram, TTT and CCT diagrams; Heat treatment in steels, pearlitic, bainitic and martensitic transformations.</p> <p>Manufacturing Technology: Rolling, extrusion, sheet-metal forming, forging, welding, mechanism of metal cutting, machining processes, machinability; Modern machining processes.</p> <p>Industrial Engineering: Work study, method study and work measurement; Plant layout, types of production, types of layout, tools and techniques for plant layout; Project scheduling, PERT and CPM; Production control, Gantt chart; Material handling.</p>
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6.	Lateral Entry to B.Tech. in Food Engineering and Technology	<p>Part-I: General Engineering: Thermodynamics, Heat & mass transfer, Fluid mechanics (weight age: 40%)</p> <p>Engineering Thermodynamics: Zeroth law, first law, second law. Concepts of enthalpy, internal energy, entropy and absolute temperature. Properties of pure substances and mixtures, reversibility and irreversibility. Thermodynamics cycles. Refrigeration and air conditioning: Refrigeration cycles, heat pump. Application of refrigeration in food processing and preservation. Food freezing systems. Steam: steam generation, steam properties and application. Psychometrics: properties of air water vapor mixer; psychrometric properties, charts and relations and psychrometric calculations.</p> <p>Heat and Mass Transfer: Principles of heat and mass transfer to heat, different methods of heat transfer, Fourier's Law, Steady state heat transfer through plain and composite slabs, cylindrical and spherical surfaces. Natural and forced convection, concept of overall heat transfer coefficient, LMTD, heat exchangers in food processing, effectiveness of heat exchanger. Fick's Law of diffusion and basic concepts of convective mass transfer.</p> <p>Basic Fluid Mechanics: Physical properties of fluids, classification of fluid flow, continuity equations, Bernoulli's equation and its application, steady state flow equation, concept of viscosity, Newtonian and non-Newtonian fluids. Poiseuille's equation. Navier Stoke's equation, flow through parallel plates and circular pipes. Concept of Reynold's number and its application. Pipe and pipe flow, fittings. Pumps, types of pumps and their application and selection.</p> <p>Part-II: Food Engineering and Technology (weightage: 60%)</p> <p>Food Engineering Operations: Materials and introduction energy balance for food engineering processes. Size reduction, mechanical expression, mechanical separation, mixing and agitation, emulsification, and homogenization. Filtration, membrane separation, sedimentation, centrifugation, crystallization, extraction, distillation, absorption, humidification, and dehumidification. Thermal processing of foods, Food concentration: Evaporation, equipment, their selection and calculation. Freeze concentration. Drying and dehydration methods, different kinds of dryers, their selection and design.</p> <p>Food Microbiology: Microbiology and reproduction of bacteria. Pure culture technique: serial dilution, pour plate, streak plate, spread plate, slant, broth and enrichment culture, lyophilization. Microbial Growth: Definition, Growth curve, account of different phases, synchronous growth, doubling/generation time. Relationship between number of generations and total number of microbes. Disinfecting agents and its dynamics. Enzymes, specificity of enzymes, co enzymes, cofactors, Enzymes inhibitors and activators. Applications of enzymes in food industry, immobilized enzymes. Definition, scope and present status of Biotechnology and its applications, Microbial propagation and production of SCP, Fermentation: Fermented and non-Fermented food, cereal fermentation.</p>
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	Lateral Entry to B.Tech. in Food Engineering and Technology	<p>Food Chemistry: Importance of different food constituent, Carbohydrate and its classification and functions. Proteins, classification, and properties of amino acids. Lipid's structure, physical and chemical properties. Vitamins and minerals in food. Food spoilage: Types and factors, Food enzymes.</p> <p>Food preservation techniques: Addition of salt, sugar, oil, spices, preservative, drying, evaporation, heat treatment, irradiation, refrigeration, freezing, plant physiology: Transpiration, Ripening, Senescence, Post-Harvest technology and its importance, Climacteric and non-climacteric fruits.</p> <p>Food Product technology: Parboiling, Milling of rice, wheat, malting, storage atmospheres: Quality control and quality assurance, different quality attributes: qualitative, hidden and sensory, HACCP and its application, Food adulteration: types, Estimation of moisture, crude, fat, proteins, crude fibre, ash, sampling and its types, BIS, AGMARK, FPA, PFA, FAO, FSSAI.</p>
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Tezpur University Entrance Examination (TUEE)-2023

Center Code	Place	Center code	Place
101	Agartala	115	Jaipur##
102	Aizwal	116	Jorhat
103	Barpeta Road	117	Kanpur
104	Bengaluru	118	Kohima
105	Bhopal##	119	Kokrajhar
106	Bhubaneswar	120	Kolkata
107	Delhi	121	Majuli##
108	Dibrugarh	122	North Lakhimpur
109	Diphu	123	Patna
110	Goalpara	124	Shillong
111	Guwahati (Cotton University)	125	Silchar
112	Guwahati (B.Boroah College) #	126	Siliguri
113	Imphal	127	Tezpur
114	Itanagar	128	Varanasi##

New centers established for TUEE 2023

Centre changed for TUEE 2023 [Earlier Guwahati (NERIM)]





A photograph of a street scene. In the foreground, a paved road is covered with numerous fallen yellow leaves. Large, mature trees with thick trunks and spreading branches line both sides of the street. In the background, there is a white building with multiple windows and a fence. The sky is overcast.

1. GENERAL INFORMATION



Introducing Tezpur

Tezpur is the headquarter of the centrally located Sonitpur district in Assam. Mythologically known as Sonitpur, Tezpur is famous as a seat of Assamese culture. Located on the northern bank of the river Brahmaputra, 180 kms north- east of Guwahati, Tezpur overlooks the beautiful snow peaks of the Himalayas throughout the winter. Several ancient sites such as Bamuni hills, Hazara tank, Da-Parbatia Gate, Mahabhairab temple, Bhairabi temple, Agnigarh etc. in and around Tezpur are worth visiting. The Chitralekha Udayan, the 3.02 kms long Kalia Bhomora Bridge over the Brahmaputra are two spots which attract many visitors. Other important tourist spots around Tezpur include Bhalukpong (64 kms), Tipi (68 kms) which are famous for the largest orchid garden in Asia, the Nameri National Park (60 km), the Orang Sanctuary (40 km) etc. The Kaziranga National Park which is the habitat of the great Indian one horned rhinoceros is just 75 kms away from Tezpur.

Connectivity



By Road

Bus services to Tezpur are available from all major places in Assam. Frequent buses from Guwahati are available (ASTC, Green Valley, Blue Hill services etc) from the Inter State Bus Terminus at Guwahati. Shared cabs also operate from Paltan Bazar, near the Guwahati railway station. Normally, Guwahati to Tezpur is four hours drive by rental car.



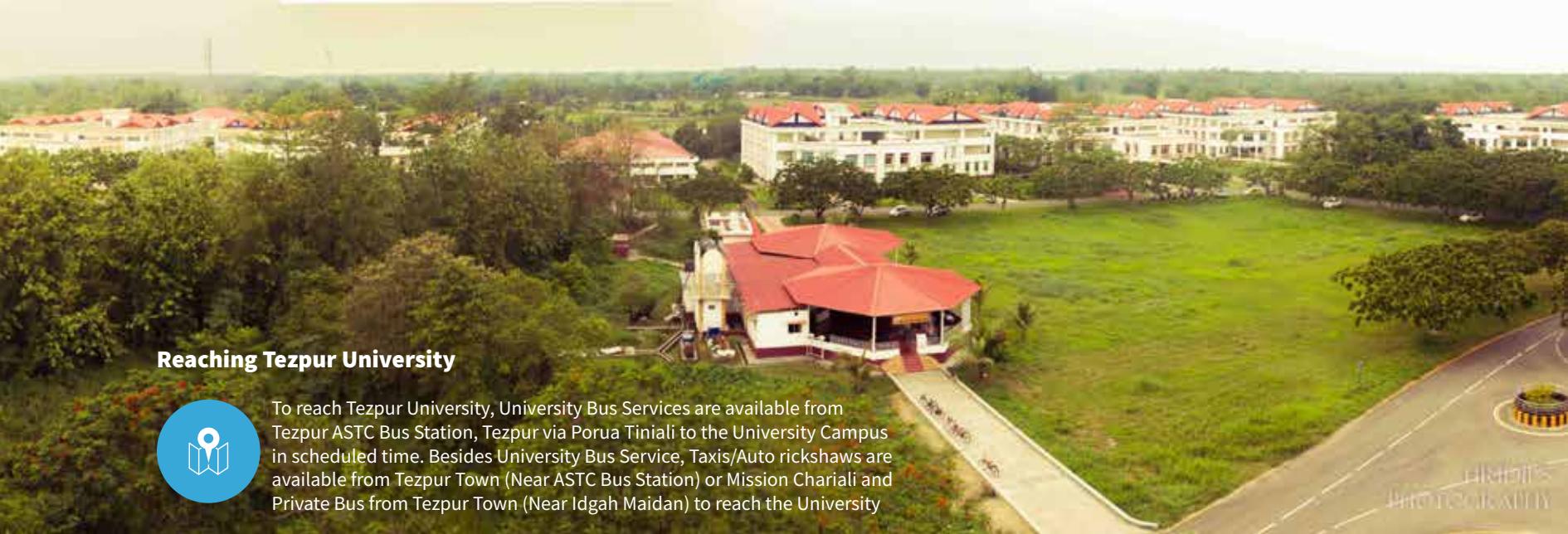
By Rail

Tezpur is connected with Kamakhya Railway Junction by a broad-gauge line from the new Dekargaon Railway Station via Rangapara and Rangia Railway Junction.



By Air

Guwahati is well connected by air with all major places in India. Direct Air India flights to Tezpur from Kolkata via Guwahati are available on Tuesday, Thursday, and Saturday. But daily flights are available from/to Guwahati to/from all other major cities of the country.



Reaching Tezpur University



To reach Tezpur University, University Bus Services are available from Tezpur ASTC Bus Station, Tezpur via Porua Tiniali to the University Campus in scheduled time. Besides University Bus Service, Taxis/Auto rickshaws are available from Tezpur Town (Near ASTC Bus Station) or Mission Chariali and Private Bus from Tezpur Town (Near Idgah Maidan) to reach the University

Historical Places

Da-Parbatia

The ruins of the door frame of the Da-Parbatia temple, a few kilometres away from Tezpur, is perhaps the finest and oldest specimen of sculptural art in Assam. Its carving is characteristic of the style of the early Gupta School of sculpture.



Agnigarh

The place where the legendary romance of Princess Usha and Anirudha blossomed. Usha was confined inside the palace which was surrounded by a wall of fire. The palace gives a panoramic view of the mighty Brahmaputra river and Tezpur.

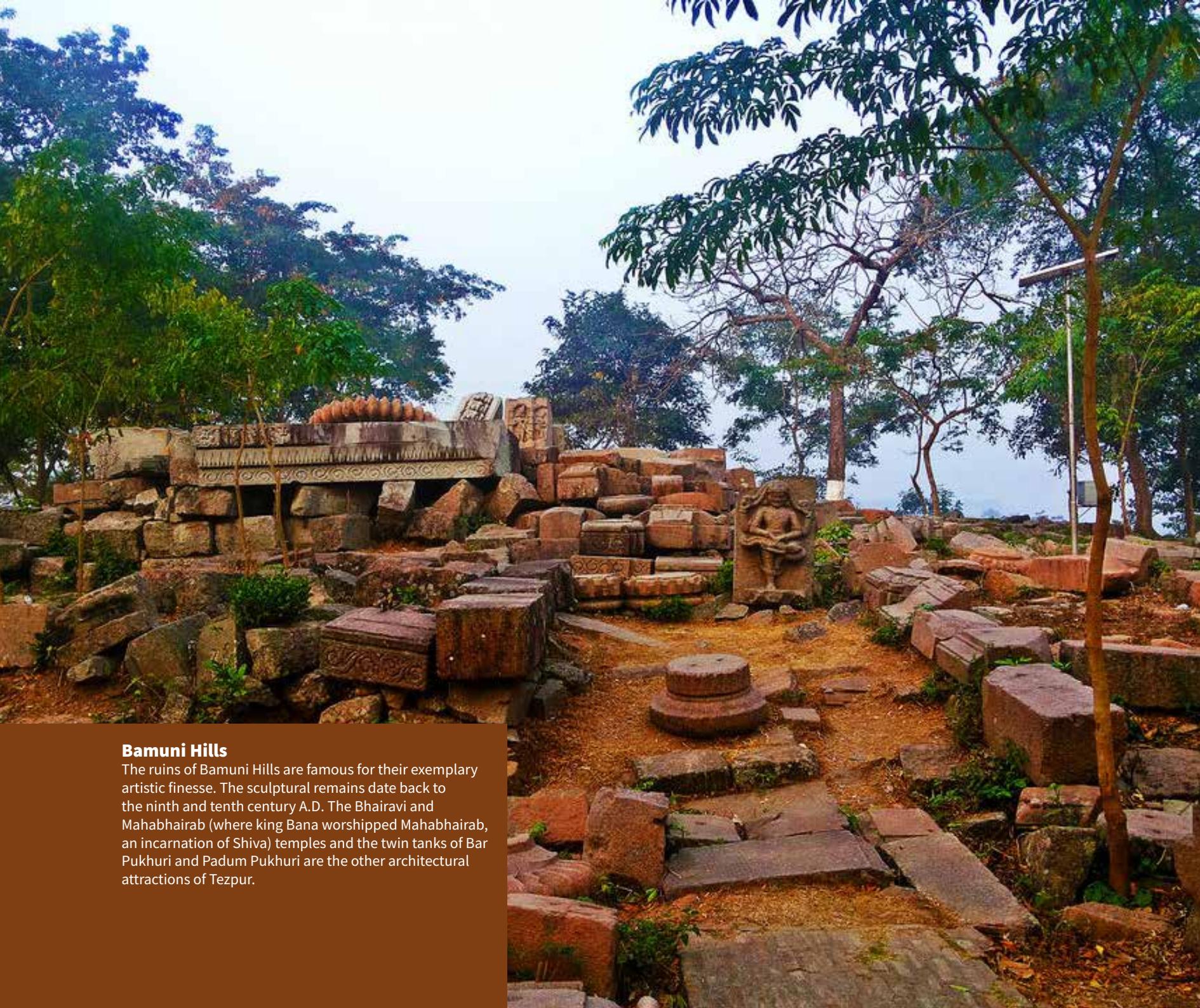


The Hazara Pukhuri

The large tank preserves the name of Hazara Varman in Tezpur. It was excavated in the early part of the 19th century. This is the third largest tank in the area sprawled over 70 acres.

Bamuni Hills

The ruins of Bamuni Hills are famous for their exemplary artistic finesse. The sculptural remains date back to the ninth and tenth century A.D. The Bhairavi and Mahabhairab (where king Bana worshipped Mahabhairab, an incarnation of Shiva) temples and the twin tanks of Bar Pukhuri and Padum Pukhuri are the other architectural attractions of Tezpur.



Shopping Centers

One of the most popular shopping destinations is Chowk Bazaar and KeyBees Store on MC Road in the heart of Tezpur town. There are several showrooms and dealers - Vishal Megha Mart, Reliance Trends, Reliance Digitals, Westsides, M Bazaar, Style Bazaar, Peter England, and Pantaloons – providing a wide range of clothings and other essentials. Shops for traditional handloom and handicrafts, traditional handwoven Assamese silks and gifting material, cane and bamboo household articles and musical instruments, bellmetal utensils like the xorai traditionally used for offering betelnut and paan to distinguished guests are also available in the town. Other traditional crafts include clay, pith, wooden, bamboo and cloth toys, pottery, woodcraft, masks, and gold jewellery. It also has a traditional fish and vegetable market where fresh vegetables and delicious fishes are marketed.

Fast Food

There are many pockets friendly fast-food chain and cafeteria in and around Tezpur town to grab a quick bite. These joints and cafes offer a wide range of food and specializes in bakery products, Indian sweets, and beverages. One can enjoy freshly brewed coffee and beverages along with freshly baked cookies, patties, pastries, muffins, brownies, breads Buns. Some of the popular places are Spring Valley, Veggie Foods, Delight bakery, Café Woodbox, the Chocholate room, Dominos, Pizza Hut, and KFC.

Restaurants

Tezpur has a wide range of restaurants and small eating outlets to satiate the appetites for the food lover in you. Any cuisine, Indian or international, you name it, you will find it in and around the Tezpur town. And it's not just cuisines, but also quirky and innovative ambience, that gives them a unique and memorable dining experience. Some of them are KRC palace, Dhaba End Dee's Samaroh, Krishna Foods, Saffron Restaurant and Banquet, Gardenia, and the Fern Residency

Cinema

There are several good cinemas in and around Tezpur town which has become the hub for cinemagoers, Anwar VRS Cinema and Imp Cinemas at Mahatma Gandhi Road, Gold Cinema near LGBRIMH New Gate and Gold Digital Cinema, Mahabhairab. These three places are the best options available to enjoy a stellar cinematic experience at an affordable price.



Parks and Sanctuary

Cole Park

It is, undoubtedly, one of the most beautiful places in Tezpur. Established by a British Deputy Commissioner, Mr. Cole, the park has two massive ornamented stone pillars, and the sculptural remnants of the famous Bamuni Hills.



Eco Camp

About 50 kms from Tezpur, off the road to Arunachal Pradesh, near the Jia Bhoroli River is the Eco Camp, a unique experiment by the Assam Anglers' Association and the state's Forest Department. The Camp organises exciting white river rafting, against the divine backdrop of lush forests and snow-capped mountains. Tourists can try their hand at casting for the elusive and endangered golden Mahseer fish, a denizen of the waters. This is part of an ecological campaign to save the mahseer - so part of the river is protected, and the fish are caught and then released in a bid to stabilise their dwindling numbers.

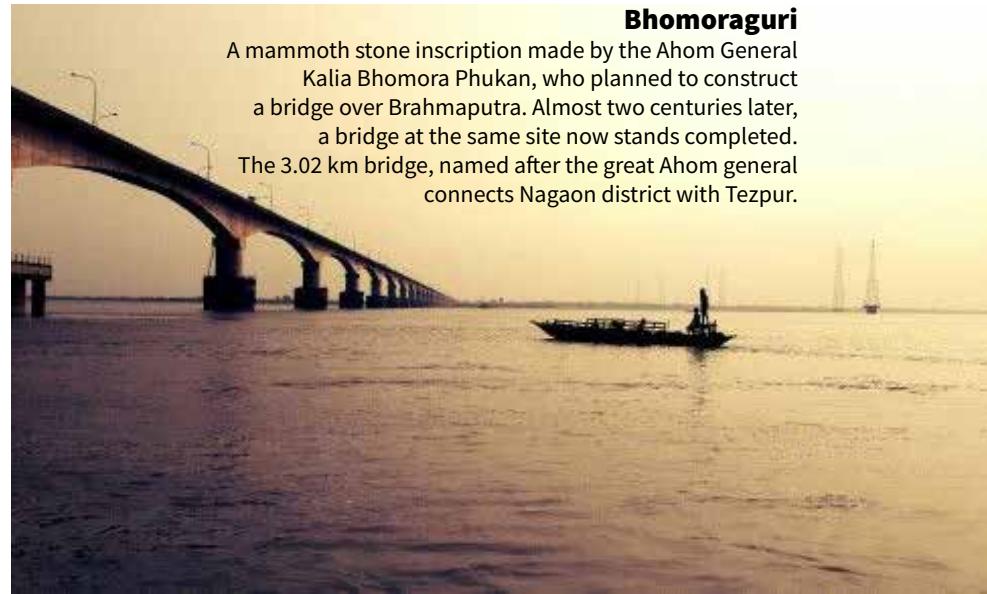
Bhalukpong

Bhalukpong is a charming picnic and angling spot, 60 km from Tezpur, on the road to Tawang in Arunachal Pradesh. Other attractions of Bhalukpong are a hot spring and a huge orchid garden.



Bhomoraguri

A mammoth stone inscription made by the Ahom General Kalia Bhomora Phukan, who planned to construct a bridge over Brahmaputra. Almost two centuries later, a bridge at the same site now stands completed. The 3.02 km bridge, named after the great Ahom general connects Nagaon district with Tezpur.



Nameri National Park

Near the Jia Bhoroli River, the Nameri National Park sprawls over from Assam to Arunachal Pradesh. As in Kaziranga, the best way to travel within the Park is atop elephants. There are no roads inside the park. The park is home to the mithun or Indian bison and the rare white winged wood duck, among the most endangered avian species in the world.



Orang Wild-life Sanctuary

This sanctuary sprawled over an area of 72 sq. km, is only 65 km from Tezpur.

The species of fauna which the area abounds in, are the one-horned rhinoceros, buffalo, leopard, sambhar, barking deer and tiger.





Introducing Tezpur University

Tezpur University was established on January 21, 1994, by an Act of Parliament of India, The Tezpur University Act, 1993 (Act No. 45), as a non-affiliating and residential Central University. The University is located at Napaam, about 15 km east of Tezpur town in the Sonitpur District of Assam. The serene and green University campus of about 262 acres provides the best of the 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 objective of the University. At present, the University offers several programmes on 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-seven 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 several 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. 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 and Development, Government of India, through the University Grants Commission. The University promotes industry academy alliance.

Safe and Sustainable Campus

The 262-Acre campus of the University is in a safe and quiet environment. The campus is gender friendly and offers all its stakeholders' equal opportunity to excel in their domain. The University maintains a 24x7 security arrangement supervised by a Security Committee consisting of faculty members and officers. There is a single point entry under the round the clock watch of security personnel. CCTV cameras are installed at the vital locations of the campus.

The eco-friendly campus encourages its students and employees to ride bicycles. Further, the University has installed 1000 kWp rooftop grid-connected solar photovoltaic power plant on its campus.

The University on an average generates ~22% of its electricity requirement by the solar power plant. Solar water heaters have been placed in the hostels. Quite a good number of the campus streetlights are powered by solar photovoltaic cells. A food waste-based bio-gas generation facility has been put into operation and the use of LPG in hostel messes has been partially replaced. The University has adopted a policy of replacing the conventional lights with the energy efficient LED lights starting with the Guest House and the Humanities and Social Sciences Complex. It is a matter of pride that Tezpur University is the first academic institution to install a MW-scale solar power plant in the entire Northeastern region.





Major Awards/Accolades

for Tezpur University

- NAAC Accreditation : A+ Grade.
- The Asia University Rankings 2021: 301-350.
- Visitor's Award 2020 for Technology Development.
- In 2020 seven faculty members of the University have been featured in the list of world's top 2% Scientists
- QS India University Rankings 2020: 35.
- THE Asia University Rankings 2020: 251-300.
- The QS BRICS University Rankings 2019: 146.
- THE World's top 20 Best Small Universities 2018: 20.
- Visitor's Award in -Research category: 2017, 2018.
- Ministry of Education (Formerly MHRD) NIRF Ranking 2016: 5, 2017: 48 (Overall), 30 (Amongst Universities), 2018: 46 (Overall), 29(Amongst Universities), 2019: 48 (Overall), 29 (Amongst Universities), 2020: 65 (Overall), 39 (Amongst Universities).
- The World Young University Rankings 2020: 251–300.
- Visitor's Best University in 2016.
- The Asia University Rankings 2018: TU ranked 4th in India in "Research" category.
- Fellow of the Royal Society of Chemistry (FRSC): 4
- INSA Teachers Award: 2017, 2018 & 2019.
- The World Young University Rankings 2017: 34th in the list of top 50 universities under — "Generation Y" (universities established between 1986 and 1999).

Campus Facilities

Student Accommodations

The University provides separate accommodation for men and women students and research scholars, having more than 3700 capacities. As a result, barring a few, all students reside in the 14 hostels (6 for boys and 8 for girls). The rooms are large enough for two people, and come equipped with attached wardrobes, shelves, tables and beds. Generally, rooms are two-seater with two beds, two wardrobes, two shelf, two tables, two chair, one fan. The University also has a married research scholar's hostel with a capacity of accommodating more than thirty six 2BHK apartments to accommodate married scholars with family and visiting faculty members. Hostel seats are allotted on merit basis as per availability. All hostels are equipped with modern facilities like-

- Network connectivity through WiFi
- Television with DTH
- Newspapers & Magazines
- Photocopy facility in some hostels
- Indoor and outdoor games
- Intercom facility
- Guest room
- Canteen
- Pantry system
- Music system
- Washing machine
- 24 hours water supply
- Common rooms
- Modern kitchen equipment & dining hall
- Cycle stand
- Filters and coolers for drinking water
- Solar power
- Water heating system
- Mini canteen
- Bio-gas plant

The seats are allotted at the time of admission as per the hostel and University rules. ***The University ensured that all foreign nationals get hostel facilities inside the University.***

Hostel Admission

- Admission to hostel is subject to the availability of seats though efforts are made to accommodate all the students in the hostels.
- At the time of admission, students are given options to stay in the hostel or arrange their private accommodation.
- If opted to stay in the hostel, a duly filled in application form as well as a declaration signed by the parent(s)/guardian must be mandatorily submitted at the time of admission/registration for a semester.



The hostel mess are run by the students at the University. Regular maintenance work of the hostels is done periodically for proper upkeep of the hostels. Each hostel is administered by a group of designated people. Senior warden, warden(s), pre-fect, and assistant prefect(s) are responsible for hostel level administration.

Staff Quarters

The University provides residential facilities to its teaching and non-teaching employees in the campus. The residential quarters are RCC multi-storied building and Assam type buildings.

Guest House

Sited on a two-acre green campus, the University Guest House has 45 well furnished rooms, a 30-seater conference room, a 40-seater dining hall (all air-conditioned), lounges, perfectly matching upholsteries, and a catering that carefully prepares and serves vegetarian, non-vegetarian and continental cuisines. It also facilitates 24-hour accessibility to the internet. Also, there is an annex of the Guest House with well-furnished rooms.

Contact Person

@ Guest House Caretaker-cum-Liason officer

Mobile: 9957191532

E-mail: ghouse@tezu.ernet.in

For online booking: <http://www.tezu.ernet.in/guesthouse/guesth.html>



Library

The University has a Central Library with a rapidly increasing collection of books, periodicals, journals, and e-resources. The library is fully modernized with RFID enable integrated KOHA library management software (open source software) which is an integrated multiuser library management system that supports all its inhouse operations and modern facilities like smart card, checkin, checkout, and renewal of books. It has CCTV surveillance system for the safety of the library materials.

Central Library has a diverse collection of more than one lakh documents including books, periodicals, theses, dissertations, braille collection etc. The collection of the library covers the latest information resources on all areas of engineering, science, management, social science, humanities. Central Library is providing access to e-resources & databases through the e-Shodh Sindhu Consortia of INFLIBNET Centre and DelCon Consortium. The library subscribes an institutional membership of Developing Library Network (DELNET) and American Library.



Library users can access books, journal database, ETDs and other e-resources from any terminal within the University campus. Apart from the resources, Central Library also contains more than 2000 publications in TU Knowledge Repository and more than 700 Theses stored in ETD Repository. Total 600+ seating capacity is there in the reading halls of Central Library and it remains open throughout the year from 09.00 am to 01.00 am midnight. The Central Library also has a Digital Resource Centre with 42 PCs for the users for e-resources browsing and ETD Lab with latest technology scanner with 8 PCs for research scholars.





Resources available in Library

Sl.No.	Items	Qty.
1.	Books	112888
2.	Journals	Print
		Online
3.	Onlinedatabases	20
4.	E-Books	1218
5.	Backvolumesofjournals	10280
6.	Theses	832
7.	Dissertations	1721
8.	CDs/DVDs	2887
9.	Govt.publications/conferenceproceedings	1025
10.	VHScassettes	36
11.	Braille	211
12.	Newspapers	10
13.	Manuscripts	32

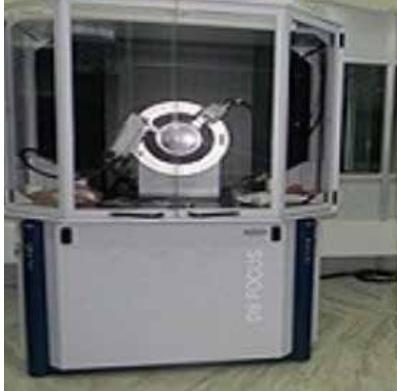
Computing Facilities

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.



Advanced Experimental Facilities

The University established the Sophisticated Analytical Instrumentation Centre (SAIC) to cater to the need of various sophisticated equipment for advance research. Several sophisticated equipments, 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 northeastern region of India and beyond to improve and promote research in different disciplines.





Museum

The Department of Cultural Studies is building up a museum of ethnographic materials collected from different parts of the state of Assam, and also few from outside the state. Items such as domestic articles, agarbark manuscripts, musical instruments, toys etc. representative of relevant cultural traditions of the region are added in the collection. An archive of various relevant cultural resources in the forms of photographs, slides, cassettes, CDs and DVDs has also been set up.

Farms and Horticulture Section

The Horticulture Section of Tezpur University is entrusted to carry out landscaping and beautification activities on the University campus. The Assistant Horticulturist employed at Horticulture Section looks after the whole horticultural/landscaping activities under the supervision of a Campus Horticultural Committee with a teacher as coordinator.

A total of 935 seedlings of different ornamental plants/ shrubs, fruit trees and medicinal plants etc. are planted in different parts of the University campus. Essential maintenance of all existing planted trees is carried out annually.

A Vermicompost Unit is running successfully and has fulfilled the need of organic manure to some extent in the University. The University has a nursery of its own, which has been the source of seedlings of ornamental and fruit trees of different types; shrubs; indoor plants and also some seasonal flowers for the use of the University.



Jan 8, 2018

The Teaching Learning Centre (TLC)

The Teaching Learning Centre (TLC), Tezpur University was formally inaugurated on January 28, 2016 as a Centre of Excellence for Curriculum and Pedagogy under the Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching (PMMNMNTT) scheme. 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 reflective research based practice and the optimal use of technology.

In the year 2021-22, TLC has conducted 24 weeklong Faculty Development programmes.

The centre has conducted 13 programs in this financial year and trained 465 teachers and prospective teachers. Through these programs, TLC has been providing assistance and support for promoting best practices in teaching learning environment among higher education communities. Focus areas of the conducted activities are teaching learning pedagogy, learning through second language, generating resources in specific fields of pedagogy and professional development through various skills.



Lecture Recording System

Special lectures or expert lectures organized by various departments and schools of the University are recorded and even up-loaded over the intranet services for students and other academic purposes. The Lecture Recording System of the University is vital to teach, share knowledge, and get global exposure.

The Centre for Open Distance and Learning Mode has recorded classroom lectures for students enrolled in different courses run by the centre. The lectures are delivered by experts from the University and outside on a wide range of topics and discipline. The system to record lectures shall create repositories of video for training of students and newly joined faculty members

Digital Language Laboratory

The Department of Foreign Languages has a digital multimedia, multipurpose language laboratory with 15 booths. Students can improve their pronunciation of English and foreign languages (Chinese, French, and German are taught at present) and develop interactive language skills by utilizing the software and other facilities available in the laboratory.



Tezpur University Media Cell

The University has a full functioning Media Cell to look after publicity of the University. The Media Cell is headed by a chairperson and a Public Relations Officer of the University. The achievements, news of the University is disseminated through traditional (print, electronic & radio) as well as through news and media. The University has Facebook, Twitter & YouTube channel and actively engages with the netizens through these social media platforms.

International Collaboration

In a significant development of academic collaborations between India and the UK at University level, Tezpur University has entered into a multi-level collaborative deal with the Queen's University, Belfast, one of the oldest and top ranking universities of the world under which young faculties and research scholars will benefit academically. The collaborative project, which has been approved by the Ministry of Human Resource Development and the University Grants Commission, is for a period of six years. The following are some other international collaborations:

- Department of Energy with the Department of Chemical Engineering, Abu Akademi University, Finland in Platform Biofuel.
- Department of Energy with the European Union under FP7 (Seventh Framework Programme for Research) in Biomass Research and Biowaste conversion to value added products.
- Departments of Energy, Mass Communication & Journalism with the University of Nottingham, UK.
- Department of Cultural Studies with Department of Dance Studies, University of Auckland, New Zealand.
- Department of Chemical Sciences with the University College of London.
- Department of English with International Institute of Social History, Amsterdam, Netherlands
- Collaboration with Yunnan University of Finance and Economics, China.
- Department of Physics with University of Southampton under the UK-India Education and Research Initiative (UKIERI)



International Students' Office

The International Students Office (ISO) of Tezpur University was established in February 2013. The office is run by a part time director and two assistant coordinators. Over the years, the International Students Office has handled the admission of international students, organized talks and seminars on overseas education and research opportunities and facilitated collaboration between the University and institutions abroad.

Profile of International Students

There has been a definite upward swing in the number of international students selecting Tezpur University as their destination of choice. This is partly because of the University's global and national rankings. Apart from the academic programmes on offer which are of international standards, Tezpur University strictly adheres to its announced academic calendar. This works well for foreign students (who are self-financing or on time-bound fellowships). While students from countries abroad visit for short periods for research purposes, most foreign students currently at the University are full time students from countries like Sri Lanka, Thailand, Botswana, Malawi, Tanzania, Zimbabwe, Lesotho, Egypt, Palestine, Ghana, Nepal, and Guyana in undergraduate, post-graduate, and doctoral programmes.

Category of International /NRI Students

- Sponsored by the Govt. of India (through ICCR) on cultural exchange programme.
- Sponsored by the home country of the concerned international /NRI students and/or funding agencies.
- Self-financing direct entry (with the clearance of Govt. of India).
- NRI students.

Admission Information

A student willing to join the University for various programmes will get the information about the application form and the information on the eligibility requirements, courses available, and admission procedure from the prospectus or the website of the University (International Student Office, Tezpur University).

Provisional Admission Form

The application for provisional admission is to be submitted to the ISO along with the prescribed fees on or before the last date specified. The office will then check the eligibility and issue the provisional eligibility letter. This is required to get the visa and to complete other formalities.

Provisional Admission Procedure

Apply for provisional eligibility in the prescribed form which can be downloaded from the University website. The prescribed eligibility fee must be deposited along with the form before the last date specified.

- Attach with this application form photocopies of the statement of marks of the last qualifying examinations duly attested by:
 - a. Indian Embassy in the country of the student, or
 - b. High Commissioner of the country of the student in India, or
 - c. Ministry of Education in the country of the student.
- Attach Migration Certificate in original with the application form. This is obligatory for those coming from any other statutory Indian University.
- Attach affidavit to the application form relating to the gap between year of passing and the last qualifying examination and the date of application for admission to this University (This is not required for Ph. D. programmes).

For more details

<http://www.tezu.ernet.in/io/notice/Rules%20for%20International-NRI%20students-revised-1.pdf>

For information related to International Students Office

<http://www.tezu.ernet.in/io/>

In case of Ph.D. course, enclose 6 (six) copies of the outline of the proposed research along with the application form.

The ISO will issue the provisional eligibility letter after scrutinizing the forms and on the basis of credentials verified by the University and the Association of Indian Universities.

Visa Application

A foreign student will require a visa endorsed only to Tezpur University for joining a full-time programme. No other endorsement is acceptable. Visa should cover the duration of the academic programme.

English Language Proficiency Requirements

Foreign students should have a certificate of English language proficiency issued by a recognized language institute such as TOEFL or IELTS or by a duly qualified University teacher of English.

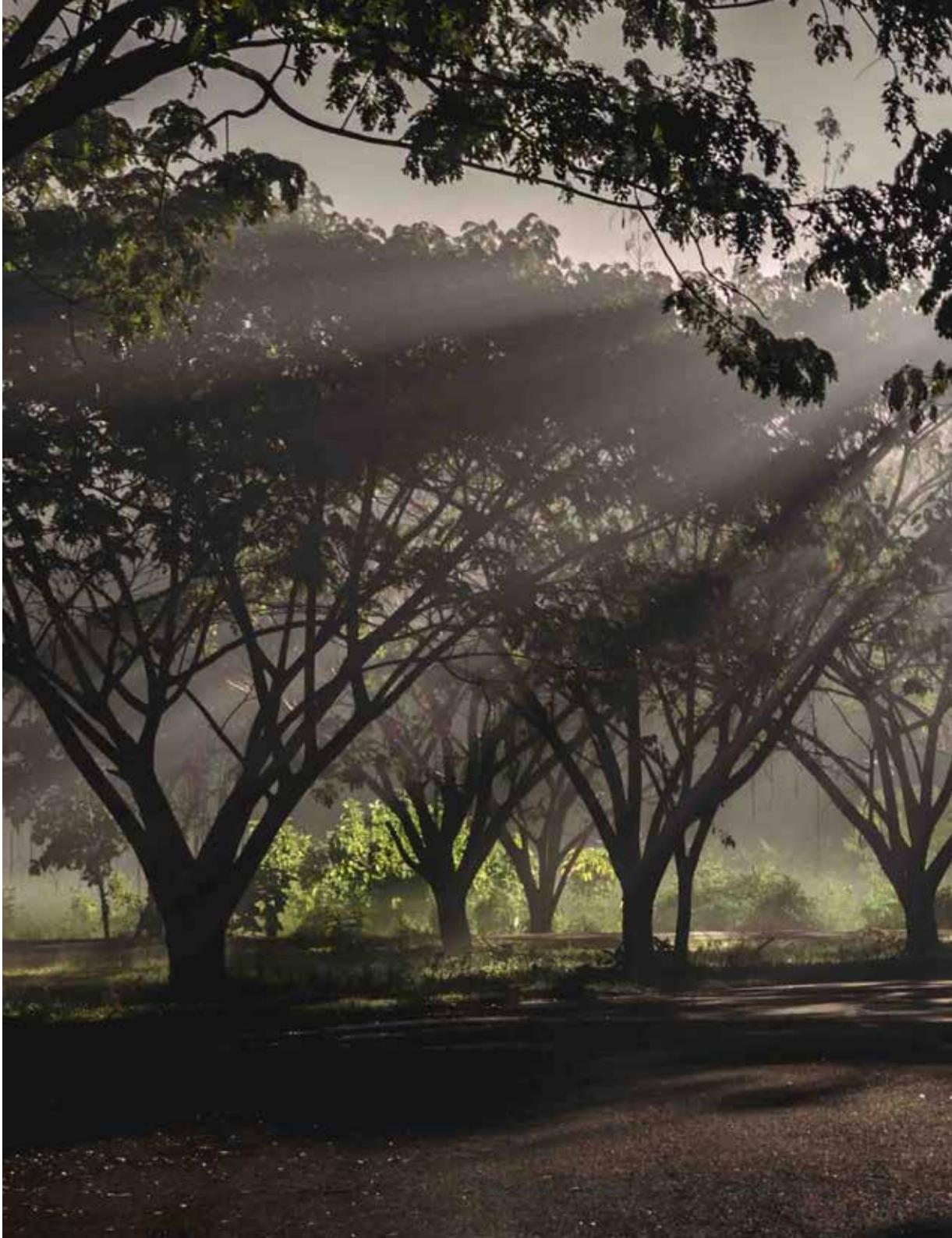
Pre-Arrival Support International Welcome Programme/Orientation

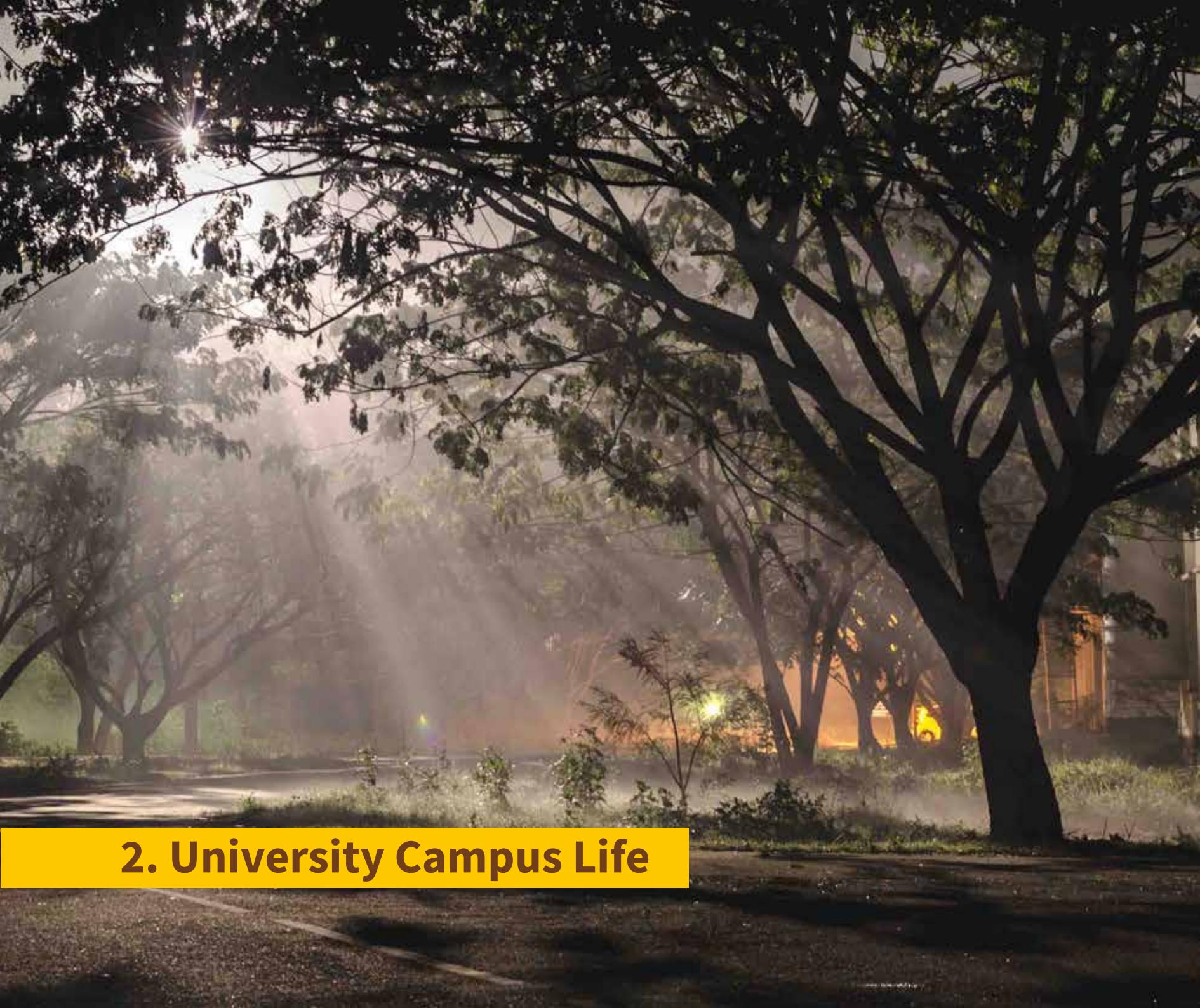
Students will have to attend a brief orientation programme soon after arrival. Student volunteers and designated faculty members will also assist students during the initial settling down period.

Accommodation

Tezpur University follows a policy of providing hostel accommodation to all its foreign students.

The International Students Office does a certain amount of hand holding. The University has effective support systems for all its student, including foreign ones.



A scenic view of a university campus at sunset or sunrise. The foreground features a paved path and some low-lying greenery. Large, mature trees with dense foliage dominate the middle ground, their branches silhouetted against a bright sky. In the background, a building is visible with warm, glowing windows, and palm trees are scattered across the landscape under a hazy, orange-tinted sky.

2. University Campus Life



Cosmopolitan Students' Community

At present approximately 4349 students are on the campus. Almost equitable composition of male (2302) and female (2047) students provide a healthy gender ratio. There are students' groups from all corners of India particularly from the northeastern states, Bihar, Maharashtra, J&K, Jharkhand, Uttar Pradesh, Uttarakhand, West Bengal. Maximum number of students are from the northeastern states. The state of Assam contributes major portion to student's population. Approximately 15% of students belong to other than northeastern states.

The University also attracts students from different countries such as Sri Lanka, Thailand, Ethiopia, Palestine, Botswana, and Sierra Leone amongst others.

Different students from diversified social and cultural backgrounds make the the campus a vibrant multicultural society.

Important Rules

- During studentship of the University, students are governed by the disciplinary rules of the University, on and off the campus.
- Use of motorized vehicles by students are not allowed in the campus. Students are rather advised to use bicycles.
- Consumption or possession of any kind of intoxicated substances like alcoholic beverages/items etc. is strictly prohibited. Also, entering/staying in the campus in an inebriated state will be considered as an offence.
- There may be penalty for violation of discipline including maintenance of cleanliness, late payment of hostel dues etc.
- Participation of the students/boarders in common events of the University/hostel, like celebrations,
- competitions, is subject to their willingness and is not mandatory.

More Than a Degree

Study at Tezpur University is not just for a degree but for all round development of an individual. Apart from classroom teaching, the University takes special care to cultivate the talented minds of the students through various curricular and co-curricular activities. Our students showcased their talent & quality in various competitions:

- Tezpur University has been awarded the prestigious Gandhian Young Technological Innovation (GYTI) Award for four times, consecutive in 2017-2019 and then again in 2021, for our students' innovative ideas.
- Tezpur University has been awarded the following positions in the 35th Inter University East Zone Youth Festival christened as "KARMOTSAV 2019" organized by The Assam Royal Global University, Guwahati under the aegis of Association of Indian Universities (AIU), New Delhi during 11-15th November, 2019.
- First position in Quiz and Western Vocal Solo,
- Second position in Classical Vocal Solo – Folk Orchestra – Western Group Song,
- Third position in One act Play and Mehendi competition.
- Best Team in music.
- Tezpur University won first position in Quiz and Folk Orchestra respectively in the 34th Inter University East Zone Youth Festival held at Lalit Narayan Mithila University in January, 2019.
- Tezpur The Folk Orchestra team of the University was invited to participate in the 12th South Asian Universities Festival held at Pt. Ravi Shankar Shukla University, Raipur, Chhattisgarh during March 2019.

In the field of sports, students participated in several AIU national and zonal sports meets. Some of them are Inter Zonal Archery Tournament, East Zone Basketball, East Zone Badminton, East Zone Cricket. One student of Tezpur University also represented Assam in the 40th Junior National Archery. An alumnus also got selected for the Assam Cricket Team under 23 category. Our students also begged 29 medals in the 36th Annual Meet, 2019 organized by Sonitpur District Bodybuilding Association.



Students' Campus Life

The University has an in-built section to deal with the welfare of the students presently headed by the Dean of Students Welfare. The section comprises various clubs and centers like the TEDx, Movie Club, Astronomy Club, Philately Club, Drama Club, Nrityangan Dance Club, Adventure Sports and Adda-The Quizzing Club, Sports Complex, Gymnasium etc.

Students' Representation

Students have the representations in almost all the administrative and governing bodies of the University. DSW nominates students to different bodies in consultation with TUSC as below.

- Board of Management: two student members.
- Academic Council: two student members.
- Students' Disciplinary Committee: two student members.
- Library Committee: one student member.
- Grievance Redressel Committee: two student members.
- Anti-Ragging Committee: fourteen student members.



Students' Bodies

Tezpur University Students' 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 themselves through secret ballots.

Society of Automative Engineers (SAE)

With the prime motto to develop the automotive culture in the University, SAE encourages students to participate in national and international competitions like BAJA, EFFICYCLE etc. Tezpur University is the largest collegiate club of SAE in the entire northeastern region.

Tezpur University Robotics Society (TURS)

Aims to promote exchange of information about robotics to simulate education in sciences and to promote the enjoyment of robotics as a hobby.

Hobby Clubs

There are several other clubs with the initiative of the students and mentored by faculty members such as (i) Photography Club, (ii) Movie Club, (iii) Adventure Sports Club, (iv) Nrityangan: Dance Club of Tezpur University. Photography Club organises photographic exhibitions and competitions in the University. Trekking to mountains has been some popular programmes by Adventure Sports Club. Nrityangan is an initiative for bringing all the dancers of different dance style into a single platform initiated by a section of dance loving students at the University. Astronomy club encourages the students to study and observe major astrophysical phenomena. Students with interest in quiz form Adda Quiz Club and organizes quiz competitions regularly. There is also an active Yoga Centre under the mentorship of a faculty member to cater the need of the students' physical and mental well being.

Child Rights and You (CRY) Volunteer Chapter

It works for the upliftment of the children of the society. It works with a motive to provide best facilities for the underprivileged children around the town.



Students' Activities

Round the year activities make students busy, providing them opportunities to grow in their fields of choice. Some of the major activities are mentioned below.

National Cadet Corps (NCC)



Tezpur University has its own NCC unit under 5 Assam Bn. Five National Integration Camps were organized in the campus during 2013-17. Several students take active part in the NCC CATC Camps and ATC camps.

National Service Scheme (NSS)



NSS in Tezpur University intends to involve the students in nation building process by maintaining a link between the campus and the surrounding community.



Annual Meet

The Annual Meet of Tezpur University is organized by the Students Council every year. There are provisions for both group and individual competitions. The group competitions are either inter-departmental or inter-hostel. Some of the major events are dances, drama, song, literary, debate, photography, fine arts, wall magazine, cultural procession etc. Every year a grand cultural night is organized on the last day of the Annual Meet inviting reputed artists.

Spring Festival

Student council also organizes Spring Festival with several competition events like photography, poster making, rangoli making, skit, Indian group song, western group song, folk dance, folk orchestra, movie making etc. followed by cultural night.

InSCIgnis

The annual, national level science festival of Tezpur University inSCIgnis is organized with the initiative of students belonging to School of Sciences. Celebrated on the occasion of National Science Day, it is one of the largest science-fest of the northeastern region. It showcases an array of events ranging from experimentation and designing, innovative events, quizzes, workshops, observational events, fun events, webinars, and lecture series from eminent scientists from around the globe.

Sampark

Sampark is another annual event of Tezpur University organized by the students belonging to the School of management Sciences. It aims at establishing a synergic relationship and interface platform where the management fraternity from both the corporate and academic world can share their experience, thereby enriching the students.

Outreach Programme

Numerous outreach programmes like blood donation, health awareness, flood relief, tree plantation etc. are organised from time to time in coordination with NSS, NCC units.



Days of National Importance and Remembrance

Office of the DSW also supports to organize different events of national importance with active participation of students such as Independence Day, Republic Day, Gandhi Jayanti, Yoga day, Birthday of Sri Atal Bihari Bajpayee, Anniversary of Sardar Ballabh Bhai Patel, Ambedkar Jayanti, Remembrance Day of Dr Bhupendra Hazarika, Rabha Divas, Shilpi Divas, National Unity Day, National Education Day, International Yoga Day etc.

36th Inter-University Youth Festival 2022-2023

Tezpur University with a contingent of 41 members have participated in the 36th Inter-University Northeast Zone Festival held at USTM, Meghalaya from January 3, 2023 to January 8, 2023 amidst 15 universities of the Northeast. The results are –

- Quiz – 1st position
- Cultural Procession – 2nd position
- Instrumental Non-Percussion (Solo) – 2nd position
- Indian Group Song – 3rd position
- Western Vocal Solo – 3rd position
- Folk Dance Group – 3rd position
- Installation (Fine Arts-Group) – 3rd position

Additionally, TU has bagged overall 2nd position in Literary and 3rd position in Dance category.

Tezpur University has qualified for the National Youth Festival held at Jain Deemed-to-be University, Bengaluru from February 24, 2023 to February 28, 2023 and participated among 120 universities across India. The results are as follows:

- Indian Group Song – 1st position
- Quiz – 3rd position
- Western Vocal Solo – 3rd position
- Folk Dance Group – 3rd position



Students' Support System

Pre-arrival Support and Settling in

The University prepares a detailed academic calendar at the beginning of every academic year and all activities are carried out while strictly adhering to the same. A week long orientation programmes for newly admitted students are conducted at the beginning of every academic year. The students are familiarized with the facilities and the scope which the University offers and made known the expectations bestowed upon them.

At the beginning of every new academic year, a Walk to Library programme is organized to inculcate amongst the students the habit of reading and to expose them to the vast resources of the Central Library of the University. Counselling and icebreaking sessions are carried out at the department and hostel level as well.

Students' Well Being

The University has a Centre for Inclusive Development looking into the affairs of SC/ STs, counselling, placement activities etc. The Equal Opportunity Cell under this centre engages in affirmative actions towards the needy sections of students and society.

Mentoring System

Student mentoring is done at the departmental level. Each faculty member is assigned a small group of students to mentor for their overall development.

Counselling and Mental Health Support

Psychological counselling sessions are organized for students every week to address their various psychological needs.

A Resident Clinical Psychologist is appointed to provide counselling services and referrals.

Financial Support

The University provides financial support to the needy students. Bicycles are also provided to economically underprivileged girl students and other needy sections of students to commute to their classes. A limited number

of institutional fellowships is provided to meritorious Ph.D. students as per University rules.

Support for Differently Abled Students

The University provides vehicles for differently abled students to commute to their classes. The University has adopted the policy of providing extra time in all the examinations for the benefit of differently abled students. All buildings are provided with ramp facilities.

Academic Writing Guidance

Periodically, academic writing workshops and seminars are organized by the departments and Placement Cell for students enrolled in Ph.D., graduate, and undergraduate programmes.

Redressal of Descriimination and Harassment

The University has an Internal Complaint Committee (ICC) that examines complaints of sexual harassment at workplace within the framework of The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013. ICC has zero tolerance policy against discrimination and sexual harassment.

The ICC at Tezpur University actively organized sensitization programme for officers, nonteaching staff, faculty members, security staff, local vendors, students etc. An orientation programme is also organized every year for the newly admitted students to sensitize them on prevention, prohibition and redressal of sexual harassment and the role of ICC. The committee has nominated members from all the departments/centres.

Students Publications

Annual magazine (Srijan: An annual multi-lingual magazine) with articles written in English, Assamese, Hindi etc. is brought out.

A science and society-based publication under the aegis 'InSCIgnis' is brought out every year and edited by a committee of students during National Science Day celebration.

A Souvenir for Sampark is released on business academia interaction.

Hostels and departments bring out their own wall magazines every year during the University Annual Meet



Study Abroad

World-Class Partners

The University has tied up with several top rated educational/research institutions as well as with industry by signing MoUs. Some of the notable international collaborations are:

- KTH Royal Institute of Technology Stockholm, Sweden
- University of Auckland, New Zealand
- Vietnam Military Medical University, Hanoi, Vietnam
- University of Malaya, Malaysia
- Queen's University Belfast, UK
- National Chung Hsing University, Taiwan

After You Leave [Alumni Association]

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.

Common Facilities

Health Centre

Health Centre of Tezpur University has been functioning since 1995. It provides health care services mainly to the students, faculty members, staff along with their families and others those who are involved with the University. At present we have over 6000 beneficiaries.

Sl No.	Name of the Medical Staff	Number
01.	Chief Medical Officer	1
02.	Medical Officer	2
03.	Nurse	2
04.	Pharmacist	1
05.	Laboratory Technician	2
06.	Radiographer	1
07.	Multi-Tasking Staff	2
08	Clinical Psychologist	1

Services /Facilities available

Health Centre offer OPD services and ten beds are also available to provide initial care to the indoor patients including emergency cases.

Important Activities

- The Medical Officers give visits to the hostels and canteens for assessing the prevailing hygiene of the dining hall and the drainage system of the surroundings to check for any outbreak of waterborne diseases.
- Fogging in the campus was done to prevent any outbreak of mosquito borne diseases.
- During Covid-19 pandemic period, various suggestions and advice were given to the TU Covid-19 Task Force and patients.
- Health Centre organizes Pulse Polio Immunization camp time to time in the campus as per directive of the Govt.

- Covid -19 screening was done as per direction of the district authority for the Tezpur University community as well as for guests who visited Tezpur University.
- Covid 19 vaccination programmes were done at Health Centre time to time for the Tezpur University community

OPD services

The OPD timings are as follows:

Session	Morning	Evening
April to September	8.30AM to 12.30PM	4PM to 6PM
October to March	8.30AM to 12.30PM	3PM to 6PM
Saturdays and Sundays-From 10AM to 12NOON		

One Medical Officer is always available for 24 hrs emergency duty. The cases requiring hospitalization are referred to the referral hospitals at Tezpur. Ambulance service is also available round the clock and is provided free of cost for students. There are two ambulances available at present and one ambulance is specifically for the PWD candidates to attend to their classes with a payment of nominal charge. A stock of common medicines including lifesaving drugs are maintained and are supplied free of cost. Routine laboratory investigations are also done. An Autoanalyser (fully automatic) and a Hormone Analyser (Mini-Vidas) is available for doing the investigations. ECG and X-ray facilities are also made available at the Health Centre for the benefit of the University community. A set of appliances for person with disability are kept.

Visit by Specialists

The University has engaged specialists of different disciplines (paediatrics, obstetrics and gynaecology) who visits the Health Centre on different days of the week on regular basis for the benefit of the University community.

A clinical psychologist is also regularly available on working days to provide counselling on stress related problems. A physiotherapist visits the health centre twice a week for offering physiotherapy to the differently abled students as well as other patients.

Transport Facility

The University provides shuttle bus service that connects major route of Tezpur town to the University. The service is for students and staff who need to travel between town and the University campus to meet their academic timetable. For commuting to and from hostel, students and residence use alternatives such as walking, cycling and personal vehicles.

Shopping Complex and Eateries

In order to provide and supply day to day essentials for the students and residence of the University, a shopping complex is located inside the University. A wide variety of small eateries that provide delicious food, including Indian, Chinese, bakery items, fresh fruit juice etc. are located inside the Campus.

Pre-Primary School

Takshashila Vidyapeeth is a pre-primary school located within the University and is part of the University. It was established on 13th of May 2006 with a vision to promote pre-primary education for the campus residents as well as for the people staying around the University. It also welcomes people in and outside Tezpur. The school functions as play group, nursery, lower K.G, and upper K.G classes with minimum of two sections in each.

Kendriya Vidyalaya Tezpur University

It is a co-education, English medium, senior secondary school, affiliated with CBSE and located within Tezpur University. It comes under Kendriya Vidyalaya Sangathan and aims at providing a conducive environment to stimulate intellectual growth of each child, thereby ensuring that their energy is properly channeled in the right direction.

Banks

There are two banks and a number of ATMs inside and within close proximity to the campus. State Bank of India Tezpur University Branch is located inside the University campus. There are three ATM points, two of which are located near the main entrance of the University, whereas the third one is placed close to the Samarooh Restaurant' in School of Engineering.



Punjab National Bank (PNB) and United Bank of India (UBI) have their branches inside the University campus. But their ATM's are kept outside the main gate of the University.

Post-Office

A post office is situated inside the University and is located near the main entrance of the University (next to the SBI, Tezpur University Branch) where all postal services including savings bank facilities etc. Speed post, Registered post can be availed in all working days.

Auditorium

Kalaguru Bishnu Prasad Rabha (KBR) Auditorium, named after Kalaguru Bishnu Prasad Rabha, is the main auditorium of Tezpur University.



The auditorium is fully air conditioned and is equipped with state-of-the-art Bose PA system. The auditorium has a capacity of 850 seats with comfortable seats and delicate interiors. The auditorium has two galleries, and the stage has a good viewing angle from both the top gallery as well as the ground floor seating arrangement. Cultural programmes and other events of the University are organized in this auditorium. The auditorium has a well maintained garden and a spacious area for any pre/post event gathering.

Community Hall

The community hall serves as an open auditorium for events which need large gatherings and audience. The hall has an open seating space and does not have a fixed seating arrangement so that chairs can be arranged and removed as per the requirement of the event. The hall is equipped

with lighting facilities and an open area where the audience can sit and view plays, concerts, and other events. Since the hall is situated next to the large sports ground of the University, one can create more side space, so that it becomes bigger and broader depending on the need of the event.

Seminar Rooms

Almost all the departments in the University has seminar rooms and multi-purpose halls to host seminars, symposia, and workshops.

Gardens

All the departments, hostels and administrative building has a well-maintained garden. The University has a collection of trees that are planted all over the University. The trees are catalogued and labeled across for visitors to learn and enjoy. The University maintains citrus gardens inside the campus. Assam has a wide range of citrus varieties and the garden inside the University boast of growing all varieties on the campus.





3. Admission at Tezpur University

Salient Features

- Registration and filling in of Admission cum Counselling Form (ACF) in online mode.
- Reservation as per Govt. of India Reservation Policy.
- Quota for medalists in national and international sports events.
- Admission through CUET (UG), TUEE(PG).
- Admission of foreign students through Direct Admission of Students Abroad (DASA & ICCR).
- Admission through Prime Minister's Special Scholarship Scheme (PMSS).
- Ph.D. admission through QIP and ADF (AICTE), National eligibility tests like NET/GATE etc., and TUEE-2023.

Tezpur University offers several programmes on underaraduate degree/diploma/certificate, postgraduate degree/diploma, and Ph.D. degree in various disciplines. Application process for the session 2023-2024 will be in online mode.

General Information

Important Dates About TU portal

SN	Programme	Opening Date	Closing Date
01.	B.Tech. (JEE Mains)		As per NTA Schedule
02.	B.Tech.(Lateral Entry)	24.03.2023	30.04.2023
03.	M.Tech.(Direct entry with valid GATE score)	24.03.2023	30.04.2023
04.	Ph.D.	24.03.2023	30.04.2023

Online Application cum Counselling 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 admission cum counselling form will remain incomplete until the required fee is transferred successfully. Programme-wise fee details for Indian students are given in the table below.

StudentType	Category	Programmes through CUET (UG)	TUEE- 2023[Ph.D./PG/M.Tech.(GATE)/B.Tech.(Lateral Entry)/B.Tech.]
Indian Student	General/OBC/OBC-NCL	₹600.00	₹800.00
	SC/ST/EWS/PwD	₹300.00	₹400.00

Admission and Semester Fee Structure: 2023-2024

Indian Students

Level	Programmes	Only once at the time of admission		Fees To Be Paid Per Semester	Grand Total
		Non-Refundable	Refundable Caution Deposit		
		₹	₹		
Undergraduate	B.Tech.*/B.Tech.(Lateral Entry)*	2300.00	5000.00	26943.00	34243.00
Integrated Programme	M.Com./M.A.	2300.00	5000.00	12943.00	20243.00
	B.Sc. B.Ed./M. Sc.*	2300.00	5000.00	15443.00	22743.00
Postgraduate	B.Ed.(2year)	2300.00	5000.00	14443.00	21743.00
	M.Sc.*	2300.00	5000.00	15943.00	23243.00
	M.A./M.Com.	2300.00	5000.00	12943.00	20243.00
	MCA	2300.00	5000.00	18443.00	25743.00
	M.A.in MCJ	2300.00	5000.00	22443.00	30743.00
	M.Tech.*/M.Des.*	2300.00	5000.00	22443.00	29743.00
	LL.M.	2300.00	5000.00	17593.00	24893.00
	MTTM	2300.00	5000.00	17443.00	24743.00
PG Diploma	P.G. Diploma in Women Studies	2300.00	5000.00	17443.00	24743.00
	P.G. Diploma in Translation (Hindi)	1800.00	5000.00	10943.00	17743.00
Certificate	Chinese	1300.00	5000.00	11693.00	17993.00
Ph.D.*	Full Time (Hosteller) #	2300.00	5000.00	16543.00*	23843.00
	Full Time(Non-hosteller) #	2300.00	2000.00	12043.00*	16343.00
	Part Time	2300.00	2000.00	13400.00*	17700.00
	TU Employee	2300.00	2000.00	11700.00*	16000.00

***NOTE:** Candidates of the following programmes will be required to pay an additional fee of Rs. 2000.00 (for Ph.D.) and Rs. 1200.00 (for other programmes) per semester on account of consumables

1. Integrated M.Sc./B.Sc. B.Ed. in Chemistry and Integrated M.Sc. in Life Sciences programmes.
2. M.Sc. in Molecular Biology and Biotechnology/ Chemistry / Environmental Science.
3. B.Tech. and M.Tech. in Food Engineering and Technology.
4. M.Tech. in Energy Technology.
5. Master of Design.

Candidates up to the age of 30 years are required to pay an additional fee of Rs. 143.00 per semester on account of health insurance.

SC/ST students are exempted from paying the hostel seat rent of Rs. 675/- per semester.



International Students (In US Dollar)

Level	Programmes	Only once at the time of admission		Fees To Be Paid Per Semester	Grand Total
		Non-Refundable	Refundable Caution Deposit		
		US\$	US\$	US\$	US\$
Undergraduate	B.Tech.*/B.Tech. (Lateral Entry)*	120.00	210.00	1386.90	1716.90
Integrated Programme	M.Sc.*	120.00	210.00	961.90	1291.90
	M.Com.				
	M.A.	120.00	210.00	691.90	1021.90
	B.Sc. B.Ed.	120.00	210.00	961.90	1291.90
Postgraduate	B.Ed.(2year)				
	M.Sc.*	120.00	210.00	741.90	1071.90
	M.A.	120.00	210.00	691.90	1021.90
	M.Com.				
	MCA	120.00	210.00	821.90	1151.90
	M.A. in MCJ	120.00	210.00	1696.90	2086.90
	M.Tech.*/M.Des.*	120.00	210.00	821.90	1151.90
	LL.M.	To be updated			
	MTTM				
	MBA	390.00	210.00	3599.70	4199.70
PG Diploma	P.G. Diploma in Women Studies	To be updated			
	P.G. Diploma in Translation (Hindi)				
Certificate	Chinese	90.00	60.00	421.90	571.90
Ph.D.*	FullTime*	90.00	270.00	1075.00*	1435.00
	PartTime*	90.00	270.00	1225.00*	1585.00

**NOTE: Candidates of the following programmes will be required to pay an additional fee of \$200 (for Ph.D.) and \$120 (for other programmes) per semester on account of consumables:*

1. Integrated M.Sc. /B.Sc.B.Ed. in Chemistry and Integrated M.Sc. in Life Sciences programmes.
2. M.Sc. in Molecular Biology and Biotechnology/ Chemistry / Environmental Science.
3. B.Tech. and M.Tech. in Food Engineering and Technology.
4. M.Tech. in Energy Technology.
5. Master of Design.

Important Notes

- Interested eligible candidates may apply Online through the link: <http://www.tezuadmissions.in> for the B. Tech.; B. Tech. (Lateral Entry); M. Tech. (with valid GATE score); M. Sc. in MBBT (with valid GAT-B score) PG including M tech. and Ph. D. programmes
- A PG candidate can apply for 3 programmes in a single application by paying application fee only once. The candidate must select the desired number of programmes in the programme selection section of the online application. However, a Ph.D. candidate can select a maximum of only 02 programmes during the application process.
- In the case of B.Tech. programmes, selection of multiple programmes is not available. The selected candidates will opt for the programme/ department/discipline based on the availability of seats at the time of their turns during the counselling cum 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.
- Foreign candidates may be enrolled on supernumerary basis and their admissions would be as per guidelines and regulations of Government of India. For details, candidates are advised to contact International Student Office, Tezpur University.
- All communication with candidates will be made through their registered e-mail ID/ mobile number or notification in TU admission portal.
- No separate letter will be issued for acceptance/ rejection of application form, appearing in entrance examinations (admit card), entrance examination schedule, selection for admission, etc.
- Communication for any doubt/query may be made on asktuee@tezu.ernet.in.

Mandatory Documents to Be Uploaded

Following documents (digital/scanned copy) to be uploaded as documentary evidence in original against each provided by the candidate in his/her TUEE Application Form:

- A passport size photograph.
- Scanned copy of the signature.
- Relevant certificate issued by the competent authority, if applied for admission under any reserved category mentioned in the reservation policy.
- For B.Tech. programmes: JEE Main admit card and Permanent Residence Certificate (PRC) issued by the competent authority of any state of northeastern India for the northeastern India quota.
- M.Sc. programme in Molecular Biology and Biotechnology: GAT-B score card and PRC under the northeastern India quota.
- Certificates and mark-sheets/grade cards of all the previous degree/diploma/certificate examinations, including those of the 10 and 10+2 standard examinations.
- Valid CEED/GATE/DAT score card, if applied for admission to an M.Tech./M.Des. programme through CEED/GATE/DAT.
- Score cards/award letters of national level eligibility tests/ GATE, if any, while applying for Ph.D. programmes.
- Sponsorship/No Objection Certificate issued by the employer if the candidate is employed.
- Relevant certificate as evidence of winning medal(s) in international/national sports event(s) in academics.
- While filling up the academic details, if the result is given in CGPA, the conversion of CGPA to percentage must be done by the applicant, as per the qualifying board/University formula. If the formula is not provided by the University/ board, the converted CGPA in percentage must be certified by the principal/competent authority of the institute.

Reservation Policy

- 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.
- Relaxation of 5% marks or equivalent grade point will be allowed for reserved category candidates as per rules.
- As per the Directives of the Govt. of India, supernumerary seats are available in the following categories:
 - Employee Wards' Quota.
 - Preference under sports quota will be considered as per University rules.
 - Prime Minister's special scholarship scheme for candidates from Jammu and Kashmir.
 - Up to 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. However, the reservation for M.Sc. in MBBT programme is subject to approval by the DBT, Govt. of India.

- No reservation under defence quota in B.Tech. (Lateral Entry) programmes.
- The wards/widows/wives of Armed Forces personnel strictly in accordance with following priorities laid down by Ministry of Defence:
 - Priority I: Widows/wards of defence personnel killed in action.
 - Priority II: Wards of disabled in action and boarded out from service.
 - Priority III: Widows/wards of defence personnel who died in service with death attributable to military service.
 - Priority IV: Wards of defence personnel disabled in service and boarded out with disability attributable to military service.
 - Priority V: Wards of ex-servicemen and serving personnel who are in receipt of Gallantry Awards.
 - Priority VI: Wards of ex-servicemen.
 - Priority VII: Wards of serving personnel.

Mandatory Conditions for Securing Admission

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

- Fulfillment of the eligibility criteria as specified in eligibility criteria for admission.
- Selection for admission to the programme.
- Production of all the relevant documents such as pass certificates and mark sheets 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.
- Submission of a set of self-attested copy of all pass certificate, mark sheets and other relevant documents.
- Submission of the character certificate from the head of the institution and migration certificate (in original) from the board/University last attended.
- Submission of a self-attested printout of the filled in application form.
- Receipt of payment of admission fee in full.

Conditions for Provisional Admission

- If the result of the qualifying examination of a student is awaited at the time of admission, he/she must produce/submit pass certificate/mark sheet with requisite percentage of marks within the stipulated time to be notified later. 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 institution 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.
- If a candidate fails to produce/submit any document (such as the completion certificates and marksheets/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 the stipulated time to be notified later. Candidates failing to produce marksheets or pass certificate with requisite percentage of marks within the specified period will not be allowed to continue her/his study.
- All admissions are provisional in nature. The admission of a student in a programme may be cancelled under the following circumstances:
 - Production/submission of any false/tempered information/ document.

- Failing to produce/submit any required pending document within 31/10/2023.
- If the required percentage of marks of the qualifying examination is not fulfilled or does not meet the requirement of the eligibility criterion.

List of Academic Programmes

UG Degree/Integrated/Diploma/Certificate Programmes

Sl.No.	Programme Names	Department/Centre	School	
01.	B.Tech. in Civil Engineering	Civil Engineering	Engineering	
02.	B.Tech. in Computer Science and Engineering#	Computer Science and Engineering		
03.	B.Tech. in Electrical Engineering	Electrical Engineering		
04.	B.Tech. in Electronics and Communication Engineering#	Electronics and Communication Engineering		
05.	B.Tech. in Food Engineering and Technology#	Food Engineering and Technology		
06.	B.Tech. in Mechanical Engineering#	Mechanical Engineering		
07.	Lateral Entry to 2nd year of B.Tech.	All Engineering Departments		
08.	B.Ed.	Education	Humanities and Social Sciences	
09.	Certificate in Chinese	Foreign Languages		
10.	Integrated M.A. in English	English		
11.	Integrated M.Com.(With provision in Lateral exit after B.Com. module & Lateral entry in the M.Com. module)	Commerce	Management Sciences	
12.	Integrated B.Sc. B.Ed.(Chemistry Major)	Chemical Sciences	Sciences	
13.	Integrated M.Sc.in Chemistry			
14.	Integrated B.Sc. B.Ed.(Mathematics Major)	Mathematical Sciences		
15.	Integrated M.Sc. in Mathematics			
16.	Integrated M.Sc. in Life Sciences	Molecular Biology and Biotechnology		
17.	Integrated B.Sc. B.Ed.(Physics Major)	Physics		
18.	Integrated M.Sc. in Physics			

NBA accredited as Tier-I programme and AICTE approved

PG Degree/Diploma Programmes

Sl.No.	Programme Names	Department/Centre	School	
01.	Master of Computer Application (MCA)	Computer Science and Engineering	Engineering	
02.	M.Tech. in Information Technology			
03.	M.Tech. in Computer Science & Engineering			
04.	M.Tech. in Civil Engineering			
05.	Master of Design(M. Des.)			
06.	M.Tech. in Bioelectronics			
07.	M.Tech. in Electronics Design and Technology			
08.	M.Tech. in Energy Technology			
09.	M.Tech. in Food Engineering and Technology			
10.	M.Tech. in Mechanical Engineering			
11.	M.A. in Cultural Studies	Cultural Studies	Humanities and Social Sciences	
12.	M.A. in Education	Education		
13.	M.A. in English	English		
14.	M.A. in Linguistics and Language Technology	Linguistics and Language Technology		
15.	M.A. in Hindi	Hindi		
16.	Post Graduate Diploma in Translation(Hindi)			
17.	Master of Laws(LL.M)	Law		
18.	M.A. in Mass Communication and Journalism	Mass Communication and Journalism		
19.	M.A. in Communication for Development			
20.	M.A. in Social Work	Social Work		
21.	M.A. in Sociology	Sociology		
22.	M.A. in Assamese	Assamese		
24.	P.G. Diploma in Women Studies	Chandraprabha Saikiani Centre for Women Studies		

25.	M.B.A.*	Business Administration	Management Sciences
26.	Master of Tourism and Travel Management(MTTM)		
27.	Certificate in NCCMP# (Part Time)(Not Through TUEE)		
28.	M.Com.	Commerce	Sciences
29.	M.Sc. in Chemistry	Chemical Sciences	
30.	M.Sc. in Environmental Science	Environmental Science	
31.	M.Sc. in Mathematics	Mathematical Sciences	
32.	M.Sc. in Molecular Biology and Biotechnology	Molecular Biology and Biotechnology	
33.	M.Sc. in Physics	Physics	

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

All M.Tech. programmes are AICTE approved

Admission is not through TUEE

Ph.D. Programmes

Sl.No.	Programme Names	Department/Centre	School
01.	Ph.D. in Physics	Applied Sciences	Engineering
02.	Ph.D. in Chemical Sciences		
03.	Ph.D. in Mathematical Sciences		
04.	Ph.D. in Civil Engineering	Civil Engineering	
05.	Ph.D. in Computer Science and Engineering	Computer Science and Engineering	
06.	Ph.D. in Electronics and Communication Engineering	Electronics and Communication Engineering	
07.	Ph.D. in Energy	Energy	
08.	Ph.D. in Food Engineering and Technology	Food Engineering and Technology	
09.	Ph.D. in Mechanical Engineering	Mechanical Engineering	
10.	Ph.D. in Electrical Engineering	Electrical Engineering	

11	Ph.D. in Cultural Studies	Cultural Studies	Humanities and Social Sciences
12.	Ph.D. in Education	Education	
13.	Ph.D. in English	English	
14	Ph.D. in Hindi	Hindi	
15.	Ph.D. in Mass Communication and Journalism	Mass Communication and Journalism	
16.	Ph.D. in Sociology	Sociology	
17.	Ph.D. in Social Work	Social Work	
18.	Ph.D. in Business Administration	Business Administration	Management Sciences
19.	Ph.D. in Commerce	Commerce	
20.	Ph.D. in Chemical Sciences	Chemical Sciences	
21.	Ph.D. in Environmental Science	Environmental Science	Sciences
22.	Ph.D. in Mathematical Sciences	Mathematical Sciences	
23.	Ph.D. in Molecular Biology and Biotechnology	Molecular Biology and Biotechnology	
24.	Ph.D. in Physics	Physics	

Admission Procedure for Academic Programmes

Important Note

While filling up the academic details, if the result is given in CGPA, the conversion of CGPA to percentage must be done by the applicant, as per the qualifying board/University formula. If the formula is not provided by the board/University, the converted CGPA in percentage must be certified by the principal/competent authority of the institute.

1. B.Tech. Programmes

- i. Candidates seeking admission to the B.Tech. programmes are required to appear in the JEE (Main) – 2023 to be conducted by NTA, New Delhi. All admission shall be on the basis of JEE (Main) - 2023 All India Ranking/CRL.
- ii. The candidates who appear in the JEE (Main) – 2023 can seek for admission to the B.Tech. programmes through two channels:
 - a. Open Seats through Central Counselling : 40% of the total seats shall be made available through the central counselling i.e., Central Seat Allocation Board (CSAB) on the basis of JEE (Main)-2023. The candidates of any place of India can participate in the central counselling conducted by CSAB/JoSSA (online choice filling process), to get admission in Tezpur University against these 40% seats.
 - b. Northeastern (NE) States Quota Seats through BSSC-TU Counselling : 60% of the total seats shall be made available through the counselling by the B.Tech. Screening cum Selection Cell at Tezpur University (BSSC-TU). These seats are reserved for the permanent

residents of northeastern (NE) states. The candidates need to register and fill in the ACF at TU admission portal in addition to JEE (Main)-2023 application.

While filling in the ACF form, candidates must produce the PRC (Permanent Residence Certificate) issued by the competent authority and JEE-Main-2023 admit card. The prescribed format of PRC is available in Annexure-1. Category-wise merit list on the basis of JEE-main score and schedule of counselling will be notified on TU admission portal.

- c. **Important Note :** Candidates who are permanent residents of NE states shall still be eligible to get admitted to the open seats through central counselling procedure mentioned in (a).

Table 1.1: Duration, Intake, and Eligibility of B.Tech. Programmes

Sl.No	Branch	Intake	Duration(No. of Semesters)	
			Minimum	Maximum
01.	Civil Engineering	68	08	12
02.	Computer Science and Engineering	68	08	12
03.	Electrical Engineering	38	08	12
04.	Electronics and Communication Engineering	68	08	12
05.	Food Engineering and Technology	56	08	12
06.	Mechanical Engineering	68	08	12

Common Eligibility : 10+2 standard or equivalent examination with minimum 60% aggregate marks or equivalent grade point, where applicable and pass marks or equivalent grade point in (1) Physics, (2) Mathematics, (3) Language, (4) Chemistry/Biology/Biotechnology/Technical vocational subject (anyone of them), and (5) any other subject.

2. Lateral Entry to the 2nd year of B.Tech. Programmes

- a. As per the provisions of AICTE, diploma holders may apply for admission to the 2nd year of existing B.Tech. programmes of the University. The duration of the Lateral Entry programme in all branches is available in the Table 2.1 below.

Table 2.1 Duration of B.Tech. Lateral Entry Programmes

Sl.No	Branch	Intake	Duration (No. of Semesters)	
			Minimum	Maximum
01.	Civil Engineering	03	06	10
02.	Computer Science and Engineering	03	06	10
03.	Electrical Engineering	08	06	10
04.	Electronics and Communication Engineering	05	06	10
05.	Food Engineering and Technology	12	06	10
06.	Mechanical Engineering	07	06	10

Note: Exact number of candidates to be admitted in each discipline will be notified separately on the University webpage after facilitating internal branch sliding among continuing students.

- b. Desirous candidates must satisfy the eligibility criteria before applying for B.Tech. (Lateral Entry) programmes. The eligibility criteria of the programme in all branches are given in the Table 2.2.
- c. Candidates, 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.

Table 2.2: Eligibility of B.Tech. (Lateral Entry) Programme Across Disciplines

Sl.No.	Branch	Eligibility
01.	Civil Engineering	
02.	Computer Science and Engineering	
03.	Electrical Engineering	
04.	Electronics and Communication Engineering	
05.	Mechanical Engineering	Passed minimum 3 years/2 years (Lateral Entry) diploma examination with at least 45% marks (40% marks in case of candidates belonging to reserved category SC/ST) in any branch of Engineering and
06.	Food Engineering and Technology	

- d. Admission Procedure
 - i. Candidates will be selected on the basis of performance in an OMR based Written Entrance Examination (OWEE) to be conducted by Tezpur University Entrance Examination (TUEE) Cell at centres across India and past academic performance.
 - ii. They must register and fill in the ACF at TU admission portal to appear in the OWEE at their preferred center on or before the last date specified for the purpose.

3. Integrated/Certificate Programmes

(M.A./M.Com./M.Sc./B.Sc.B.Ed./Certificate in Chinese)

- a. Candidates will be selected based on the performance in the CUET (UG)-2023 for UG programmes conducted by NTA. Registration for CUET (UG)-2023 can be done at <https://cuet.samarth.ac.in>
- b. The intake and duration of all integrated programmes at Tezpur University is given in Table 3.1.
- c. Before applying, candidates must satisfy the eligibility criteria for the desired programme(s) of study. Table 3.2 can be referred to check the eligibility criteria as well as the components of the subject domain of an integrated programme in CUET (UG)-2023.

Table3.1: Intake and Duration of Integrated/Certificate Programmes

Sl. No	Programmes	Intake	Duration (No. of Semesters)	
			Minimum	Maximum
01.	Integrated M.Sc. in Chemistry	25	10	14
02.	Integrated M.Sc. in Life Sciences	25	10	14
03.	Integrated M.Sc. in Mathematics	25	10	14
04.	Integrated M.Sc. in Physics	25	10	14
05.	Integrated M.Com.	33*	10	14
06.	Integrated M.A. in English	25	10	14
07.	Integrated B.Sc. B.Ed. with major in Chemistry	13	08	12
08.	Integrated B.Sc. B.Ed. with major in Mathematics	13	08	12
09.	Integrated B.Sc. B.Ed. with major in Physics	13	08	12
10.	Certificate in Chinese	49	02	04

*Actual intake may vary.

Eligibility & CUET(UG) Test Paper of Integrated/Certificate Programmes

Candidate can find the eligibility criteria from NTA website

d. Admission Procedure

★ At TU Portal

- After obtaining NTA score, register and fill in the ACF online at the TU admission portal on or before the last date specified for the purpose.
- Wait for merit lists for admission cum counselling. The lists will be published at TU admission portal.

4. M.Sc. in Molecular Biology and Biotechnology

Eligibility Criteria

Bachelor's degree with minimum 45% marks or equivalent grade point, where applicable in major/honours in Physical/Biological/ Agricultural/ Veterinary/Fisheries Science or 50% marks or equivalent grade point in any of the specified subjects as well as in aggregate if not having major/ honours in any of the specified subjects, or Bachelor's degree with minimum 50% aggregate marks or equivalent grade point in Pharmacy/ Engineering/ Technology/Physician Assistant Course/Medicine.

- a. Total intake is 30 seats.
- b. Out of this total intake, only 10 (ten) seats are reserved for the candidates who are domicile of any of the NE states of India and the rest 20 (twenty) seats will be filled up on all India basis according to the GAT-B score.
- c. Before applying for the programme, please check its eligibility criteria carefully.

d. Admission Procedure

Candidates will be selected on the basis of the GAT-B score. The examination of GAT-B is conducted by the Regional Centre for Biotechnology, Faridabad under the Department of Biotechnology (DBT), Govt. of India. PRC is to be mandatorily provided while applying for the 10 (ten) quota seats for the NE states. The prescribed format of PRC is provided in Annexure-1.

5. Master of Business Administration (MBA)

Eligibility Criteria

A Bachelor's degree in any discipline from a recognized Indian or foreign University/ institution (foreign degree must have UGC approval) with a minimum of 50% of marks (or equivalent grade) in major subject or in aggregate. Relaxation of 5% of the minimum percentage will be applicable to the reserved categories as per Govt. of India rules.

- a. Total intake for this programme is 58 seats.
- b. Any desirous candidate must first satisfy the eligibility criteria for the programme before applying for it.

c. Admission Procedure

- Candidates who aspire for the MBA programme at Tezpur University may seek for admission based on CAT/ MAT/ XAT/ ATMA/ GMAT/ CMAT score.
- The score of the test should be valid till the day of Personal Interaction.
- Merit list of candidates on the basis of the above-mentioned score will be prepared and only the candidates short listed in the merit list will be called for Group Discussion and Personal Interview.
- The application and admission process for this programme is done separately during the months of November and December of the year. Please check for notification on the University website.

6. Master of Design (M. Des.)

Eligibility Criteria

Bachelor's Degree in Design/Engineering/Architecture/Planning/Interior Design (10+2+4)years / 4 Years/Diploma in Design/4 Years BFA/Any recognized (AICTE/UGC) Design related field (10+2+4) years/Master Degree in Art/Science/MCA/MSc (Computer Sciences/Electronics) with minimum 50% marks in graduation/ and Post-graduation/Equivalent CGPA/CPI/Qualifying degree (Relaxation of percentage marks for the reserved categories is as per Govt. of India rules). CEED (Conducted by IITB) /GATE / DAT (Conducted by National Institutes of Design) qualified/Candidates

will be preferred: Seats will be filled up both by based on TUEE2023/Portfolio/Interview and from valid CEED/GATE/DAT qualified candidates followed by Portfolio/Interview. The candidates qualified through valid CEED/GATE/DAT will have to produce original score cards at the time of interview.

7. M. Tech. Programmes

- a. Admission to various M.Tech. programmes shown in the Table 7.1, is on the basis of performance in the TUEE (PG)-2023 conducted by Tezpur University or on the basis of valid score in GATE examination. Candidates having valid GATE score in relevant subject can apply directly for M.Tech. programmes. Candidates not having GATE qualification, must register and appear for the TUEE (PG)-2023 conducted by Tezpur University. With score of TUEE (PG), they can apply for M.Tech. programmes.
- b. The GATE-qualified candidates may still apply and appear in TUEE (PG)-2023 test to secure their chance. Candidates without GATE qualification must register and appear for TUEE-(PG)-2023.
- c. Category-wise merit lists of GATE-qualified candidates and TUEE (PG) qualified candidates will be prepared separately and will be notified on TU admission portal.
- d. All candidates desirous to be admitted to any of the M.Tech. programmes need to register and fill the ACF at TU admission portal.

Table 7.1: Duration and Intake of M.Tech. Programmes

Sl.No	Programmes	Intake*	Duration (No. of Semesters)	
			Minimum	Maximum
01.	M.Tech. in Bioelectronics	19	04	08
02.	M.Tech. in Civil Engineering (Specialization in Geo technical Engineering)	11	04	08
03.	M.Tech. in Computer Science and Engineering	28	04	08
04.	M.Tech. in Electronics Design and Technology	35	04	08
05.	M.Tech. in Energy Technology	35	04	08
06.	M.Tech. in Food Engineering and Technology	23	04	08
07.	M.Tech. in Information Technology	25	04	08
08.	M.Tech. in Mechanical Engineering (Specialization:1. Machine Design and 2.Thermo Fluids)	23	04	08

*Out of the total intake, the number of sanctioned GATE seats in M.Tech. in Civil Engineering is 04 (Four) only and it is 18 (eighteen) in the M.Tech. programme in other disciplines. In any discipline, if the sanctioned GATE seats cannot be filled up fully due to non-availability of applicants with valid GATE score, then the vacant seats will be filled up from the merit list of applicants with TUEE(PG) score. Such candidates admitted through



TUEE(PG) will not be entitled for GATE scholarship. However, if they have valid GATE score in other eligible discipline, they may be recommended for GATE fellowship from AICTE.

8. Other PG Programmes

(M.A./M.Sc./M.Com./MCA/LL.M./MTTM/B.Ed./PG Diploma)

- a. Candidates for any of these programmes will be selected on the basis of the performance in the TUEE (PG)-2023 conducted by Tezpur University for PG programmes. The intake capacity and duration of each programme are given in Table 8.1
- b. Before applying, candidates must check the eligibility criteria

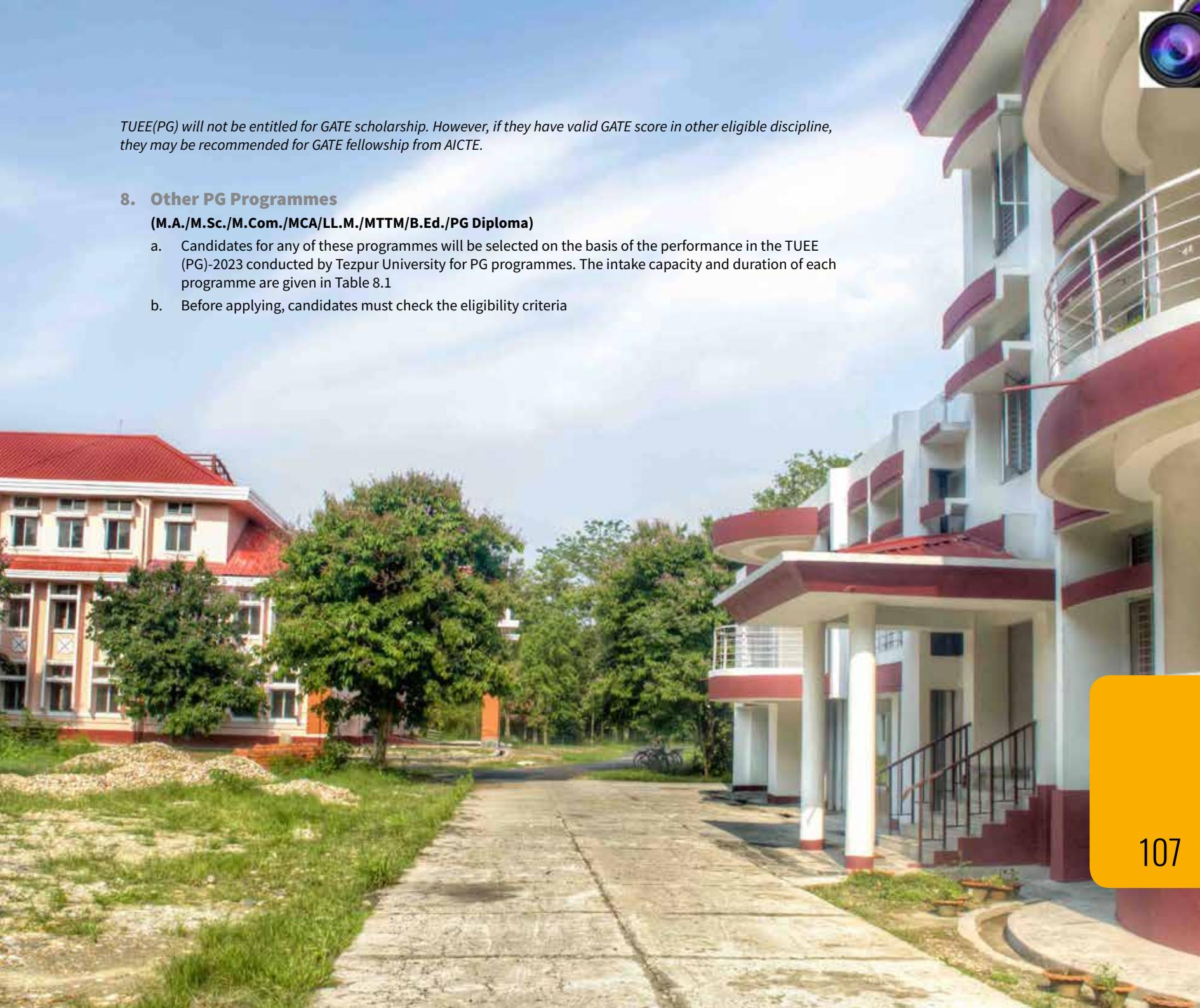


Table 8.1 Intake and duration for all Postgraduates Programmes

SN	Programmes	Intake*	Duration (No. of Semesters)	
			Minimum	Maximum
01.	B.Ed.	63	04	08
02.	LL.M.	25	04	08
03.	M.A. in Assamese	20	04	08
04.	M.A. in Communication for Development	15	04	08
05.	M.A. in Cultural Studies	30	04	08
06.	M.A. in Education	38	04	08
07.	M.A. in English	63	04	08
08.	M.A. in Hindi	31	04	08
09.	M.A. in Linguistics and Language Technology	38	04	08
10.	M.A. in Mass Communication and Journalism	44	04	08
11.	M.A. in Social Work	22	04	08
12.	M.A. in Sociology	38	04	08
13.	M.Com. Commerce	14	04	08
14.	M.Sc. in Chemistry	30	04	08
15.	M.Sc. in Environmental Sciences	38	04	08
16.	M.Sc. in Mathematics	53	04	08
17.	M.Sc. in Physics	38	04	08

18.	M.Sc. in Molecular Biology and Biotechnology	30**	04	08
19.	Master on Computer Application(MCA)	56	04	08
20.	M. Des	18	04	08
21.	Master of Tourism and Travel Management(MTTM)	19	04	08
22.	PG Diploma in Translation (Hindi)	31	02	04
23.	PG Diploma in Women's Studies	25	02	04

***Only ten seats are reserved for GAT-B qualifiers who are permanent residents of Northeastern states and rest twenty seats will be filled from GAT-B qualifiers on All India basis.*

9. Ph.D. Programmes

- a) 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.
- b) Department specific further requirement for admission into Ph.D. Programme in Tezpur University is given separately. Refer to Tables 9.1-9.4 for department specific requirements for Ph.D. programmes under different schools.
- c) Ph.D. candidates for admission in Autumn 2023 will be selected on the basis of (i) Performance in an MCQ/ MCQ cum descriptive Entrance Examination conducted by Tezpur University Entrance Examination (TUEE-2023) Cell at centres across India, and Personal Interview (PI) in online/physical mode. Candidates with UGC-(NET/JRF)/UGC-CSIR(NET/JRF)/DBT-JRF/ICMR-JRF/ ICAR-NET/ GATE/ SLET / M.Phil. will be selected on the basis of the performance in the personal interview only.
- d) Candidate desiring full time Ph. D. will be given preference.

PhD Admission, Autumn Semester, 2023

SI No	Department
1	Applied Sciences
3	Business Administration
4	Chemical Sciences
5	Civil Engineering
6	Commerce
7	Computer Science & Engineering
8	Cultural Studies
9	Education
10	Electrical Engineering
11	Electronics & Communication Engg
12	Energy
13	English
14	Linguistics & Language Technology

15	Environmental Sciences
16	Food Engg & Tech
18	Hindi
19	Mass Comm. & Journalism
20	Mathematical Sciences
21	Mechanical Engg.
22	Molecular Biology & Biotechnology
23	Multi-Disciplinary Research
24	Physics
25	Sociology
26	Social Work
27	Women Studies

Table 9.1: Department Specific Criteria for Ph.D. Programmes in School of Engineering

Sl. No.	Department	Research Areas	Pre-requisite
01.	Applied Sciences (Physics) *	Theoretical Modeling of Astrophysical Flows Around Compact Objects/ 2D Layered Materials for Applications.	M.Sc./Integrated M.Sc. in Physics/ Astrophysics/ Electronics/ Geophysics/Material Science/ Applied Mathematics/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Science. OR M.Phil./M.Tech. in Solid State Material/ Material Science/ Electronics/ Energy/ Nanoscience and Technology/ Biotechnology/ Environmental Science and Chemical Sciences. OR M.S Astronomy and Astrophysics. OR B.Tech. in Engineering Physics with 80% marks in aggregate or equivalent CGPA.
	Applied Sciences (Mathematics)*	Differential Equations, Harmonic Analysis/ Spectral Graph Theory/ Operations Research, Inventory Modeling, Fuzzy Mathematics and Optimization, Mathematics Modelling.	M.Sc./M.A./M.E./M.Tech. /MS/BS-MS/Integrated M.Sc. degree in Mathematics/ Statistics/ Engineering Mathematics/ Mathematics and Computing/ Applied Mathematics/ Operations Research/ Mechanical Engg./ Industrial Engineering/ Computer Science and Engineering/ Information Technology/any allied subject with 55% marks in aggregate or equivalent CGPA. OR B.Tech. in Mathematics and Computing/any allied subjects 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.
	Applied Sciences (Chemistry)*	Metal-Organic Frameworks, Porous Organic Polymers.	M.Sc. in Chemistry/ Chemical Sciences/ Polymer Chemistry/Polymer Science/ Physics/ Nano Science/ Material Science/ Environmental Science or allied subjects OR M.E./M.Tech. in allied subjects (Chemical Engineering/ Polymer Technology/ Material Sciences/ Environmental Engineering/ Energy etc.)

*Separate PI will be conducted for the short-listed candidates for Ph.D. in Applied Sciences Department.

02.	Civil Engineering	Geotechnical Engineering/ Environmental Engineering/ Transportation Engineering.	<ul style="list-style-type: none"> (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.
03.	Computer Science & Engineering	Data mining, Image processing/ Computer vision and Geometry/Bio-informatics/ SDN, NFV, IoT/ Speech Processing/ NLP/ Pattern recognition/ Machine learning, Computer Vision/ ML, V2X, Tactile internet/ ML, Trust and Reputation, EDM/ Data Mining/ Network security, Bio-informatics, / CRN, 5g/6G, Optical network, SDN/ Wireless network.	M.Tech. in Computer Science/ I.T./ Electronics or MCA/M.Sc. in Computer Science/ I.T. or 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.
04.	Electronics & Communication Engineering	Robotics, Biomedical Signal Processing/ Image Processing, Computer Vision, Deep learning-based signal and image analysis, Biomedical signal Processing/Bio-electronics/Semiconductor Devices Flexible Electronics/Neuro-engineering, Bioelectronics/ Semiconductor Devices, Simulation and Modeling/ Bio-sensors, Quantum Technology/Machine learning for smart Sensing, Sensors/ Sensor and Nanotechnology/ Vehicular electronics, Bio-electronic Devices.	<p>M.E. / M.Tech. / M.Sc. Engg. / M.S. in Electronics/ Communication/ Electronics Design/ Electrical/ Instrumentation/ Control/ Microwave/ Biomedical/ Bioelectronics/ Biotechnology/ Computer Science/ Information Technology.</p> <p>or</p> <p>M.Sc. in Electronics/ Physics/ Applied Mathematics. MCA with Physics, Chemistry and Mathematics in Bachelor's degree, MBBS with MD/ MS degree. OR 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.</p>
05.	Electrical Engineering	Sensor Fabrication for Application in Food Industry, IOT & health monitoring Green Energy Sensor/ Control System, Smart energy system, chaos, IOT, Waste water Purification/ Renewable Energy, Power System, Electronic Drives, Electric Vehicles/ Power Electronics & Drives Micro grid/ Smart Grid.	<p>ME/M.Tech. in any relevant discipline of Engineering or MBBS with MD/MS or M.Sc. in any relevant Science discipline,</p> <p>or</p> <p>B.E./B.Tech. with 75% marks aggregate or equivalent CGPA with a valid GATE Score and minimum two recommendation letters from the Institute or University from where B.E. /B.Tech. degree was obtained.</p>

06.	Energy	Energy Management, Bio-energy, IoT for Biogas/ Bio-fuels, Bio-energy, Catalytic transformation of Biofuels, Energy-Environment/ Building Energy, Biomass Energy/ Hybrid energy system, Grid integration, instrumentation and control, waste management/ Fuel Cell, Green Hydrogen, Battery Supercapacitor, Hybrid UAV based air quality monitor/ Solar Energy, Photovoltaic, Energy Systems, Solar Hybrid Systems/ Heating & Ventilation, Radiant System, Ground Source Heat	M.Sc. / M.E. / M.Tech. degree in Energy Technology/ Energy Management/Energy related Engineering and Technology/Physics/ Chemistry/Agriculture Allied subjects.
07.	Food Engineering and Technology	Functional Foods and Food Chemistry/Food Packaging, Food Processing waste utilization/ Food process engineering.	M.Tech. / M.E. /Integrated M. Tech. in Food Engineering and Technology/Food and Dairy related other programme/Mechanical Engineering/Chemical Engineering/Bio-Process/Bio-chemical/ Biotechnology, or M.Sc. and Integrated M.Sc. in Food Engineering and Technology/ Food and Dairy related other programme/ Applied Microbiology/ Microbiology/Bio-Chemistry/ 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.
08	Mechanical Engineering	Design and Analysis of Heat Exchangers, Thermodynamic modelling and optimization of (i) Solar thermal power and cooling systems (ii) Gas turbine based combined power systems with steam Rankine, organic Rankine and Kalina as bottoming cycles (iii) vapour absorption cooling systems/ Optimum design of Structures and systems using evolutionary algorithms with special emphasis to multi- Objective Combinatorial optimization problems/Solar Thermal Energy Applications, Drying Technology Including Solar Hybrid Drying, Thermal Energy Storage/ Solar Thermal Energy storage Material Characterization/Thermal Engineering, Heat Transfer System/ Rehabilitation robotics- Prosthetic Hand, Single Objective and Multi- objective Optimization Facility Layout Problem, Mechatronics/ Stress Analysis, Plasticity, Autofrettage, Fracture Mechanics.	"M.E. / M.Tech. / M.Sc. (Engg.) in Mechanical Engineering or any other relevant Engineering branches including Chemical Engineering and Materials Science Engineering. Or, M.Sc Degree in any relevant discipline with CSIR-UGC JRF/NET Qualified certificate or a valid GATE score. Candidates other than those with M.Sc. Mathematics must have studied Mathematics up to BSc level. Or, B.E. / B.Tech degree 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"

Table 9.2: Department Specific Criteria for Ph.D. Programmes in School of Humanities and Social Sciences

SL. No.	Department	Research Areas	Pre-requisite
01.	Assamese	Modern Assamese Literature, Film Studies & Theatre Studies/Translation Studies, Comparative Literature & Ethnic Literature/Assamese Literature & Colonial Assam, Languages of Assam.	Postgraduate in Assamese or in any allied discipline/subjects with 55% marks.
02.	Cultural Studies	Masculinity, Protest Music, Comparative Literature and Film Studies/Digital Culture/Design Ethnography/ Media and Culture/Folklore/Visual Culture & Art History.	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.
03.	Education	Education Technology, Teacher Education, Language Education/ Mathematics Education, Cognitive Science, Blended Learning, E-Content Development, Inclusive Education.	Post Graduate in Education or in any allied discipline/subjects with 55% marks.
04.	English	Material Development Language Policy, Curriculum Design/Life Writing, Travel Writing, Contemporary British Literature, Translation/Gender & Literature/Film Adaption, Indian Literature in English, Popular Culture/Anglophone South Asian Literature, Indian Writing in English, Ecocriticism /English Language Education.	MA in English (specialization may be in American Literature as well as in English Language Teaching, English Literature, Indian Writing in English, New literature in English and Women's Writing in English).
05.	Hindi	M.A. in Hindi. Research Areas: Linguistics, Poetry and Journalism/Fiction and Modern Hindi Literature	MA in Hindi
06.	Mass Communication & Journalism	New Media, ICT for Development.	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..
07.	Sociology	Development, Migration, Urbanization/ Social Movement, Agrarian Structure/ Tribal Studies/ Development, Governance, Health/ Masculinity Studies/ Agrarian Structure, Rural Livelihood, Gender/ Sociology of Science/ Sociology of Religion, Ritual Studies, Kinship Studies.	Post Graduation in Sociology / Cultural Studies/ Anthropology (with specialization in Social Anthropology) / Economics / History / Political Science / Philosophy / Mass Communication / English / Law / Management/ Social Work.

08.	Social Work	Social Work & Mental Health, Psychosocial Care in Disaster Management, Street Children, and Application of Social Work Methods/Migration, Rural Development, Social Innovation	MA in Social Work and allied Social Sciences such as Sociology, Psychology, Rural Development, Development Studies, Law, Public Health, Education and Management.
09.	Linguistics & Language Technology	Morphology, Language Description, Documentation and Language Typology	M.A. in Linguistics and Language Technology/M.A. Linguistics/ M.A in allied Subjects with 55% prerequisite

Table 9.3: Department Specific Criteria for Ph.D. Programmes under School of Management Sciences

SL. No	Department	Research Areas	Pre-requisite
01.	Business Administration	Human Resource Management, Organization Behaviour/accounting, taxation, social Development Issues/Tourism Marketing Management/ Finance, Green Finance, Fin Tech, agriculture Finance, Stock Market/ Tourism, Logistic & Supply Chain Management, Intellectual Property Management, Community Conserved Areas.	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.
02.	Commerce	Sustainability, Climate Change/ Economic Growth, Financial Development/ Corporate Finance.	1. M.Com., 2. M.A./M.Sc. in Economics, 3. 3. FCA/ FCMA/FCS.

Table 9.4: Department Specific Criteria for Ph.D. Programmes under School of Sciences

SL. No	Department	Research Areas	Pre-requisite
01.	Chemical Sciences	Polymer Chemistry/ water Purification, Theoretical Chemistry/ Organic Synthesis, Computational & Inorganic Chemistry/ Ionic Liquid Based Material, Electrocatalysis/ Molecular Magnetism, Organic Chemistry/ Synthetic Organic Chemistry/ Catalysis/ Physical Chemistry.	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.).
02.	Environmental Sciences	Atmospheric Chemistry/ Air Pollution/ Climate change and forest ecosystem dynamics/ Pollution Biology and Health Entomology/ Plant -Insect Interface/ Indoor Air Pollution, Human Environment Interactions.	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.

03.	Mathematical Sciences	Topology and Fuzzy Mathematics/ Functional Analysis and Operator Theory/ Computational Fluid Dynamics/ Number Theory/ Coding Theory/ Fractional Differential Equations.	M.A. / M.Sc. in Mathematics or M.A./M.Sc. in Statistics with requisite background in Mathematics.
04.	Molecular Biology & Biotechnology	Cancer Biology/ Inflammation/ Bioinformatics, computational Biotechnology/ Whole genome sequencing (WGS) and metabolic pathway analysis / Type 2 Diabetics/ Plant pathogenicity, gene expressions.	Masters in any branches of Life Sciences/ Physical Sciences/ Chemical Sciences/ Mathematical Sciences/ Agricultural Sciences / Veterinary or Sciences / Engineering Sciences / Medical Sciences or in any allied field. B.Tech./ B. E. degree with 80% marks in CGPA (with GATE score > 90.00 percentile) in Chemical Engineering/ Chemical Sciences/ Bioinformatics or any allied field. 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.
05.	Physics	High Energy Physics/ Microwave Materials & Devices/ Optoelectronics, Laser Physics/ Nano- sciences, Condensed Matter Physics, Multidisciplinary/ Mesoscopic Physics, Quantum Systems/ Neutrino Physics/ Applied Photonics, Biomedical Instrumentation/ Applied Optics & Instrumentation/ Astronomy & Astrophysics/ Materials Science.	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.

Admission Procedure

* At TU Portal

- Candidates must first satisfy all the criteria and department specific eligibility before applying for admission into the Ph.D. programmes. Refer to Tables 9.1 – 9.4 for department specific eligibility criteria for Ph.D. programmes in the four schools.
- Eligible candidates must register themselves and fill in the ACF form available at TU admission portal on or before the last date specified for the purpose.
- Candidates without UGC-(NET/JRF)/UGC-CSIR(NET/JRF)/DBT-JRF/ ICMR-JRF/ICAR-NET/GATE/SLET/M.Phil. Must appear in the Written exam conducted by TUEE Cell at 24 centres across India. Candidates must give the preference of the examination centers while filling up the form.
- The performance of the candidates in the OWEE will be published on the University website.

- Only the candidates short-listed in the merit list will be called for a personal interview in the respective department.
- Candidates qualified in the UGC NET-JRF/ UGC-CSIR NET-JRF, UGC/CSIR NET (LS)/ SLET (LS), GATE and M. Phil. degree holders are exempted from appearing in the written test; however, such candidates are still required to register and to fill in the ACF available at TU admission portal on or before the last date specified for the purpose. Further they shall also appear in the personal interview.
- A candidate can only apply for three programmes during the application process.
- Finally selected candidates shall be notified through University website for getting admission into the Ph.D. programme.
- 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 marksheets of the qualifying examination fulfilling the eligibility criteria at the time of admission.



4. Studying at Tezpur University

The University prepares a detailed academic calendar at the beginning of every academic year and all activities are carried out by strictly adhering to the calendar. 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.

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.

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 and to relate theoretical knowledge to the practical field.

Group Discussion is also used as a teaching pedagogy to increase the analytical capability and creativity of the students.

Important Academic Rules

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 several tests and assignments spread over the entire semester. As a rule, in a semester there are two major tests (Mid-term and End-term) apart from two class tests held at regular intervals of teaching-learning process. Finally, a Letter Grade is awarded against each course on the basis of these assessment components.

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 given in Table 1.



*Former President Kovind graces
19th Convocation of Tezpur University*

Table 1 : Letter Grades and Grade Points

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

The letter Grades 'O' to 'P' are qualifying Grades, while 'F' and 'W' are disqualifying Grades. The students awarded with the 'F' or 'W' Grade in a course are required to re-register the course.

Additionally, there are some other Grades being followed in University as stated in Table 2.

Table 2 Additional Letter Grades and their meaning

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 leftout 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	The student withdraws the course after the last date for withdrawal of courses. Deficit in attendance shall also be awarded with W.

If a provisionally selected candidate fails to produce the marksheets of the qualifying examination at the time of admission, the seat will be offered to the next eligible candidate from the merit list.

Course Registration

A student needs to register for some courses/ research work(s) in each semester through a prescribed 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 Policy

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, students may be allowed to take admission within one week of the notified date with a 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:

- To obtain a qualifying Grade in each of the registered courses.
- 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).
- 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. Even an already awarded Degree/Diploma/Certificate may be withdrawn,

under various circumstances, such as:

- Failing to complete successfully all the components of the programme within the maximum period of completion specified for the programme.
- 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.
- Production/submission of any false/tempered document at the time of application/ admission.
- Serious violation of any clause of the Regulations on Maintenance of Discipline and Hostel Rules prescribed by the University.
- ***Indulging in ragging inside or outside the University campus is strictly prohibited and students found indulged in ragging may lead to rustication from the University. 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.***
- During the study period in the University, involvement in any criminal/offensive activity, that may be punishable according to the law of country.

Financial Help from the Government

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

- Institutional fellowship for meritorious Ph.D. students.
- AICTE Doctoral Fellowship.
- UGC Research Fellowship.
- UGC Merit Scholarship for SC/ST students pursuing PG level professional courses.
- PG Indira Gandhi Scholarship for single girl child.
- UGC Merit scholarship for University rank holders.
- Ishan Uday scholarship for the students (from NE States) of UG courses.
- Inspire Scholarship.
- Post Matric Scholarship for SC, ST and OBC students under different schemes of the Govt.
- Merit cum Means Based scholarship for professional and technical courses (from Ministry of Minority Affairs).
- Post-Matric Scholarship from the Director of Welfare of Tea and Ex-tea garden.
- AICTE scholarship for the GATE qualified students of M. Tech.
- DBT scholarship.
- NEC scholarship from Director of Technical Education.
- Post-Matric scholarship for students belonging to Minority communities.
- Scholarship for differently abled students from National Handicapped Finance and Development Corporation and many more.
- Selected candidates belonging to BPL / AAY Category will be provided free studentship.

Students admitted on the basis of GATE score to the M.Tech. programme 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.

Departments Under Different Schools

School of Engineering

- Applied Sciences
- Civil Engineering
- Computer Science & Engineering
- Design
- Electrical Engineering
- Electronics & Communication Engineering
- Energy
- Food Engineering & Technology
- Mechanical Engineering

School of Humanities and Social Sciences

- Assamese
- Cultural Studies
- Education
- English
- Foreign Languages
- Hindi
- Law
- Linguistics & Language Technology
- Mass Communication & Journalism
- Social Work
- Sociology



School of Management Sciences

- Business Administration
- Commerce

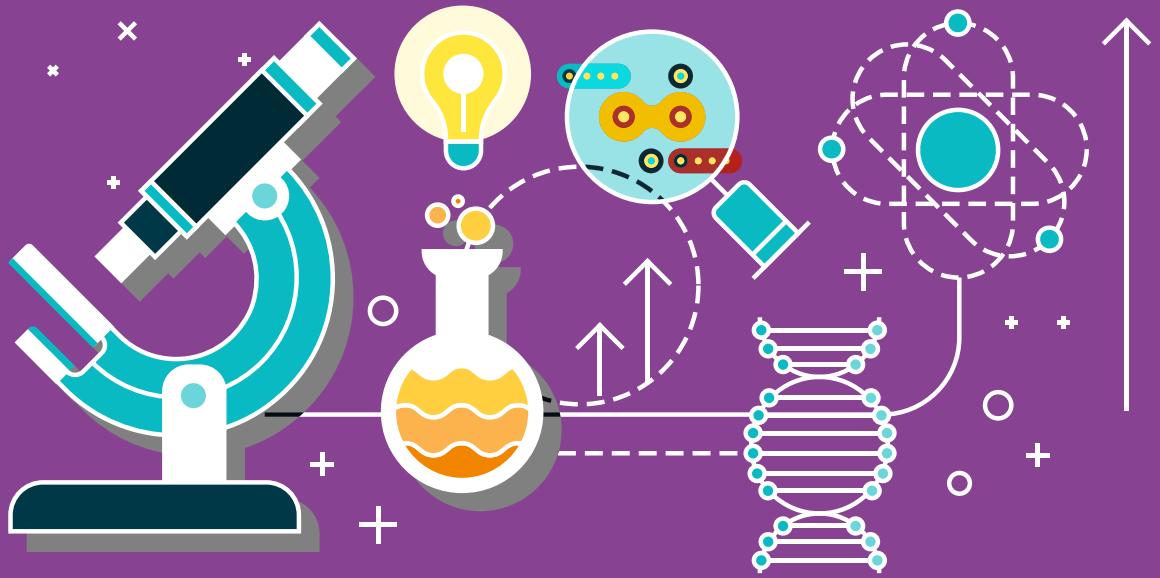
School of Sciences

- Chemical Sciences
- Environmental Science
- Mathematical Sciences
- Molecular Biology and Biotechnology
- Physics



5. Department Profile





APPLIED SCIENCES

(Year of Establishment: 2019)

The Department of Applied Sciences, one of the newest departments of Tezpur University, was established in 2019. It aims to provide high quality teaching of basic science subjects to engineering students. The teachers provide individual attention to the students with the goal to develop a strong foundation for their respective future careers by nurturing their analytical abilities and critical thinking. The department provides well equipped laboratory facilities to the students as a part of their curriculum. At the same time, the department aspires to establish its name in research with world class and high-impact outputs in the frontiers of applied sciences in interdisciplinary areas. Particularly, the department possesses some highly motivated young faculty members with research experience from various premier institutes of India and abroad. Their research interests encompass diverse areas of applied as well as fundamental sciences, spanning fields like astrophysics, condensed matter physics, materials chemistry, pure and applied mathematics. The faculty members are currently focused on establishing their own research groups to pursue research on their respective thrust areas.

Vision

To emerge as a dedicated centre of excellence in applied sciences by imparting basic science knowledge to engineering students and taking a leading role in research in the frontier areas of applied sciences.

Mission

1. To impart quality basic science education to the students of UG/PG programmes of engineering sciences.
2. To educate youths with a strong foundation in applied sciences.
3. To provide knowledge and skill for green and sustainable development.
4. To promote academic growth through the development of new programme as per NEP2020, skill development courses, and state-of-the-art research facilities for research in the emerging areas of applied sciences.

Mathematics

Programmes offered

Ph.D. in Applied Mathematics

Research Activities

No. of papers published in the year 2022-2023: 05

No. of ongoing research projects: Nil
No. of current Ph.D. scholars: 07

Faculty and Areas of Interest

Professor

Rajib Haloi*, Ph.D. (IITK), HoD
Differential Equations, Harmonic Analysis.

Assistant Professor

Bijoy Krishna Debnath*, Ph.D. (NITA)
Operations Research, Inventory Modelling, Fuzzy Mathematics and Applications, Multi Criteria Decision Making Problems.

Somnath Paul*, Ph.D. (TU)

Spectral Graph Theory: Application of Linear Algebra in Graph Theory, Graphs and Matrices

Selected Publications

- D. Chutia, R. Haloi, Weighted integral inequalities for modified integral Hardy operators, Bulletin of Korean Mathematical Society 59(3), 757 (2022).
- S. Paul, Distance Laplacian spectra of joined union of graphs, Asian-European Journal of Mathematics, Vol. 15 (2022), 2250039.
- S. Mahata, B. K. Debnath, A profit maximization single item inventory problem considering deterioration during carrying for price dependent demand and preservation technology investment, RAIRO-Operations Research 56(3), 1841 (2022).

Chemistry

Programmes offered

Ph.D. in Applied Chemistry.

Faculty and Areas of Interest

Associate Professor

Dhrubajyoti Haloi*, Ph.D. (IIT KGP)
Polymer Chemistry

Assistant Professor

Saona Seth*, Ph.D. (IITK)
Functional Organic and Metal-organic Polymers, Energetic Materials, Materials for Energy and Environmental Applications

Research Activities

No. of papers published in the year 2022-2023: 02

No. of ongoing research projects: 02

No. of current Ph.D. scholars: 04

Selected Publications

- Medhi, A., Dhar, A., Sarmah, K., Dutta, P., Haloi, D.J. Copolymers of Poly(butyl acrylate): Synthesis, Characterization and Compositional Analysis, *Asian Journal of Chemistry*, 2022, 34(4), pp. 912–916.
- Dhar, A., Haloi, D.J. Polyethylene glycol-based RAFT agent cum ATRP macroinitiator initiated block copolymerization of methyl methacrylate *Indian Journal of Chemical Technology*, 2022, 29(5), pp. 533–539.

Physics

Programmes offered

Ph.D. in Applied Physics

Faculty and Areas of Interest

Assistant Professor

Pranjal Kumar Gogoi*, Ph.D. (NUS)

Low-dimensional Material Physics, Transition Metal Dichalcogenides, Spectroscopic Ellipsometry, Electron Energy Loss Spectroscopy, Scanning Transmission Electron Microscopy.

Biplob Sarkar*, Ph.D. (IITG)

Theoretical Modeling of Astrophysical Flows, Study of X-ray Binaries, X-ray Data Analysis and Interpretation

* Recognized Ph.D. Supervisor

Selected Publications

- B. Mondal, P. K. Gogoi, Nanoscale hetero-structured materials based on metal oxides for chemiresistive gas sensor, *ACS Applied Electronic Materials* 4(1), 59 (2022).
- A. Nath, B. Sarkar, J. Roy, R. Misra, AstroSat observation of rapid Type-I thermonuclear burst from the low mass X-ray binary GX 3+1, *Journal of Astrophysics and Astronomy*, 43:93, 2022.

ACRONYMS

IITK- Indian Institute of Technology, Kanpur; **NITA**- National Institute of Technology, Agartala; **TU**-Tezpur University, **IIT KGP**- Indian Institute of

Technology, Kharagpur; **NUS**-National University of Singapore, **IITG**-Indian Institute of Technology, Guwahati; **HoD**-Head of the Department.

Facilities

Physics Laboratory for UG and PG students.

Chemistry Laboratory for UG and PG students

Research Activities

No. of papers published in the year 2022- 2023: 02

No. of ongoing research projects: 02

No. of current Ph.D. scholars: 05

Courses offered in B.Tech. program

Course Code	Course Title	Cr.
First Semester		
CH103	Chemistry	4
MS104	Mathematics I	4
PH103	Physics I	3
Second Semester		
MS105	Mathematics II	4
PH104	Physics II	2
Third Semester		
MS205	Mathematics III	3

Courses offered in Ph.D. in Chemistry

Course Code	Course Title	Cr.
AC701	Supramolecular Chemistry	4
AC702	Chemistry of Porous Materials	4

Remaining credits to be fulfilled by open elective courses

Courses offered in Ph.D. in Mathematics

Course Code	Course Title	Cr.
AM701	Inventory Modeling	4
AM702	Optimization Techniques	4
AM703	Transportation problems and Soft Computing	4
AM704	Graphs and Matrices	4
AM705	Linear Algebra and Applicable Matrix Theory	4
AM 706	Topics in Fourier Analysis	4
AM 707	Topics in Theory of partial Differential Equations	4

Remaining credits to be fulfilled by open elective courses

Courses offered in Ph.D. in Physics

Course Code	Course Title	Cr.
AP701	Astrophysical Gas Dynamics and Accretion Process	4
AP702	Optical Properties of Solids	4

Remaining credits to be fulfilled by open elective courses

For more information, please visit the departmental website <http://www.tezu.ernet.in/appsc>



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. Ph.D.
2. M. Tech. in Civil Engineering (Specialization in Geotechnical Engineering)
3. B. Tech. in Civil Engineering

Faculty and Areas of Interest

Professor

Utpal Kumar Das*, Ph.D. (GU)
Geotechnical Engineering

Associate Professor

Kamal Uddin Ahamed*, Ph.D. (IITG), HoD
Environmental Engineering

Assistant Professor

Ankurjyoti Saikia*, Ph.D. (TU)
Geotechnical Engineering

Binanda Khungur Narzary*, Ph.D. (TU)
Transportation Engineering

Debaraj Bailung Sonowal, M.Tech. (IITR)
Structural Engineering

Shailesh Deka*, Ph.D. (IITG)
Geotechnical Engineering

Jayanta Deori Bharali, M.Tech. (IITG)
Transportation Engineering

Rituraj Buragohain, M.Tech. (IITG)
Water Resources Engineering

Karabi Bharadwaj, M.Tech. (NITS)
Structural Engineering

Arunav Chakraborty*, Ph.D. (GU)

Geotechnical Engineering

Hemanta Medhi, Ph.D. (IITK)

Geotechnical Engineering

* Recognized Ph.D. Supervisor

ACRONYMS:

GU-Gauhati University, **IITG**-Indian Institute of Technology, Guwahati;

TU-Tezpur University, **IITR**-Indian Institute of Technology, Roorkee;

NITS- National Institute of Technology, Silchar; **IITK** - Indian Institute of Technology, Kanpur ; **HoD**- Head of the Department.

Facilities

The Department has the following Laboratory facilities.

Computational Laboratory Facilities

- SAAP 2000
- Plaxis 2D

Core Departmental Laboratories

- Geotechnical Engineering Laboratory
- Structural Engineering & NDT Laboratory
- Environmental Engineering Laboratory
- Transportation Engineering Laboratory
- Water Resources Laboratory
- Surveying Laboratory
- Computational Laboratory

Research Activities

- No. of papers published in the year 2022- 2023: 5
- No. of ongoing research projects: 3
- No. of current Ph.D. scholars: 10

Selected Publications

- Boruah P.P., Chakraborty A., Deterministic and Probabilistic Approach of Seismic Slope Stability Analysis-A State-of-the-Art Review, Geotechnical Engineering, 53(3); pp. 31-39, 2022.
- Chakraborty A, Goswami A., Mathematical Model for Estimation of Shear Parameters of Alluvial Soils of Kamrup Metro District (Assam, India) from Index Properties, Australian Journal of Civil Engineering, 2022.

- Doley C., Das U.K., Shukla S.K., Development of a Multiple Regression Equation for Prediction of Bearing Capacity of Geocell-reinforced Sand Beds Based on Experimental Study, Arabian Journal of Geosciences, 15: 1408, 2022.
- Soni P., Medhi H., Sagar A., Garg P., Singh A., Karna U., Runoff estimation using digital image processing for residential areas, Journal of Water Supply: Research and Technology-Aqua, 71 (8); pp. 938–948, 2022.
- Tripathy D., Ahamed K.U., Ríos-Pérez D., Tiwari D.K., Téllez A.V.C., Estimation of Elemental Pollution in Freshwater Sediment of Lerma River Using EDS and FRX Techniques (Assessment of Lerma River Bed Sediments Using EDS and FRX Techniques), Microscopy and Microanalysis, 28 (S1), pp. 1578-1582, 2022.

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
CE221	Building Materials & Technology	3
CE 222	Concrete & Structure Lab	2
CE228	Engineering Geology	2
CE229	Solid Mechanics	4

Fifth Semester

Course Code	Course Title	Cr.
LW301	Indian Constitution	0
CE320	Structural Design-I	4
CE321	Hydraulics	3
CE322	Structural Analysis-II	3
CE323	Geotechnical Engineering-II	3
CE324	Environmental Engineering-I	3
CE325	Environmental Engineering Lab.	2
CE326	Transportation Engineering-I	3
CE327	Transportation Engineering Lab.	1

Seventh Semester

Course Code	Course Title	Cr.
XXXXX	HSS / Management Elective	3
CExxx	Programme Elective-II	3

CE225	Structural Analysis-I	4
CE226	Geotechnical Engineering-I	4
CE227	Geotechnical Engineering Lab	2

Sixth Semester

Course Code	Course Title	Cr.
IC361	Accounting and Financial Management	3
CE328	Structural Design-II	3
CE329	Environmental Engineering-II	3
CE330	Estimating, Costing and Valuation	3
CE331	Construction Management	3
CExxx	Programme Elective-I	3
XXXXX	Open Elective-I	3

Eighth Semester

Course Code	Course Title	Cr.
CExxx	Programme Elective	3
CExxx	Programme Elective	3

CExxx	Programme Elective-III	3
CExxx	Programme Elective-IV	3
XXxxx	Open Elective-II	3
CE471	Industrial Summer Training	2
CE483	Project-I	4
CT465	Essence of Indian Traditional Knowledge	0

XXxxx	Open Elective	3
CE484	Project	6

Elective Courses

Course Code	Course Title	Cr.
CE 421	Advanced Reinforced Concrete Design	3
CE 422	Dynamics of Structures	3
CE 423	Pre-stressed Concrete and Industrial Structures	3
CE 424	Bridge Engineering	3
CE 425	Soil Dynamics and Foundation Engineering	3
CE 426	Ground Improvement Methods	3
CE 427	Earth Retaining Structures	3
CE 428	Applied Geotechnical Engineering	3
CE 429	Environmental Geo-techniques	3
CE 430	Open Channel Flow	3
CE 431	Hydraulic Structures	3

Course Code	Course Title	Cr.
CE 432	Hydraulic Machines	3
CE 433	Groundwater Hydrology and Management	3
CE 434	Air Pollution and Industrial Waste Management	3
CE 435	Solid Waste Engineering	3
CE 436	Environmental Impact Assessment	3
CE 437	Remote Sensing and GIS	3
CE 438	Pavement Design	3
CE 439	Pavements Materials	3
CE 440	Geometric Design of Road Transportation System	3
CE 441	Design and Construction of Rural Roads	3
CE442	Analysis and design of foundations	3

Courses offered in M. Tech. in Civil Engineering

(Specialization: Geotechnical Engineering)

Course Code	Course Title	Cr.
First Semester		
CE501	Engineering Behaviour of Soil	4
CE 502	Geotechnical Exploration and Testing	5
CE 503	Strength and Compressibility of Soils	3
-	Elective I	3
CE 101	Elective II	3
-	Open Elective I	3
Third Semester		
CE 598	M. Tech Project (MTP) Phase-I	12

Course Code	Course Title	Cr.
Second Semester		
CE 504	Advanced Foundation Engineering	4
CE 505	Ground Improvement Methods	3
CE 590	Term Paper	2
-	Elective III	3
-	Elective IV	3
-	Elective V	3
-	Open Elective II	3
Fourth Semester		
CE 599	M. Tech Project (MTP) Phase-II	12

Elective Courses

First Semester		
CE 521	Unsaturated Soil Mechanics	3
CE 522	Reinforced Earth and Geosynthetics	3
CE 523	Rock Mechanics	3
CE 524	Groundwater Hydrology	3
CE 525	Numerical Methods in Engineering	3
CE 526	Analysis and Design of Pavements	3

Second Semester		
CE 527	Slope stability and Retaining Structures	3
CE 528	Soil Dynamics and Foundation Engineering	3
CE 529	Earth and Rockfill Dams	3
CE 530	Geotechnical Aspects of Waste Disposal	3
CE 531	Environmental Geotechnology	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 2018-2022, 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, computational biology and bioinformatics, image processing algorithms, speech processing, computational geometry, machine learning and remote sensing image analysis.

Programmes offered

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

Faculty and Areas of Interest

Professor

Dilip Kumar Saikia*, Ph.D. (IITKgp)

Networks, Mobile Computing

Dhruba Kumar Bhattacharyya*, Ph.D. (TU), VC (Acting)

Data Mining, Network Security, Bioinformatics

Smriti Kr. Sinha*, Ph.D. (TU)

Workflow Automation, Web Theory

Utpal Sharma*, Ph.D. (TU)- Dean, P&D

Natural Language Processing

Nityananda Sarma*, Ph.D. (IITG), Director, CC

Wireless Networks and Mobile Computing

Bhogeswar Borah*, Ph.D. (TU)

Data Mining, Image Processing

Sarat Saharia*, Ph.D. (TU), HoD

Pattern Recognition

Bhabesh Nath*, Ph.D. (TU)

Data Mining

Associate Professor

Siddhartha Sankar Satapathy*, Ph.D. (TU)

Computational Biology and Bioinformatics, Wireless Sensor Network

Sanjib Kumar Deka, * Ph.D. (TU)

Cognitive Radio Network, Operating System

Debojit Boro*, Ph.D. (TU)

Network Security

Rosy Sarmah*, Ph.D. (TU)

Data Mining, Bioinformatics, Image Processing

Assistant Professor

Sarangthem Ibotombi Singh*, Ph.D. (TU)

Service Oriented Systems, Trust and Reputation

Loitongbam Basantakumar Singh, M.Tech. (TU)

Object Recognition, Trust and Reputation

Arindam Karmakar*, Ph.D. (ISI)

Algorithms, Computational Geometry

Sanghamitra Nath*, Ph.D. (TU)

Speech Processing, NLP

Swarnajyoti Patra*, Ph.D. (JU)

Pattern Recognition, Machine Learning, Remote Sensing, Image Analysis

Shobhanjana Kalita*, Ph.D. (TU)

Knowledge Representation and Reasoning

Nabajyoti Medhi*, Ph.D. (NITM)

Software Defined Networking, Wireless Networks, Network Security, Cloud Computing, Web Technologies

Jyotismita Talukdar, Ph.D. (GU)

Data Mining, Machine Learning

Tribikram Pradhan, Ph.D. (IIT BHU)

Recommender System, Information Retrieval, Knowledge Graph, Data Mining, NLP

Ram Charan Baishya, Ph.D. (TU) (Guest faculty)

Data Mining, Network Security

Faiz Iqbal Faiz, Ph.D. (NERIST) (Guest Faculty)

Machine Learning in Information Security

Recognized Ph.D. Supervisor

ACRONYMS

IITKgp-Indian Institute of Technology, Kharagpur; TU-Tezpur University; P&D- Planning & Development; IITG-Indian Institute of Technology, Guwahati; ISI-Indian Statistical Institute, Kolkata; JU-Jadavpur University, Kolkata; NITM- National Institute of Technology, Meghalaya; GU- Gauhati University, IIT- BHU- Indian Institute Technology- Banaras Hindu University Uttar Pradesh; NERIST- North Eastern Regional Institute of Technology Itanagar; HoD-Head of the Department

Facilities

The Department has the following Laboratory facilities

State-of-the-art computer laboratories

- Basic Programming Laboratory
- Software Engineering Laboratory
- Hardware Laboratory
- Mobile Computing Laboratory/SEA Laboratory

Research / Special Computing Facilities

- High Performance Computing Centre (23 TFlops speed and 50 TB storage)
- Network/Information Security Laboratory
- Biomimetic and Cognitive Robotics Laboratory
- Natural Language Processing Laboratory
- Cognitive Radio Network Research Laboratory/Malware / SDN Research Laboratory
- AR/VR Laboratory
- IoT Laboratory
- Data Science 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. The digital libraries of ACM, IEEE, are accessible to the Department.

Research Activities

- No. of papers published in the year 2022-2023: **37**
- No. of ongoing research projects: **07**
- No. of current Ph.D. scholars: **62**

Selected Publications

Chowdhury H. A., Bhattacharyya D. K. and Kalita J. K., UIPBC: An effective clustering for scRNA-seq data analysis without user input, *Knowledge-Based Systems*, 248(1), ISSN: 0950-7051. DOI: <https://doi.org/10.1016/j.knosys.2022.108767>

Mandal K., Sarmah R. and Bhattacharyya D. K. POPTric: Pathway-based Order Preserving Tri-clustering for gene sample time data analysis, *Expert Systems with Applications*, 192(1), ISSN: 0957-4174. DOI: <https://doi.org/10.1016/j.eswa.2021.116336>

Devi M., Sarma N. and Deka S. K., A single-channel single-winner auction model for homogeneous channel allocation in CRNs, *Physical Communication*, 55(1), ISSN: 1874-4907. DOI: <https://doi.org/10.1016/j.phycom.2022.101890>

Bhowmick A., Saharia S. and Hazarika S. M. Non-parametric scene parsing: Label transfer methods and datasets, *Computer Vision and Image Understanding*, 219(1), ISSN: 1077-3142, DOI: <https://doi.org/10.1016/j.cviu.2022.103418>

Sen P., Kurmi A., Ray S. K. and Satapathy S. S. Machine learning approach identifies prominent codons from different degenerate groups influencing gene expression in bacteria, *Genes to Cells*, 27(10), ISSN:1365-2443, DOI: <https://doi.org/10.1111/gtc.12977>

Neog H., Dutta P. E. and Medhi N. Health condition prediction and covid risk detection using healthcare 4.0 techniques, *Smart Health*, Vol: 26, ISSN: 2352-6483, DOI: <https://doi.org/10.1016/j.smhl.2022.100322>

Kharkongor C. and Nath B. Set Representation for Rule Generation Algorithms, *Computer Science*, 23(2), ISSN: 1508-2806, DOI: <https://doi.org/10.7494/csci.2022.23.2.4071>

Devi N. and Borah B, A novel mutual information-based feature selection approach for efficient transfer learning in aerial scene

classification, *International Journal of Remote Sensing*, 43(15-16), ISSN:1366-5901, DOI:<https://doi.org/10.1080/01431161.2021.1939916>
 Ramdinmawii E. and Nath S. A Preliminary Analysis on the Correlates of Stress and Tones in Mizo, *ACM Transactions on Asian and Low-Resource Language Information Processing*, 22(2), ISSN:2375-4699, DOI: <https://doi.org/10.1145/3546950>

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

Course Code	Course Title	Cr.
First Semester		
CH103	Chemistry	4
PH103	Physics-I	3
MS104	Mathematics-I	4
EE103	Basic Electrical Engineering	3
EE104	Basic Electrical Engineering Lab	1
EF103	Communicative English	3
SE100	Induction Program	3
Third Semester		
MS205	Mathematics – III	3
CO202	Digital Logic Design	4
CO209	Computing Workshop	2
BA201	Economics	3
CO210	Data Structures	4
CO211	Data structures using Object Oriented Programming Lab	3
EC201	Signals and Systems	3
ES201	Environmental Science	-

Course Code	Course Title	Cr.
Second Semester		
PH104	Physics-II	2
MS105	Mathematics-II	4
CO105	Discrete Mathematics	4
EC102	Basic Electronics	4
ME103	Workshop Practice	2
CO103	Introductory Computing	3
CO104	Computing Lab	2
CE103	Engineering Graphics	3
Fourth Semester		
BT201	Biology	3
CO218	Data Communication	3
CO214	Computer Architecture and Organization	4
CO215	Computer Organization Lab	1
CO216	Formal Language and Automata	3
CO206	Design and Analysis of Algorithms	4
CO217	Graph Theory	3

Fifth Semester		
CO309	Operating Systems	3
CO311	Software Engineering	3
CO310	Operating Systems Lab	1
CO312	Database Systems	3
CO313	Data base Systems Lab	2
CO303	Computer Graphics	4
-	Elective-I (PEC01)	3
-	Open Elective-I (OEC01)	3
LW301	Indian Constitution (MC- Non Credit)	-

Seventh Semester		
XXxxx	* HSS/Management Elective	3
CO401	Artificial Intelligence	3
-	Elective-III (PEC03)	4
-	Elective-IV (PEC04)	3
-	Open Elective-III (OEC03)	3
CO402	Project-II	4
CT465	Essence of Indian Traditional Knowledge (MC- Non Credit)	-

Sixth Semester		
CO314	System Software and Compiler Design	4
-	Elective-II (PEC02)	4
-	Open Elective-II (OEC02)	3
CO315	Computer Networks	3
CO316	Computer Networks Lab	1
IC361	Accounting and Financial Management	3
CO317	Project-I (using SE perspective)	2
Eighth Semester		
-	Elective-V (PEC05)	3
-	Open Elective-IV (OEC04)	3
CO403	Project-III	8

Mandatory Non-credit Courses

Course Code	Course Title	Schedule
SE100	Induction Programme	Semester I
CO404	Summer Internship /Industrial Training	After Semester VI

CO405	Comprehensive Written Exam	Semester VII/Semester VIII
ES201	Environmental Science	Semester III
LW301	Indian Constitution	Semester V
CT465	Essence of Indian Traditional Knowledge	Semester VI

Professional Elective Courses (PEC)

PEC01, PEC02, PEC03, PEC04, PEC05 will be offered from the following list of Elective courses from the Department. Some of the elective courses are already running in the B.Tech. Programme and some of them are added newly.

Course Code	Course Title	Cr.
CO304	Principles of Programming Languages	3
CO318	Cryptography	3
CO432	Information Theory and Coding	3
CO319	Statistical Modelling and Applications	3
CO423	Web Technology	4
CO306	Embedded Systems	4
CO426	Advanced Computer Architecture	4
CO422	Theory of Computation	4
CO406	Distributed Systems	4
CO509	Computer Vision & Image Processing	4
CO512	Parallel Programming	4
CO513	Fundamentals of Speech Processing	4
CO514	Machine Learning	4
CO515	Knowledge Representation and Reasoning	4

CO516	Advanced Algorithms	4
CO517	Virtual and Augmented Reality	4
CO518	Cloud Computing	3
CO504	Natural Language Processing	3
CO519	Internet of Things	3
CO520	Software Defined Networking and Network Function Virtualization	3
CO521	Computational Geometry	3
CO522	Bioinformatics	3
CO523	Quantum Computing	3
CO524	Linear Optimization	3
CO505	Advanced Database Management System	3
CO503	Fuzzy Logic and Neural Networks	3
CO435	Mobile Computing	3
CO525	Data Mining	4
CO526	Operation Research	3

Courses offered in Master of Computer Application (MCA)

Course Code	Course Title	Cr.
Bridge Semester-I		
(Only for students not having adequate CS/IT degree background)		
CO103	Introductory Computing (Audit)	3
CO104	Computing Lab (Audit)	2
CO202	Digital Logic Design (Audit)	4
CO209	Computing Workshop (Audit)	2
First Semester		
EF103	Communicative English (Audit)	3
CS405	Discrete Mathematics	3
CS412	Data Structures	4
CS416	Object Oriented programming and data Structures Lab	3
-	Elective-1	3
-	Elective-2	3
-	Elective-3	3
Third Semester		
CS513	Software Engineering	3
CS518	Software Engineering Lab	1
CS519	Computer Networks	4
CS520	Computer Networks Lab	1
CS510	Minor Project	5
-	Elective-6	3
-	Elective-7	3
-	Open Elective-2	3

Course Code	Course Title	Cr.
Bridge Semester-II		
(Only for students not having adequate CS/IT degree background)		
CO208	Object Oriented Programming (Audit)	4
CO214	Computer Architecture and Organization (Audit)	4
CO215	Computer Organization Lab (Audit)	1
CO218	Data Communication (Audit)	3
CS305	Internet Concepts and Web Technology (Audit)	3
Second Semester		
IC361	Accounting and Financial Management	3
CS413	Database Management System	3
CS414	Database Management System Lab	2
CS417	Operating Systems	3
CS418	Operating Systems Lab	2
-	Elective-4	3
-	Elective-5	3
-	Open Elective-1	3
Fourth Semester		
CS515	Major Project	16

Elective Courses		
Course Code	Course Title	Cr.
CS421	Graph Theory	3
CS422	Numerical Methods	4
CS424	Formal Language and Automata	3
CO423	Web Technology	4
CO504	Natural Language Processing	3
CO505	Advanced Database Management System	3
CO513	Fundamentals of Speech Processing	4
CO517	Virtual and Augmented Reality	4
IT504	E-Commerce	3
IT509	Data Mining & Data Warehousing	4
IT507	Computer Security & Cryptography	3
IT517	Pattern Recognition	4
CS522	Computer Graphics	4
CS524	Theory of Computation	3

Course Code	Course Title	Cr.
CS525	Artificial Intelligence	3
CS532	Compiler Design	4
CS541	Mathematical Foundation for Computer Science	4
CS530	Data Analytics and Visualization	4
CS538	Computational Geometry	3
CS529	Embedded Systems	4
CS601	Design & Analysis of Algorithms	3
CS602	Image Processing	3
CS606	Computer Architecture and Parallel Processing	3
CS609	Geographic Information Systems	3
CS610	Bioinformatics	3
IT611	Distributed Systems	3
CS621	Mobile Computing	4
CS638	Software Defined Networking & Network Function Virtualization	3

Courses offered in M. Tech in Information Technology

Course Code	Course Title	Cr.
First Semester		
CS531	Object Oriented Programming and Design	5
CS634	Selected Topics in Computer Networks	4
CS 601	Design and Analysis of Algorithms	3
CS543	Advanced Programming Lab I	3
-	Elective-I	3
-	Open Elective -I	3

Course Code	Course Title	Cr.
Second Semester		
IT610	Advanced Database System	4
CS545	Seminar	2
-	Elective-II	3
-	Elective-III	3
-	Elective-IV	3
-	Open Elective-II	3

Third Semester			Fourth Semester		
IT604	Term Project-I	8	IT605	Term Project-II	16
-	Elective-V	3			
-	Elective-VI	3			
Elective Courses					
CS509	Data Communication	4	CS533	Computational Geometry	3
CS505	Software Engineering	4	IT523	Discrete Mathematics	3
CS525	Artificial Intelligence	3	CS522	Computer Graphics	4
CS424	Formal Language and Automata	3	CS523	Enterprise Resource Planning	3
IT518	Graph Theory	3	CS524	Theory of Computation	3
CS529	Embedded Systems	4	CS502	System Software	3
CS621	Mobile Computing	4	CS507	Computer Networks	4
CS625	Web Technology	4	CS523	Enterprise Resource Planning	3
IT517	Pattern Recognition	4	CS524	Theory of Computation	3
IT509	Data Mining and Data Warehousing	4	CS502	System Software	3
IT507	Computer Security and Cryptography	3	CS507	Computer Networks	4
CO504	Natural Language Processing	3	CS508	Database Management Systems	5
CS610	Bioinformatics	3	IT503	Multimedia Systems	4
IT611	Distributed Systems	3	IT504	E-Commerce	3
CS725	Knowledge Representation and Reasoning	4	CS602	Image Processing	3
CS731	Data Mining in Security	4	CS607	Optimization Technique	3
CO501	Network Management and Security	3	CO503	Fuzzy Logic and Neural Networks	3
CS606	Computer Architecture and Parallel Processing	3	CS638	Software-Defined Networking and Network Function Virtualization	3

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

Course Code	Course Title	Cr.	Course Code	Course Title	Cr.
First Semester			Second Semester		
CS541	Mathematical Foundation for Computer Science	4	CS634	Computer Architecture and Parallel Processing	3
CS542	Advanced Algorithms and Data Structures	3	CS606	Advanced Programming Lab II	3
CS544	Selected Topics in Computer Networks	4	CS545	Seminar	2
CS543	Advanced Programming Lab I	3	--	Elective I	3/4
IT510	Advanced Operating Systems	4	--	Elective II	3/4
			--	Open Elective I	3
Third Semester			Fourth Semester		
-	Elective III	3/4	CS641	Term Project-II	16
-	Elective IV	3/4			
-	Open Elective II	3			
CS640	Term Project I	8			
Elective I					
IT610	Advanced Database System	4	IT611	Distributed Systems	3
CS607	Optimization Techniques	3	CS612	Advanced Computer Graphics	3
CS659	An Introduction to Probability in Computing	3	CS613	Image Processing and Computer Vision	3
CS622	Modern Compiler Design	3	CS614	Graph Theoretic Algorithms	3
IT517	Pattern Recognition	4	CS664	Parallel Algorithms	3
Elective II					
CS615	Robotics	3	CS538	Computational Geometry	3
CS637	Topics on Cognitive Radio and Networks	4	IT509	Data Mining and Data Warehousing	4

CS525	Artificial Intelligence	3		CS504	Natural Language Processing	3
CS616	Machine Learning	3		CS610	Bioinformatics	3
CS529	Embedded Systems	4		CS663	Randomized Algorithms	3
CS653	Introduction to Internet of Things	3		CS638	Software Defined Networking and Network Function Virtualization	3
IT503	Multimedia Systems	4		CS524	Theory of Computation	3
CS617	VLSI Design	3		CS618	Information Theory and Coding	3

Elective III and IV

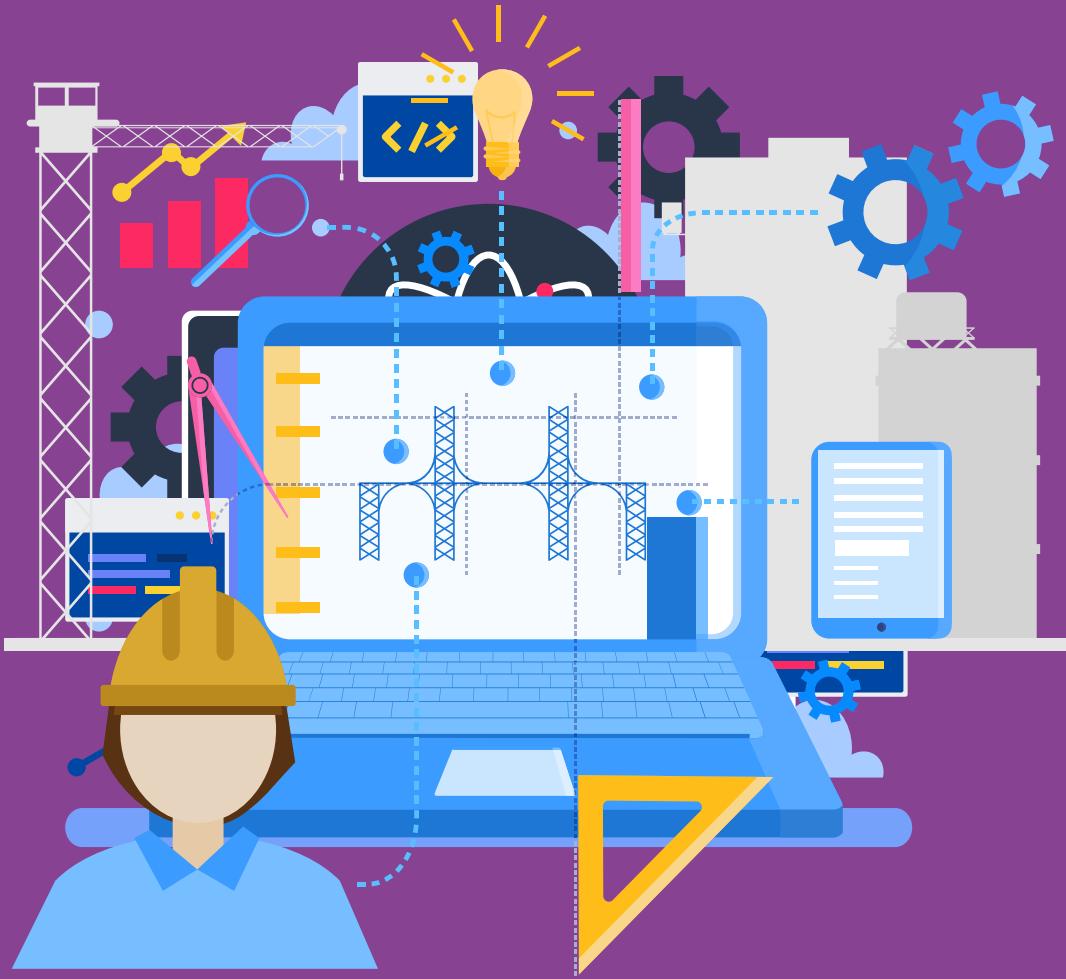
CS621	Mobile Computing	4		CO503	Fuzzy Logic and Neural Networks	3
IT507	Computer Security and Cryptography	3		CS619	Privacy and Security in Online Social Network	3
CS725	Knowledge Representation and Reasoning	4		CS668	Blockchain Architecture and Use cases	3
CS602	Image Processing	3		CS620	Data Science	3

Additional Elective Courses (from SWAYAM MOOCs courses of UGC)

CS650	Introduction to Machine Learning	2		CS666	Embedded System Design with ARM	2
CS651	Artificial Intelligence Search Methods for problem Solving	3		CS667	Introduction to Soft Computing	2
CS652	Privacy and Security in Online Social Media	2		CS668	Blockchain Architecture and Use Cases	3
CS653	Introduction to Internet of Things	3		CS669	Introduction to Industry 4.0 and Industrial Internet of Things	3
CS654	Programming, Data Structures and Algorithms using Python	2		CS670	Deep Learning	3
CS655	Scalable Data Science	2		CS671	Reinforcement Learning	3
CS656	Introduction to R Software	2		CS672	Ethical Hacking	3
CS657	Cloud Computing	2		CS673	Demystifying Networking	1
CS658	Social Networks	3		CS674	Theory of Computation	2

CS659	An Introduction to Probability in Computing	1		CS675	Practical Machine Learning with Tensor Flow	2
CS660	Programming in Java	3		CS676	Human Computer Interactions	2
CS661	Data Science for Engineers	2		CS677	Introduction to Machine Learning	3
CS662	Machine Learning for Engineering and Science Applications	3		CS681	GPU Architecture and Programming	3
CS663	Randomized Algorithms	3		CS682	Multi-Core Computer Architecture - Storage and Interconnects	2
CS664	Parallel Algorithms	3		CS683	Data Analytics with Python	3
CS665	AI: Knowledge Representation and Reasoning	3		CS684	Cloud Computing and Distributed Systems	2
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				

For more information one can visit the departmental web site at <http://www.tezu.ernet.in/dcompsc>



DESIGN

(Year of Establishment: 2019)

Tezpur University started the ‘Department of Design’ in the year 2019 under the School of Engineering considering the importance of design education in the successful development of useful products. India represents a huge market and an “Atmanirbhar Bharat” needs an enormous range of well-designed products for its population as well as the rest of the world. That needs training and preparing future generations of technocrats with the right design perspective.

The first design faculty joined the department in June 2020. During the academic year 2020-21, initially the department offered open elective courses to the students of undergraduate and postgraduate programmes of the University to provide a perspective of design thinking and the necessary training in problem-solving. The department had started its M.Des programme in 2021 with admission of good number students from different educational backgrounds like B.Des, Engineering (BE/BTech), and Architecture through CEED scores and TUEE followed by portfolio and interview. At present, there are 6 faculty members, and 2 staff members. Department plans to start its Ph.D. programme in Design in the academic year 2023-2024. We also envisage the need for catering to students/project-specific requirements through a Human-Centred Design approach.

Vision of the Department

A centre of excellence in Design and Innovation for creating competent professionals capable of integrating traditional and modern knowledge, concepts and styles for eco-friendly products and for addressing the challenges of India becoming a manufacturing hub.

Mission of the Department

1. To offer UG/ PG and Research programmes in the domain of design.
2. To engage in design and consultancy activities for environmentally sustainable products.
3. To achieve regional, national, and international recognitions through need-based quality academic, research and consultancy activities.

Programme Educational Objectives

1. To promote design thinking and hands on approach to learning through academic projects on industrial challenges among the students.
2. To make students aware of real-life socio-economic problems and to solve using technology learning.
3. To develop professional attitude and expertise among the students

4. for addressing the industrial challenges.
4. To contribute to the Governmental regional/ nation development policy and road map for Industrial revolution in the domain of design.

Programme Outcomes (POs) of M. Des

1. Graduates will be able to conduct investigation and developmental work to solve real-world design problems.
2. Graduates will be able to write and present a technical report/ document.
3. Graduates will be able to demonstrate a degree of mastery and in-depth knowledge in the design domain.

Programme offered

1. Master of Design (M. Des.)

Professor

***Partha Pratim Dutta**, Ph.D. (TU)- HoD

Renewable Energy, Thermal Engineering, Biomass Gasification, Solar Thermal Energy, Drying Technology, Automobile Engineering, Rural Technology/ Innovation

Assistant Professor

Shiv Kumar Verma, Ph.D. (IITG)

Design Methods, Design Research, Form Studies, Design Science, Design Education and Pedagogy, Healthcare, Educational games, and Designing for communities.

Srinivasan G, Ph.D. (IIITDM)

Product and Industrial Design, Physical and cognitive ergonomics, Design for occupational health and disabled.

Assistant Professor (Guest)

Mr. Pranjali Protim Borah, M. Tech. (ADBU), PhD (Pursuing IITG)

*Interaction Design*Recognized Ph.D. Supervisor*

Ms. Kankana Narayan Dev, M. Arch. (MAHE), PhD (IITG)

Visual Communication Design

Ms. Namrita Sharma, MFA (College of Art, DU), PhD (Pursuing IITG)

Visual Communication Design, Printmaking, Stylistic Analysis, Art and Design History

Mr. Hari Brat Saikia, M.Des. (CIT, Kokrajhar), PhD (Pursuing CIT,

Kokrajhar)

Low cost Sustainable Design, Product Design, Transportation Design, Healthcare & Design Research

ACRONYMS

TU- Tezpur University; **IITG**- Indian Institute of Technology, Guwahati; **IIITDM**- Indian Institute of Information Technology, Design and Manufacturing Kancheepuram Chennai; **MAHE**-Manipal Academy of Higher Education Puducherry, **ADBU**- Assam Don Bosco University, **CIT**- Central Institute of Technology, **DU** – Delhi University, **HoD**- Head of the Department.

Facilities

The Department has the following facilities

Digital Prototyping Studio: The studio has the following equipments

- 18 numbers of High End Computers (HP Z2 G4 Intel Core i7-9700/ 16GB/ 1TB)
- 2 numbers of Workstation (Dell Precision 3640)
- Software Packages (Solidworks)
- Cintiq Pro for product styling, illustrations, and visual design
- Wacom Cintiq Pro 32 inch
- Wacom Cintiq Pro 24 inch

Physical Prototyping Studio: The studio has the following equipments

- 3D Clay and Plastic Printer
- 3D Printer with Nylon, PLA, ABS, CPE and PVA Printing

Communication Studio: The studio has the following equipments

- DSLR Camera
- Tripods

Central Workshop facilities (Under Mechanical Engineering)

Woodwork / Carpentry, Metal work, Welding

Facility planned in near future

Product Development Workshop-Three divisions for Wood work, Metal work, and Paint work for large scale prototype development.

Research Activities

- No. of papers published in the year 2022-2023: 03
- No. of papers presented at international conferences: 3
- No. of ongoing research projects: 0
- No. of current Ph.D. scholars:

Selected Publications Journals

- Verma S.K., Punekar R.M. (2022) Gaining Insights into the Creative Process of Designing Nature Inspired Product Forms. International Journal of Technology and Design Education. Springer.

Conferences

- Basak A., Verma S.K., (2022) Understanding various factors affecting tea garden workers and their working conditions in a tea garden ecosystem: An exploratory study. 20th International Conference on Humanizing Work and Work Environment. Punjabi University. (Paper presented, November 24 – 26, 2022)
- Harsh Mohan Shrivastava and Srinivasan G, Design Issues and their associated health hazards from metal fumes during the welding process, “North-East Research Conclave”, Indian Institute of Technology Guwahati, Science, Technology and Climate Change Department and Department of Education, Government of Assam, IIT Guwahati. May 20 - 22, 2022.
- Ankit Basak, Shalini Singh, Aurabinda Ghosh and Srinivasan G, Design of tea basket for small-scale tea plantation workers - An ergonomic approach, “ 20th International Conference on Humanizing Work and Work Environment”, Punjabi University, November 24 – 26, 2022.
- Harsh Mohan Shrivastava and Srinivasan G, Design Process Issues and Concerns Observed While Improving Taylors Slate for Visually Impaired Students, “Co-evolution of design research and design practice - Implications of new methodological developments on future design processes”, Indian Institute of Science, Bangalore - January 12, 2023.
- Verma S.K., Punekar R.M. (2021) Decoding Nature-Inspired Form Generation Processes. In: Chakrabarti A., Poovaiah R., Bokil P., Kant V. (eds) Design for Tomorrow—Volume 3. Smart Innovation, Systems and Technologies, vol 223. Springer, Singapore.
- Verma S.K., Punekar R.M. (2020). Design Science Approach to Nature Inspired Product Forms: Studies on Processes and Products. Synergy: Design Research Society (DRS) 2020.
- Verma S.K., Punekar R.M. (2019) Observing Nature—What Designers Can Learn from Biologists. In: Chakrabarti A. (eds) Research into Design for a Connected World. Smart Innovation, Systems and Technologies, vol 135. Springer, Singapore

- Verma S.K., Punekar R.M. (2017) Nature Inspired Design—A Review from an Industrial Design Perspective. In: Chakrabarti A., Chakrabarti D. (eds) Research into Design for Communities, Volume 2. ICoRD 2017. Smart Innovation, Systems and Technologies, vol 66. Springer, Singapore

Placements and Internships

Student in the final semester internship: TSC, IITB, IITG, Medblue Innovations Pvt Ltd at SGPGI, Lucknow, UP etc.

Courses offered.

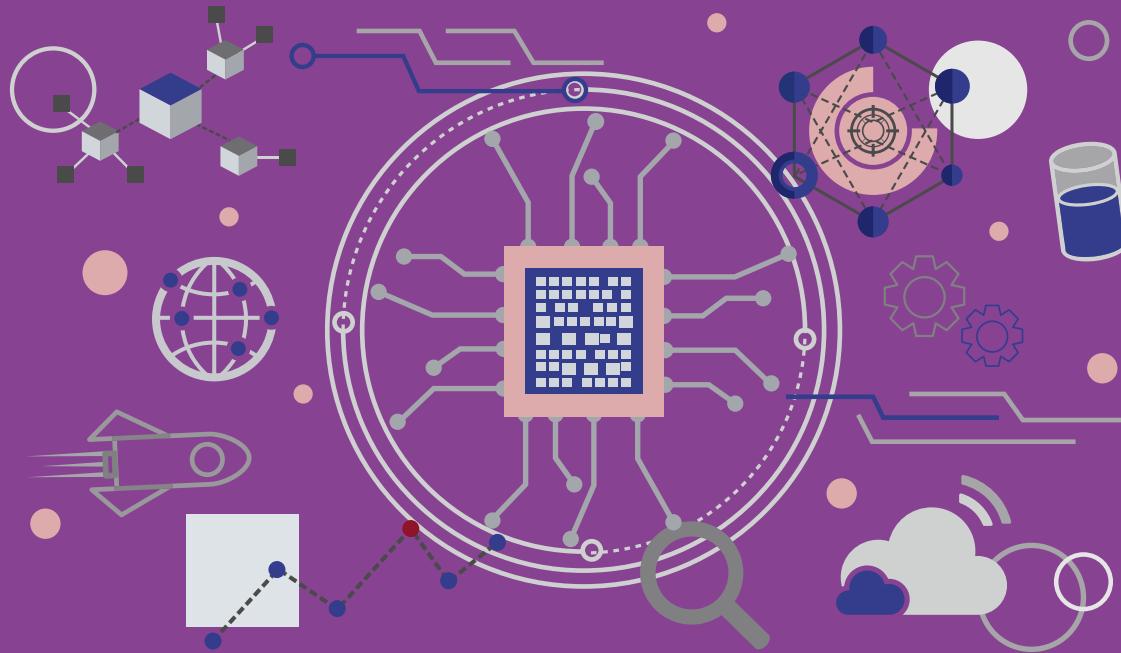
- Open Elective “DD 301 Introduction to Design” offered in Autumn 2020 & Spring 2023.
- Open Elective “DD 302 Design Methods” offered in Spring 2021.
- Open Elective “DD519 Basics of Engineering product design” offered in Spring 2023.

Courses offered in Master of Design (M. Des.)

Course Code	Course Title	Cr.
First Semester		
DD-511	Design and Creativity – An Introduction	4
DD-512	Elements & Principles of Product Form Design	4
DD-513	Visual Design – Principles and Technology	4
DD-514	User Interface Design	4
DD-515	Communication Techniques for Designers	2
Electives (anyone from the below Design courses excluding open elective)		
DD-516	Materials and Manufacturing Processes for Designers	4
DD-518	User Research Methods	4
-	(University Open Electives)	3
Second Semester		
DD-521	Design Methods and Sustainability – Issues and concerns	4
DD-522	Ergonomics for Designers	6
DD-523	Principles of Interaction Design	4

DD-524	Design Project	4
Electives (anyone from the below Design courses excluding open elective)		
DD-525	Product Communication & Digital Products	4
DD-526	Product Graphics and Packaging – Principles and Applications	4
-	(University Open Electives)	
Third Semester		
DD-532	Usability Engineering	4
DD-533	Design Project (Major) - I	8
DD-534	Design Research Seminar (focused on scientific writing)	2
Electives (Anyone from the Design courses below excluding open elective)		
DD-535	Semantics and Communication Theory	4
DD-536	Product Detailing	4
Fourth Semester		
DD-542	Design Project (Major) - II	14

For more information one can visit the departmental web site at
<http://www.tezu.ernet.in/design/>



ELECTRICAL ENGINEERING

(Year of Establishment: 2014)

The Electrical Engineering department started in 2014 under the School of Engineering with the B.Tech program. The prime motive of the department is to impart quality education, training and research at the undergraduate level in the 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 & 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.

Vision

To emerge as a center of academic excellence by imparting quality technical knowledge and executing research activities in frontier areas of electrical engineering to produce engineers that are competent to take key roles in Industry and Academia.

Mission

1. To produce electrical engineers that have a strong theoretical foundation, good practical experience and exposure to research and development.
2. To impart quality education, training and research at the undergraduate level in all the areas of Electrical Engineering.
3. To create a nurturing environment for young minds by involving the students in individual and team projects for solving innovative problems in the applied fronts of Electrical engineering.
4. To inculcate Team Spirit, ethical conduct and strong practical base among its students to equip them with the professional knowhow for succeeding to challenges of changing global environment.
5. To be a center for innovation and technological Research & Development in frontier areas of electrical engineering.
6. To update our technological knowledge base and curriculum as per the changing trends in the Industry and research innovations.

Programme offered

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

Faculty & Areas of Interest

Associate Professor

Asim Datta*, Ph.D. (IEST)- HoD

Renewable Energy Integration, Electric Drives, Electric Vehicle, Power System

Assistant Professor

Md. Rahat Mahboob*, Ph.D. (JMI)

Sensors and Sensing Technology; Electronics Instrumentation; Wireless Sensor & Health Monitoring, IoT, signal conditioning circuit, Food Sensor & Technology, Green technology, Microcontroller based Control Strategy.

Manashita Borah*, Ph.D. (NITS)

Control Systems, Chaos and Fractional Order Systems, Biomedical Applications, Wastewater Management, IoT, Smart Energy System.

Barnam Jyoti Saharia, M.Tech. (NITA)

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, Optimization in Power Electronic Converters Design, Artificial Intelligence in Renewable Energy Applications

Anish Ahmad*, PhD (IIT-BHU)

Power Electronics and Drives, Renewable Energy Integration, Control techniques in Power Electronics and Drives, Electric Vehicle/Hybrid Electric Vehicle and Microgrid

Soumya Samanta*, Ph.D. (NITS)

Power and Energy Systems Engineering, Renewable Energy Integration, Microgrid Control, Electric Vehicle and Drives.

***Recognized Ph.D. Supervisor**

ACRONYMS

IEST- Indian Institute of Engineering Science & Technology, Shibpur; **JMI**- Jamia Millia Islamia, New Delhi; **NITS**- National Institute of Technology, Silchar; **NITA**- National Institute of Technology, Agartala; **IIT-BHU** - Indian Institute of Technology (BHU), Varanasi; **HoD**- Head of the Department

Facilities

The Department has the following Laboratory facilities
Laboratory facilities.

- Basic Electrical Engineering Laboratory
- Network Laboratory
- Measurement and Instrumentation Laboratory
- Power Electronics Laboratory
- Electronics Design Laboratory
- Analog Electronic Circuits Laboratory
- Microprocessors Laboratory
- Electrical Machine Laboratory
- Power Systems Laboratory
- Thod-Phod-Jod Laboratory
- Control System Design Laboratory

Research Activities

- No. of papers published in the year 2022-2023: 20
- No. of ongoing research projects: 02
- No. of current Ph.D. scholars: 04

Selected Publications

- Rishiraj Sarker, Asim Datta, and Sudipta Debnath, "An Improved Multicarrier PWM (MCPWM) Technique with a New Harmonic Mitigation Strategy for Cascaded H-Bridge Multilevel Inverter Applications," IEEE Transactions on Industrial Informatics, vol.18, no.3, pp.1500-1510, 2022.
- Rishiraj Sarker, , Asim Datta, and Sudipta Debnath. "FPGA-based High-Definition SPWM Generation with Harmonic Mitigation Property for Voltage Source Inverter Applications." IEEE Transactions on Industrial Informatics, vol.17, no.2, pp. 1352-1362, 2021.
- Asim Datta and Rishiraj Sarker "Improvements to the H5 inverter topology for transformer-less grid-photovoltaic interface applications," IET Renewable Power Generation, vol.14, no. 11, pp.1873-1882, 2020.
- Asim Datta, Rishiraj Sarker, and Imraj Hazarika. "An Efficient

Technique using Modified pq Theory for Controlling Power Flow in a Single-Stage Single-Phase Grid-Connected PV System," IEEE Transactions on Industrial Informatics, vol. 15, no. 8, pp. 4635 – 4645, Aug. 2019.

- M.R. Mahboob, A. U. Khan, L. Kumar and T. Islam, "Investigation of Chip Temperature on Response Characteristics of the Humidity Sensor From ppm to %RH," in IEEE Transactions on Device and Materials Reliability, vol. 20, no. 3, pp. 576 -583 , Sept. 2020.
- MA Siddiqui, MN Anwar, SH Laskar and Md Rahat Mahboob , "A unified approach to design controller in cascade control structure for unstable, integrating and stable processes", ISA Transactions, vol. 114, pp.331-346, 2021, Elsevier.
- Manashita Borah and B. K. Roy, "Hidden multistability in four fractional-order memristive, meminductive and memcapacitive chaotic systems with bursting and boosting phenomena", European Physical Journal Special Topics, vol. 230, pp. 1773–1783, 2021, Springer.
- Manashita Borah and B. K. Roy, "Systematic construction of high dimensional fractional-order hyperchaotic systems", Chaos, Solitons and Fractals, vol. 131, 2020, Elsevier.
- Barnam Jyoti Saharia, H. Brahma, N. Sarmah "A review of algorithms for control and optimization for energy management of hybrid renewable energy systems" Journal of Renewable and Sustainable Energy, vol.10, pp. 053502, 2018.
- Barnam Jyoti Saharia and M. Manas, "Viability Analysis of Photovoltaic/Wind Hybrid Distributed Generation in an Isolated Community of Northeastern India," Distributed Generation & Alternative Energy Journal, vol. 32, pp. 49-80, 2017.
- Anish Ahmad, M. M. Reza, A. R. Beig, J. Alsawalhi and K. A. Jaafari, "High Voltage Gain Switched- Z-Source Bidirectional DC-DC Converter," IEEE Access, vol. 10, pp. 53560-53577, 2022.
- K Shiluveru, A Singh, Anish Ahmad, and R. K.Singh, "Hybrid Buck-Boost Multi Output Quasi Z-Source Converter with Dual DC and Single AC Outputs" IEEE Transactions on Power Electronics, vol. 35, no. 7, pp. 7246-7260, July 2020.
- S. Samanta, J. P. Mishra, and B. K. Roy, "Virtual DC Machine: An Inertia Emulation and Control Technique for a Bidirectional DC-DC Converter in a DC Microgrid", IET Electric Power Applications, vol. 12, no.6, pp. 874-884, 2018.

- S. Samanta , J. P. Mishra, and B. K. Roy, “AC Load Bus Frequency Control of a DC Microgrid based on DC Voltage Regulation using Inertia Emulation and Economic Power Management”, IET Generation Transmission & Distribution, vol. 13, no.22, pp. 5117-5128, 2019.

Courses offered in B.Tech. in Electrical Engineering

Course Code	Course Title	Cr.
First Semester		
CH 103	Chemistry	4
MS 104	Mathematics-I	4
EE 103	Basic Electrical Engineering	3
EE 104	Basic Electrical Engineering lab	1
PH 103	Physics-I	3
EF 103	English	3
SE 100	Induction Program	-
Second Semester		
PH 104	Physics-II	2
MS 105	Mathematics-II	4
CE 103	Engineering Graphics	3
ME 103	Workshop Practice	2
CO 103	Introductory Computing / Programming for Problem Solving	3
CO 104	Computing Lab	2
ME 102	Engineering Mechanics	4
Third Semester		
PH 104	Physics-II	2

MS 105	Mathematics-II	4
CE 103	Engineering Graphics	3
ME 103	Workshop Practice	2
CO 103	Introductory Computing / Programming for Problem Solving	3
CO 104	Computing Lab	2
ME 102	Engineering Mechanics	4
Fourth Semester		
BT 201	Biology	3
EE 217	Digital Electronics	3
EE 218	Digital Electronics Laboratory	3
EE 219	Electrical Machines – II	1
EE 220	Electrical Machines Laboratory – II	3
EE 221	Microprocessor	1
EE 222	Microcontroller Lab	4
EE 216	Electromagnetic Fields	3
-	*Open Elective-1	3
Fifth Semester		
EE 311	Power Systems – I (Apparatus and Modelling)	3
EE 312	Power Systems Laboratory – I	1
EE 313	Control Systems	3
EE 314	Control Systems Laboratory	1
EE 315	Power Electronics	3
EE 316	Power Electronics Laboratory	1
-	Program Elective – 1	3

-	*Open Elective – 2	3
LW 301	Indian Constitution	0
Sixth Semester		
IC 361	Accounting & Financial Management	3
EE 318	Power Systems – II (Operation and Control)	3
EE 319	Power Systems Laboratory - II	1
EE 320	Measurements and Instrumentation Laboratory	4
EE 321	Electronics Design Laboratory	3
-	Program Elective – 2	4
-	Program Elective – 3	3
-	Open Elective – 3	3
EE 322	Summer Internship #	0
Seventh Semester		
XX xxx	HSS / Management Elective	3
-	Program Elective -4	3
-	Program Elective -5	3
-	Open Elective – 4	3
-	Open Elective – 5	3
EE 412	Project Stage-I	6
CT 430	Essence of Indian Traditional Knowledge	0
XX xxx	HSS / Management Elective	3
-	Program Elective -4	3
Eighth Semester		
-	Program Elective -6	3

-	Open Elective -6	3
EE 420	Project Stage-II	10
-	Program Elective -6	3
For Program Elective –2 and Program Elective –3		
EE 323	Line Commutated and Active Rectifiers	
EE 324	Electrical Drives	
EE 325	High Voltage Engineering	
EE 326	Electrical Energy Conservation and Auditing	
EE 327	Industrial Electrical Systems	
EE 328	Digital Control Systems	
EE 329	Digital Signal Processing	
EE 330	Computer Architecture	
EE 331	Electromagnetic Waves	
EE 332	Computational Electromagnetics	
EE 333	Control Systems Design	

***Open Elective:** Any course of level 400 and above offered in the University and recommended by the department.
Elective courses are offered on the basis of the choice of students and availability of teacher for teaching a particular course.

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



ELECTRONICS & 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, Vehicular Electronics, Bioelectronics, Biosensors, Microwave Engineering, Neurobioengineering, Communication Engineering and Microelectronics. The department is supported by

- DST-FIST
- DeitY – MIT
- UGC-SAP (DRS-I)
- AICTE, RPS
- AICTE NEQIP
- Visvesvaraya Ph.D. Scheme under Meity, GoI

Faculties of the department have several international research collaborations including Queen's University Belfast (QUB), UK; University of Technology Malaysia, Malaysia; Airlangga University, Indonesia, and University of Rio de Janeiro, Brazil.

Vision

To develop as a center of excellence in Electronics and Communication Engineering through creative and innovative practices in teaching, learning and research.

Mission

1. To impart quality education, training and research at the undergraduate, post graduate and doctoral levels in all the areas of Electronics and Communication Engineering.
2. To inculcate a perceptive alacrity to observe, identify real life problems, formulate strategies for solution and evolve contextually

effective solutions.

3. To deliver theoretical base, advanced technological concepts, teamwork spirit, ethics, human values, practical base, research and development to the students, extension activities to other organizations through creation of advanced facilities and providing platforms for synergy.

Programmes offered

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

Faculty and Areas of Interest

Professor

Partha Pratim Sahu*, Ph.D. (JU)

Optical Networks and its Components, Clinical Instrumentation, Micro-fabrication, Quantum Technology

Jiten Chandra Dutta*, Ph.D. (JU)

Biosensors and Bioelectronics, Neurobioengineering

Satyajib Bhattacharyya*, Ph.D. (DU)

Microwave Antennas, Absorbing Materials

Santanu Sharma*, Ph.D. (TU)-HoD

Semiconductor Devices, Bioelectronic Devices, Vehicular Electronics, Power Electronics

Soumik Roy*, Ph.D. (TU)

Neuroengineering, Healthcare system, Hydroponics, Digital System Design, Intelligent Instrumentation

Bhabesh Deka*, Ph.D. (IITG)

Signal/Image Processing, Computer Vision, Deep Learning for signal and image analysis, Precision Agriculture, Microwave and Millimeter-Wave Biosensors for smart Healthcare, Machine Learning on FPGA & SoC.

Vijay Kumar Nath*, Ph.D. (IITG)

Image Processing, Computer Vision, Pattern Recognition, Deep Learning

Nayan Moni Kakoty *, Ph.D. (TU)

Robotics, Biomedical Signal Processing

Associate Professor

Deepika Hazarika*, Ph.D. (TU)

*Medical Image Processing using Deep Learning Machine Learning,
Computer Vision, Image Processing*

Ratul Kumar Baruah *, Ph.D. (IITG)

Semiconductor Devices, Biosensors, Flexible Electronics.

Assistant Professor

Riku Chutia, Ph.D. (TU)

E-nose, Instrumentation and Signal Processing, Embedded System

Biplab Mondal*, Ph.D. (JU)

Sensor, Nanoscale engineering for Sensing, Biosensor, NEMS/NEMS.

Durlav Sonowal, Ph.D. (TU)

Sensor Intelligence Robotics

Ananya Bonjyotsna, Ph.D. (TU)

Audio Processing

Priyanka Kakoty *, Ph.D. (TU)

Sensor and Nanotechnology

Rupam Goswami *, Ph.D. (NITS)

Micro/Nano-electronics and VLSI, Bio/ Memristive Sensors, Charcoal Electronics

*** Recognized Ph.D. Supervisor**

ACRONYMS

JU-Jadavpur University, Jadavpur; **DU**- University of Delhi ; **TU**-Tezpur University; **IITG**-Indian Institute of Technology, Guwahati; **NITS**-National Institute of Technology, Silchar; **HoD**-Head of the Department

Facilities

The Department has the following facilities

Laboratory facilities:

- Basic Electrical Engineering Laboratory
- Basic Electronics Laboratory
- Design and Prototyping Laboratory
- M.Tech. Project Laboratory
- Software Simulation Laboratory
- Communication Laboratory
- Microwave Laboratory
- DSP Laboratory
- Intelligent Imaging and Vision Research Laboratory
- Instrumentation Laboratory (Supported by AICTE under MODROB)
- Bioelectronics Laboratory
- Neuro engineering Laboratory
- Optical Fiber Laboratory
- Micro fabrication/MEMS Facility
- Characterization Lab for electric devices/Bio-electrical signal
- Embedded Systems and Robotics Lab
- VLSI Lab

Research Laboratories

- E-mobility research laboratory
- Microwave Engineering Laboratory
- Wireless Communication Engineering Laboratory
- E-nose Laboratory
- Intelligent Imaging and Vision Research Laboratory
- Hydrogen fuel Lab
- Bioelectronics Lab.
- Semiconductor Device imilation Lab
- Statistical Visual Computing Lab

Major Equipment

- RIE (Reactive Ion Etching)
- PECVD (Plasma Enhanced Chemical Vapour Deposition)
- PVD
- Auto Lab
- Photolithography
- Vacuum coating unit (Thermal evaporation and E-Beam Technology)
- Oxidation Furnace
- Probe Station
- Laminar Air Flow Unit
- Spin coating unit
- Prism Coupler Water De-ionizer
- Thickness measurement instrument
- Stereomicroscope
- GP-GPU-based High-Performance Computing server
- IV-QE measurement set up
- Bio-signal measurement system

- FPGA kit and FPGA board
- Cadence EDA tool
- Sentaurus TCAD
- Mentor Graphics
- Xilinx

Research Activities

- No. of papers published in the year 2022-2023:
- No of ongoing research projects:
- No. of current Ph.D. scholars:

Selected Publications

- B. Deka, H.U Mullah, T. Barman and S. Dutta "Join Sparse Representation- based Single image Super-resolution for remote sensing Application " IEEE Jnl of selected topic in App Earth observation & RS,2023.
- D. Deka and B. Deka, "An improved multiscale distribution entropy for analyzing complexity of real-world signals" Chaos, Solitons and Fractals: the interdisciplinary journal of Nonlinear Science, and Nonequilibrium and Complex Phenomena (Elsevier), Volume 158, 2022.
- D. Deb, R. Goswami, R. K. Baruah, R. Saha, and K. Kandpal, "Parametric Investigation and Trap Sensitivity of n-p-n Double Gate TFETs", Computers and Electrical Engineering, Elsevier, vol. 100, 2022
- B. Mondal and P K Gogoi, "Nanoscale Heterostructured Materials Based on Metal Oxides for a Chemiresistive Gas Sensor" ACS Applied Electronic Materials, Vol 4, Issue 1, 59-86
- S Das, PP Sahu, "A novel electrochemical interdigitated electrodes sensor for limonin quantification and reduction in citrus limetta juice, Food Chemistry, Volume 381, 2022,
- Satyabrat Malla Bujar Baruah and Soumik Roy; Modelling neuron fiber interaction and coupling in non-myelinated bundled fiber; Biomed. Phys. Eng. Express 8 (2022) 035016.
- N M Kakoty et. al. Real-time EMG based prosthetic hand controller realizing neuromuscular constraint. International Journal of Intelligent Robotics and Applications, Vol.6, 2022.

Patents:

- S. Sarma, B. Sarma, R Chutia & P P Dutta; Patent Number 357468

- "System for measuring and correction of alignment parameters camber and toe of wheel of a vehicle".
- M. Bhuyan Patent Number; Patent, No.: 203816 "A Three level temperature Indicator System for tea drier".
- M. Bhuyan & A. Choudhury, Patent Number 216876 "Microwave Tea Drier".
- P. P. Sahu, Patent, No: 0522/ KOL/2008, "A Reduced Size Linearly Tapered 3dB (Half Power Splitter) Multimode Interference (MMI) Coupler".
- R. K. Baruah, A. Kumar, S. Dutta and S. Paul, Patent, No.: 362974, "Intelligent Helmet System".

Filed Patents

- P. P. Sahu, "A portable optical fiber instrument for instant petrol purity detection"
- D. J. Gogoi, D. Borah, N.S. Bhattacharyya, and S. Bhattacharyya, "Flexible and thin microwave dielectric absorber in X-band applications"
- N. M. Kakoty and L. Gohain, "An EMG based prosthetic hand controller for real time grasping realizing neuromuscular constraint"
- A. Das, B Muchahary, A.Raj, M Kumar, F Ahmed, C Adhikary, S Roy, 'IOT based Portable Ventilator'

Design Registration

- S. Das, N. M. Kakoty and L. Gohain. "Prosthetic Hand, Class: 24-00-Medical and laboratory Equipment"
- V. Kumar, R.Goswami and M.K Parida "Hydwaulic Arrangement Based ohmic contact Thin Flim Aluminium Foil Based Sensing System"

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

Course Code	Course Title	Cr.
First Semester		
CH103	Chemistry	4
MS104	Mathematics-I	4

EE103	Basic Electrical Engineering	3
EE104	Basic Electrical Engineering Lab	1
PH103	Physics-I	3
EF103	English	3
SE100	Induction Program	-
Second Semester		
PH104	Physics-II	2
MS105	Mathematics-II	4
EC102	Basic Electronics	4
ME103	Workshop Practice	2
CO103	Introductory Computing	3
CO104	Computing Lab	2
ME102	Engineering Mechanics	4
CE103	Engineering Graphics	3
Third Semester		
EC201	Electronics Devices	3
EC202	Electronics Devices Lab	1
EC203	Digital System Design	3
EC204	Digital System Design Lab	13
EC205	Signals and Systems	3
EC206	Network Theory	3
MS205	Mathematics-III	3
BA201	Economics	3
ES201	Environmental Science	0
Fourth Semester		
EC207	Analog & Digital Communication	3

EC208	Analog & Digital Communication Lab	1
EC209	Analog Circuits	3
EC210	Analog Circuits Lab	1
EC211	Microcontroller and Microprocessor	3
EC212	Microcontroller Lab	1
BT201	Biology	3
CS201	Data Structure & Operating System	3
Fifth Semester		
EC301	Electromagnetic Waves	3
EC302	Electromagnetic Waves Lab	1
EC303	Computer Architecture	3
EC304	Probability Theory & Stochastic Process	3
EC305	Digital Signal Processing	3
EC306	Digital Signal Processing Lab	1
ECE Elective-I (any one from the subjects below)		
EC307	Mobile Communication& Networks	3
EC308	Electrical Machines and Power protection	3
EC309	Intelligent Instrumentation	3
EC310	CMOS Design. ERC322: Fundamentals of Machine Learning and Deep Learning with Application	3
Open Elective-I		
LW301	Indian constitution (MC- Non-Credit)	0
Sixth Semester		
EC311	Control System	3
EC312	Computer Network	3
EC313	Computer Network Lab	2
EC314	Electronic Measurement Lab	1

EC315	Mini Project	2
ECE Elective-II (any one from the subjects below)		
EC316	Microwave Techniques	3
EC317	Speech and Audio Processing	3
EC318	Digital Image and Video Processing	3
EC319	VLSI Design	3
IC361	Open Elective-II	3
	Accounting & Financial Management	3
#Students will undergo a summer training of 4 weeks after 6 th semester during summer vacation and submit the report and the certificate of completion in the department in the beginning of 7 th semester.		
Seventh Semester		
ECE Elective –III (any one from the subjects below)		
EC401	Information Theory & Coding	3
EC402	Embedded Systems	3
EC403	Satellite Communication	3
EC404	Digital Systems and VHDL	3
ECE Elective-IV (any one from the subjects below)		
EC405	Computer Vision	3
EC406	Biomedical Signal Processing	3
EC407	Antenna and Propagation	3
EC408	Digital Control System	3
ECE Elective-V (any one from the subjects below)		
EC409	Introduction to MEMS	3
EC410	Biomedical electronics	3
EC411	Fibre optic communication	3

EC412	Nano-electronics	3
ECE Elective-VII (any one from the subjects below)		
EC413	Fuzzy Logic and Neural network	3
EC414	Bioneuro engineering	3
EC415	Digital signal processor	3
EC416	Electronics design automation	3
	Open Elective -III	3
EC417	Project- Stage I	6
	* HSS/Management Elective	
CT465	Essence of Indian Traditional Knowledge (MC- Non- Credit)	0
Eighth Semester		
ECE Elective-VI (any one from the subjects below)		
EC418	Power electronics	
EC419	Mixed signal design	3
EC420	High speed electronics	3
	Open Elective-IV	
EC421	Project- Stage II	10

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

Course Code	Course Title	Cr.
First Semester		
EL517	Physical and Industrial Design of Electronics Systems	4
EL531	Design of Digital Systems	
EL521	Design and Technology of Electronic Devices	4
EL523	Advanced Programming Language	5

-	Open Elective I	3
-	Elective I	4
Second Semester		
EL516	Design of Fine Mechanics and Power Devices	4
EL530	VLSI Design	4
EL538	Advanced Electronic Devices	3
EL540	Intelligent Instrumentation	4
BE528	MEMs and Nanotechnology	3
-	Open Elective II	3
-	Elective II	4
Third Semester and Fourth Semester		
EL601	M. Tech. Dissertation	24
Elective I (Any one from the following courses)		
EL 533	Data Communication & Networks	4
EL 535	Information Systems	4
Elective II (Any one from the following courses)		
EL 546	Modeling and Simulation of Digital Sytems	3
EL 544	CMOS Analog Circuits	4

Courses offered in M. Tech. in Bioelectronics

Course Code	Course Title	Cr.
First Semester		
BE 515	Basic Bioelectronics	3
BE 517	Biomedical Signal Processing	4
BE 519	Bioinspired Systems and Engineering	3
BE 509	Biomathematics	3
BE 511	Basic Bioelectronics Laboratory	3

-	Open Elective I	
-	Elective I	4
Second Semester		
BE 524	Advanced Bioelectronic Devices	4
BE 504	Neuro engineering	3
BE 506	Biomedical Image Processing	4
BE518	Bioelectronic Systems and Controls	4
EL 540	Sensor & Sensor Intelligence	4
-	Open Elective II	3
-	Elective – II	3
Third Semester and Fourth Semester		
BE 601	M. Tech. Dissertation	
Elective I (Any one from the following courses)		
BE 507	Bioinformatics	4
BE 513	Biomedical Electronics	4
Elective II(Any one from the following courses)		
BE 528	MEMS and Nanotechnology	3

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



ENERGY

(Year of Establishment: 1996)

The Department of Energy has been one of the vibrant academic Department of the university, engaging itself with a mandate to produce a qualified manpower pool in the field of energy, development of new and efficient energy technologies, R & D and extension activities in diverse areas of energy. The Department offers a two-year (four semesters) AICTE approved M.Tech. programme in Energy Technology, 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 the Department has successfully completed several international collaborative research projects and has ongoing international collaborative projects like Indo-Hungary, Indo- UK. The Department also has nine ongoing research projects.

Vision

To emerge as a centre of excellence in education, research and innovation for the changing world.

Mission

1. To promote academic growth through adoption need based curriculum, state-of-the-art R&D facilities, and extension activities in the areas of energy
2. To foster cutting-edge research activities in conjunction with industry and academic institution to address the energy challenges
3. To serve the society by technological intervention, innovation and entrepreneurship development through renewable energy

Programmes Offered

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

Faculty and Areas of Interest

Professor

Debendra Chandra Baruah*, Ph.D. (PAU), Director CMDR
Renewable Energy and Energy Management

Dhanapati Deka*, Ph.D. (TU), Dean R&D

Biofuels, Catalytic transformation of biomass to biofuel and chemical, Bioenergy and Environment

Rupam Kataki*, Ph.D. (TU), Director, IQAC

Biomass and Bioenergy, Biofuels, Energy Environment Interaction

Sadhan Mahapatra*, Ph.D. (IISc) - HoD

Biomass Gasification, Climate Responsive Buildings, Decentralized Energy Options, Energy Conservation

Assistant Professor

Pradyumna Kumar Choudhury*, Ph.D. (TU)

Energy Conservation and Management, Integration of Renewable Energy Systems.

Braj Kumar Kakati*, Ph.D. (IITG)

Fuel Cell, Hydrogen Technology and Redox Flow Battery, Graphene, Nanocatalyst.

Nabin Sarmah*, Ph.D. (HWU)

Solar Energy, Photovoltaic, Energy Systems

Vikas Verma*, Ph.D. (IITR)

Thermal Engineering, Solar Thermal Energy, Heat Transfer

***Recognized Ph.D. Supervisor**

ACRONYMS

PAU-Punjab Agriculture University; CMDR-Centre for Multidisciplinary Research; TU-Tezpur University; R&D- Research & Development; IISc. – Indian Institute of Science, Bengaluru; IITG- Indian Institute of Technology, Guwahati; IQAC- Internal Quality Assurance Cell; HWU- Heriot Watt University, United Kingdom; IITR-Indian Institute of Technology, Roorkee; HoD- Head of the Department

Facilities

The Department has the following facilities:

Laboratory

The Department is equipped with various equipment such as Gas Chromatograph, Electrochemical Analyzer, Fuel cell, Solar PV grid integration system, Biomass gasifier system, Wind electric generator, Single cylinder 4-stroke petrol engine Test Rig with electrical

Dynamometer, Flue Gas analyzer, Carbon-Hydrogen analyzer, UV-visible spectrophotometer, TOC Analyser, Petrol and Diesel Engine Test set-up, Hydrocarbon type Analyser, Pyrolyser, Adiabatic Bomb Calorimeter, TBP Apparatus, Dual Fuel Engine, Micro-hydel test set-up, Research Radiometer, Solar thermal collector test set-up, Solar Dryer, Biodiesel Plant, Waste to Energy Facilities including 50 m³ AD Plant and various renewable energy systems.

Departmental Library

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

Scholarship

MHRD and MNRE fellowships are available for GATE qualified candidates.

Research Activities

- Number of Journal papers published in the year 2022-23: 28
- Number of ongoing research projects: 09
- Number of current Ph.D. Students: 29

Selected Publications

- Boyd W. N., Quilliam R. S., Campbell B., Raha D., Baruah D. C., Clarke M. L., Sarma R., Haque C., Borah T., Dickie J. Challenging perceptions of socio-cultural rejection of a taboo technology: Narratives of imagined transitions to domestic toilet-linked biogas in India. *Energy Research and Social Science*, 92, 102802, 2022.
- Brahma H., Pant S., Micheli L., Smestad G.P., Sarmah N. Effect of Environmental Factors on Photovoltaic Soiling: Experimental and Statistical Analysis. *Energies*, 16(1), 45, 2023.
- Choudhury N. D., Saha N., Bhaumik S., Kataki R. Production and evaluation of physicochemical, rheological, and tribological properties of *Cucurbita pepo* L. seed oil. *Biomass Conversion and Biorefinery*, 13, 1101–1114, 2023
- Daimary N., Khalifa S.H.E., Bora N., Boruah P., Rather M. A., Mandal M., Bora U., Deka D. Towards integrated sustainable biofuel and chemical production: An application of banana pseudostem ash in the production of biodiesel and recovery of lignin from bamboo leaves. *Chemosphere*, 314, 137625, 2023
- Kakati U., Sakhya A. K., Baghel P., Trada A., Mahapatra S., Upadhyay D., Kaushal P. Sustainable utilization of bamboo through air-steam gasification in downdraft gasifier: Experimental and simulation approach. *Energy*, 252, 124055 2022.

Courses offered in M. Tech. in Energy Technology

Course Code	Course Title	Cr.
First Semester		
EN 560	Foundation for Energy Engineering	3
EN 561	Fuel and Combustion	3
EN 562	Heat Transfer	3
EN 563	Solar Energy Engineering and Application	3
EN 564	Biomass Energy and Application	3
EN 565	Wind and Hydro Energy	3
EN 566	Energy Laboratory	3
-	CBCT- I	3
Second Semester		
EN 570	Energy Management and Auditing	4
EN 571	Energy Economics and Planning	3
EN 572	Energy Systems and Simulation Laboratory	3
EN 573	Energy Study with Community Engagement	2
-	Elective - I	3
-	Elective - II	3
-	Elective- III	3
-	CBCT- II	3
Third Semester		
EN 539	Project (Part-I)	8
Elective I (Any one from the following courses)		
EN 515	Advanced Bio-Energy	3

EN 516	Advanced Solar Thermal Energy	3
EN 517	Advanced Solar Photovoltaic Energy	3
EN 518	Hydrogen Energy and Fuel Cell	3
EN 519	Alternative Fuels for IC Engines	3
EN 520	Petroleum Exploration, Production and Refining	3
EN 521	Nuclear Energy	3
Fourth Semester		
EN 540	Project (Part-II)	16
Elective – II & III (Any two from the following Courses) MOOCS course also can be opted		
EN 525	Thermal Power Plant Engineering	3
EN 526	Energy Efficient Buildings	3
EN 527	Renewable Energy Grid Integration	3
EN 528	Decentralized Energy Systems	3
EN 529	Energy, Climate Change and Carbon Trade	3
EN 530	Instrumentation and Control for Energy Systems	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
EN 541	Electricity Regulations and Reforms in India	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 to cater the needs of the rapidly growing food processing sector. Since its inception the Department has been imparting Post Graduate education in food processing and technology. The B. Tech. programme in Food Engineering and Technology (FET) is approved by the All-India Council for Technical Education (AICTE) and has the accreditation of the National Board of Accreditation (NBA) as a Tier-I programme. The M. Tech. in Food Engineering and Technology (FET) is also approved by the AICTE. AICTE offers PG Scholarship to GATE qualified students joining the M.Tech. programme of the Department. The Department also offers Ph. D. in Food Engineering and Technology, and students may take admission through AICTE Doctoral Fellowship (ADF), NET/JRF, and GATE etc.

Students from the department have benefited from the Ministry of Education'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. Ph. D. scholars of the Department have availed the various International Fellowships such as *Fulbright-Nehru Doctoral Research Fellowship*, *Commonwealth SPLIT-SITE Ph.D. Programme*, *Newton Bhabha Ph. D. Placement Programme*, *UNESCO / People's Republic of China (The Great Wall) Scholarship*, *Indo-US Fellowship for Women in STEMM* 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 (Level I) from 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. To cater the requirements of testing nutritional parameters of various food items by food industries and with the support from the MoFPI, the Department has established NABL accredited Food Quality Control Laboratory (FQCL). The Department has been recognized as the State Level Technical Institute (SLTI) for Assam, Meghalaya, and Arunachal Pradesh under the PM-FME scheme (PM Formalisation of Micro food processing Enterprises Scheme) of Ministry of Food Processing Industries (MoFPI), Gol, New Delhi.

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 and processes have also been patented by the faculties. Workshops, conferences, 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.

Vision

To create trained and skilled human resources well versed in engineering aspects of food processing to cater the needs of the rapidly growing food processing sector.

Mission

1. To establish itself as the leader in human resource development for supporting the food processing sector.
2. To provide knowledge and skills for better preservation, processing and value addition to agro-products, with the aim of supporting the producers.
3. To promote research and development for product and process and assurance of high level of hygiene and safety of processed food.
4. To promote food safety laws and regulations for supporting a competitive, modern and safe food market for the consumers.

Programmes offered

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

Faculty and Areas of Interest

Professor

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

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

Manuj Kumar Hazarika*, Ph.D. (IITKgp)
Food Materials Engineering, Food Industrial Engineering, Food Design.

Brijesh Srivastava*, Ph.D. (IITKgp)
Emerging non-thermal processing, Fruits & Vegetable Processing and Machineries, Food Rheology, Hurdle Technology

Nandan Sit*, Ph.D. (TU)

Food Engineering, Biochemical Engineering, Food Biotechnology

Poonam Mishra*, Ph.D. (TU)

Nano Composite, Fruits, and Vegetable Technology, Function Food, Biosensors.

Laxmikant S. Badwaik*, Ph.D. (TU)- HoD

Food Packaging, Food Safety and Laws, Food Processing Waste Utilization

Assistant Professor

Amit Baran Das*, Ph.D. (IITG)

Food Process Modeling, Food Rheology, Functional Food and Biopolymer, Food Extrusion

Nishant Rachayya Swami Hulle*, Ph.D. (IITKgp)

Food Process Technology, Non-Thermal Processing, Product Development.

Tabli Ghosh, Ph.D. (IITG)

Food Processing, Nanotechnology in Edible Food Packaging, Bionanostructured Materials, Functionalized Coating

Nickhil C, Ph.D. (ICAR-IARI)

Food Process Engineering, Grain Storage and Structures, Fruits and Vegetable Processing and Machineries

Soumya Ranjan Purohit, Ph.D. (IITKgp)

Food Bioprocessing, Rice Chemistry and Technology, Value Addition of Local Crops

* Recognized Ph.D. Supervisor

ACRONYMS

CFTRI-Central Food Technological Research Institute, Mysore; **HAU**-Haryana Agricultural University, Hisar; **CoE**- Controller of Examinations;

IITKgp-Indian Institute of Technology, Kharagpur; **TU**-Tezpur University;

IITG-Indian Institute of Technology, Guwahati; **ICAR-IARI**-Indian Council of Agricultural Research-Indian Agricultural Research Institute, New Delhi.

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, Photoflurometer, Biohazard Safety Cabinet, Packaging Equipment, Laminar Flow, Fruit Crusher, etc.

Research Activities

- Number of papers published in the year 2022-23: 70
- Number of ongoing research projects: 12
- Number of current Ph.D. scholars: 51

Selected Publications

- Gautam, G., Talukdar, D., & Mahanta, C. L. (2023). Sonochemical effect on the degree of substitution of octenyl-succinic anhydride into waxy rice starch nanoparticles and study of gastro-intestinal hydrolysis using INFOGEST in vitro digestion method. *Food Research International*, 112348.
- Maibam, B. D., Chakraborty, S., Nickhil, C., & Deka, S. C. (2023). Effect of Euryale ferox seed shell extract addition on the in vitro starch digestibility and predicted glycemic index of wheat-based bread. *International Journal of Biological Macromolecules*, 226, 1066-1078.
- Begum, A., Kalita, D., Bhattacharya, S., & Srivastava, B. (2023). Time-dependent rheological behavior of pineapple pulp foam and its relationship with foaming properties and quality attributes of dried powder. *Journal of Food Engineering*, 336, 111208.
- Thakur, R., Gupta, V., Ghosh, T., & Das, A. B. (2022). Effect of anthocyanin-natural deep eutectic solvent (lactic acid/fructose) on mechanical, thermal, barrier, and pH-sensitive properties of polyvinyl alcohol based edible films. *Food Packaging and Shelf Life*, 33, 100914.
- Singla, M., Singh, A., & Sit, N. (2022). Effect of microwave and enzymatic pretreatment and type of solvent on kinetics of ultrasound assisted extraction of bioactive compounds from ripe papaya peel. *Journal of Food Process Engineering*, e14119.
- Gupta, A. K., Das, S., Sahu, P. P., & Mishra, P. (2022). Design and

development of IDE sensor for naringin quantification in pomelo juice: An indicator of citrus maturity. Food Chemistry, 377, 131947.

Achievement/output of the department

- The department has awarded Certificate of Excellence under Eat Right Research Institute Award by the Food Safety & Standards Authority of India (FSSAI) in 2023
- The B. Tech. and M Tech program (Food Engineering and Technology) are approved by AICTE.
- The department is recognized as minor centre for Quality Improvement Program (QIP) of AICTE.
- The department received NBA accreditation (as Washington Accord) for B. Tech program for the year 2016-2023.
- The Food Quality Control Laboratory of the department is NABL accredited since 2017.
- The Department has been recognized as the State Level Technical Institute (SLTI) for Assam, Meghalaya, and Arunachal Pradesh under the PM-FME scheme (PM Formalisation of Micro food processing Enterprises Scheme) of Ministry of Food Processing Industries (MoFPI), Gol, New Delhi.
- The department has received grant from AICTE-NEQIP, DST-FIST and UGC SAP DRS-I.
- Ph. D. students of department are recipient of different prestigious fellowships to carry out part of the work abroad like Fulbright-Nehru Doctoral Research Fellowship, Commonwealth Split-Site Ph.D. Programme, Newton Bhabha Ph.D. Placement Programme, Chinese Government Scholarship, UNESCO / Peoples republic of China (The Great Wall) Scholarship, Indo-US Fellowship for Women in STEMM etc.

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

Course Code	Course Title	Cr.
First Semester		
MS 104	Mathematics-I	4
PH 103	Physics-I	3

CH 103	Chemistry	4
EE 103	Basic Electrical Engineering	3
EE 104	Basic Electrical Engineering Lab	1
EF 103	English	3
SE 100	Induction Programme	-
Second Semester		
PH 104	Physics-II	2
MS 105	Mathematics-II	4
CO 103	Introductory Computing	3
ME 103	Workshop Practice	2
CE 103	Engineering Graphics	3
CO 104	Computing Laboratory	2
ME 102	Engineering Mechanics	4
FE 101	Introduction to Food Engineering & Technology	4
Third Semester		
MS 205	Mathematics III	3
BA 201	Economics	3
FE 201	Biochemistry and Nutrition	4
FE 202	Process Thermodynamics & Reaction Kinetics	4
FE 203	Fluid Mechanics	4
FE 204	Basic & Food Microbiology	4
ES 201	Environmental Science	0
Fourth Semester		
FE 205	Food Chemistry	4
FE 206	Transport Phenomena	4
FE 207	Principles of Food Processing & Preservation	2

FE 208	Mechanical Operations & Material Handling	3
FE 209	Food Process Calculations	2
FE 210	Food Material Science & Engineering	3
-	Open Elective I	3

Fifth Semester

FE 301	Instrumentation & Process Control in Food	
Industry	4	
FE 302	Thermal Operations in Food Processing	4
FE 303	Separation Techniques in Food Processing	3
FE 304	Grains and Oilseeds Processing Technology	3
FE 305	Food Analysis & Quality Control	4
LW301	Indian Constitution	0
-	Elective I	3
-	Open elective II	3

Sixth Semester

FE 306	Food Packaging Technology	3
FE 307	Food Process Equipment Design	3
FE 308	Fruits and Vegetables Processing Technology	3
FE 309	Biochemical Engineering	3
FE 350	Credit seminar	1
-	Elective II	3
-	Open elective III	3

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.

Seventh Semester

FE 401	Dairy Products Technology	3
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FE 402	Plantation Products & Spices Processing Technology	3
FE 471	Industrial Summer Training#	2
FE 481	Project-I	4
CT 430	Essence of Indian Traditional Knowledge	0
-	HSS//Management Elective	3
-	Elective III	3
-	Elective IV	3

Eighth Semester

FE 480	Comprehensive viva-voce	0
FE 482	Project-II	8
-	Open elective IV	3

Elective Courses

FE 421	Meat, Fish & Poultry Processing	3
FE 422	Bakery & Confectionery Technology	3
FE 423	Oils & Fats Technology	3
FE 424	Functional Foods	3
FE 425	Traditional Indian Foods	3
FE 426	Recent Trends in Food Processing	3
FE 427	Process Modelling & Simulations	3
FE 428	Refrigeration & Cold Storage Systems	3
FE 429	Food Supply Chain Management	3
FE 430	Food Plant Hygiene & Sanitation	3
FE 431	Plant Design & Layout	3
FE 432	Food Plant Utilities	3
FE 433	Food Safety & Quality Assurance	3
Open Elective Courses		

FE451	Operation Research	3
FE452	Food Enterprise Development	3
FE453	Optimization Techniques	3
FE454	Numerical Methods	3
FE455	Process Modelling & Simulations	3

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

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

Third Semester		
FT 681	Project work & dissertation part I	12
Fourth Semester		
FT 682	Project work & dissertation part-II	12
Elective Courses		
Group-I		
FT 541	Recent Trends in Plant Products Technology	3
FT 542	Recent Trends in Animal Products Technology	3
FT 543	Recent Trend in Baking and Confectionary	3
FT 544	Extrusion Technology	3
FT 545	Traditional Indian Food; Case Studies	3
Group-II		
FT 546	Powder Technology	
FT 547	Recent trends in Biochemical Engineering	
FT 548	Nano Technology in Food Applications	
FT 549	Recent Trends in Fermentation Technology	
FT 550	Recent Trend in Enzyme Technology	
FT 551	Valorization of Food Byproduct	
Group-III		
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
FT 556	Chemistry of Food processes	3

**For more information one can visit departmental website
[www://tezu.ernet.in/dftpt](http://tezu.ernet.in/dftpt)**



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. programme in Mechanical Engineering. Subsequently, M.Tech. and Ph.D. programmes were started in the year 2013. Both B.Tech. and M.Tech. programmes are approved by the All India Council for Technical Education (AICTE). The B.Tech. programme is also accredited by the National Board of Accreditation (NBA) with effect from 01/01/2016.

Vision of the Department

To emerge as a Centre of Excellence producing quality engineers and conducting cutting-edge research.

Mission of the Department

- To educate youths with a strong foundation in Mechanical Engineering.
- To imbibe human values, self-confidence and independent thinking in students.
- To train scholars in handling mechanical engineering as well as interdisciplinary problems exploiting their domain knowledge and using latest technologies.
- To carry out research addressing critical issues, arising from the dual problem of limited natural resources and environmental hazards, leading to the development of alternative resources, energy management and sustainable systems design.
- To produce human resource for heavy engineering and manufacturing industries.
- To create quality mechanical engineering professionals to serve the country and the society at large.

Programmes offered

1. Ph.D. in Mechanical Engineering
2. M.Tech. in Mechanical Engineering under the following two specializations:
 - a. Thermal and Fluid Engineering
 - b. Machine Design
3. B.Tech. in Mechanical Engineering

Faculty and Areas of Interest

Professor

Dilip Datta, * Ph.D. (IITK)

Design, Optimization and Operational Research

Tapan Kumar Gogoi, * Ph.D. (TU)

Thermodynamic Modeling, Simulation and Analysis of Multi-generation and Solar Hybrid Systems

Partha Pratim Dutta, *Ph.D. (TU), HoD- Design
Renewable Energy and Drying Technology

Associate Professor

Paragmoni Kalita, * Ph.D. (IITG) -HoD
Computational Fluid Dynamics, High Speed Flows, Solar Thermal Technology

Assistant Professor

Polash Pratim Dutta, *Ph.D. (IITG)
CAD, Laser Forming, Mechatronics, Soft Computing

Sushen Kirtania, * Ph.D. (IITG)
Graphene and CNT-reinforced nanocomposites, Natural fiber-reinforced composites, Hybrid composites, Fracture mechanics, Finite element method.

Prabin Haloi, Ph.D. (TU)
Fluid and Thermal Engineering, Magnetohydrodynamics (MHD)

Sanjib Banerjee, * Ph.D. (IITG)
Materials and Manufacturing

Monoj Bardalai, * Ph.D. (GU)
Thermal Engineering, Renewal Energy Conversion

Satadru Kashyap,* Ph.D. (TU)
Manufacturing and Materials Science

Zahnupriya Kalita, * Ph.D. (TU)
Mechatronics, Rehabilitation Robotics, Optimization- Single objective and Multi-objective Optimization using Evolutionary Algorithms.

Rakesh Bhadra, ME (IEST) (On study leave)
Manufacturing, Production Engineering

Barnali Chowdhury, Ph.D. (AEC)
Data Analysis and Statistical Optimization, Six Sigma, Thermal Engineering

Seikh Mustafa Kamal, * Ph.D. (IITG)
Machine Design

Vivek Kumar Mehta, Ph.D. (IITK)

Robotics, Optimization: Classical and Evolutionary Algorithms, Multi-objective Optimization, Multi-modal Optimization

Shikha Bhuyan, M. Tech. (NITS)

Thermal Engineering

Guest Faculty

Manash Protim Baruah Ph.D. (NITS)

Thermal Engineering

*Recognized Ph.D. Supervisor

ACRONYMS

IITK-Indian Institute of Technology, Kanpur; **TU**-Tezpur University; **IITG**-Indian Institute of Technology, Guwahati; **GU**-Gauhati University; **IEST**- Indian Institute of Engineering Science & Technology West Bengal; **AEC**- Assam Engineering College, Guwahati; **NITS** - National Institute of Technology, Silchar ; **HoD**- Head of the Department.

Facilities

The Department has the following Laboratory facilities

- CAD Laboratories
- Fluid Mechanics Laboratory
- Theory of Machine Laboratory
- Engineering Mechanics Laboratory
- Strength of Materials Laboratory
- Thermal Science Laboratory (Refrigeration and Air Conditioning/ Heat Transfer)
- Material Science Laboratory
- IC Engine/Automobile Laboratory
- Kinematics Laboratory
- Turbo-Machinery Laboratory
- Vibration Laboratory
- Metrology laboratory
- Renewable Energy Laboratory

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 papers published in the year 2022-2023:
- Number of ongoing research projects:
- Number of current Ph.D. scholars:

Selected Publications

- Borah PP, Kashyap S, Banerjee S and Kirtania S. Modeling the buckling characteristics of pineapple leaf fibre reinforced laminated epoxy composites. *Mechanics of Advanced Composite Structures*, 10, 233-246, 2023.
- Joardar SD, Neog A, Parvez S, Kirtania S, Kashyap S and Banerjee S. Micromechanics based finite element analysis of effective elastic properties of natural fiber reinforced composites. *Journal of Natural Fibers*, 19(17), 15790-15807, 2022.
- Gogoi, T.K., Dutta, U.K, Performance of a combined power and cooling system under solar, solar storage and storage mode of operations, *Journal of Energy Systems*, 6(1), 18-32, 2022.
- Nondy, J., Gogoi, T.K., Tri-objective optimization of two recuperative gas turbine-based CCHP systems and 4E analyses at optimal conditions , *Applied Energy* , 323, 119582, 2022.
- Haloi, P., Gogoi, T.K., Performance assessment of a magnetohydrodynamic power generation system: Division of the exergy destruction rate into its sub-portions , *Journal of Energy Systems*, 6(2), 290-308, 2022.
- Bordoloi, M. M., Kirtania, S. Banerjee, S. and Kashyap, S., Analysis of stress through the thickness of hybrid laminated nanocomposites using finite element method, *Journal of The Institution of Engineers (India): Series D* , DOI: 10.1007/s40033-022-00380-8, 2022.
- Gogoi, S., Banerjee, S. Kirtania, S. Kashyap, S. and Bhadra, R., Computational modelling of tensile flow parameters for 2219Al alloys microalloyed with Cd, *International Journal on Interactive Design and Manufacturing* , DOI: 10.1007/s12008-022-00929-7, 2022.
- Borah, P. P., Kashyap, S. Kirtania, S. and Banerjee, S., Finite element and numerical analysis for structural responses of natural fibre-based epoxy composites, *International Journal on Interactive Design*

- and Manufacturing, , DOI: 10.1007/s12008-022-00915-z, 2022.
- Debnath, S., Rava, J. Sharma A. J. D. Kirtania, S. Kashyap, S. and Banerjee, S., Experimental and finite element analysis of carbon fibre fabric/polypropylene composites under different processing parameters, International Journal of Engineering Trends and Technology, 70(5), 70-76, 2022.
- Kamal, S.M., Dixit, U.S., Design of a disk-mandrel assembly for achieving rotational autofrettage in the disk, IMechE Part C: Journal of Mechanical Engineering Science, 235(13), 2452–2467, 2021.
- Perl, M. , Kamal, S.M. and Mulera, S., The use of an equivalent temperature field to emulate an induced residual stress field in a rotating disk due to full or partial rotational autofrettage, ASME Journal of Pressure Vessel Technology, <https://doi.org/10.1115/1.4053880>, 2022.
- Gogoi, S, Banerjee, S., and Bhowmick, S., Modelling Precipitation Kinetics and Investigating Age-Hardening Behaviour of 2219Al Alloys Microalloyed with Cd , Journal of Thermal Analysis and Calorimetry, DOI: 10.1007/s10973-022-11449-7 , 2022.
- Kumar H, Chowdhury B, An application of design of experiments approach to statistically model and optimize performance parameters of a single cylinder four-stroke diesel engine , ADBU-Journal of Engineering Technology (UGC CARE), , 11 (2), 0110203505(8PP), 2022.
- Chetry A., Kamal S.M. and Mehta V.K., A numerical model for rotational autofrettage of disks based on von Mises yield criterion and its application in strengthening flanged disks used for joining high pressure pipelines, International Journal of Applied Mechanics, 2023, DOI: 10.1142/S1758825123500229.
- Haloi, P. and Gogoi, T.K. Effects of partially ionized combustion products on the performance of a Magneto-hydrodynamics (MHD)-gas turbine (GT) combined power plant, Part 1: Exergy analysis. *Iranian Journal of Science and Technology Transactions in Mechanical Engineering*, 46 (2) (2022) 481-495.

Courses offered in B.Tech. in Mechanical Engineering

Course Code	Course Title	Cr.
First Semester		
CH103	Chemistry	4
MS104	Mathematics -I	4

PH103	Physics -I	3
EE103	Basic Electrical Engineering	3
EE104	Basic Electrical Engineering Lab	1
EF103	English	3
SE100	Induction Program	-
Second Semester		
PH 104	Physics -II	2
MS 105	Mathematics -II	4
EC 102	Basic Electronics	4
ME 102	Engineering Mechanics	4
ME103	Workshop Practice	2
CO103	Introductory Computing	3
CO104	Computing Laboratory	2
CE103	Engineering Graphics	3
Third Semester		
MS 205	Mathematics- III	3
BA 201	Economics	3
ME 201	Solid Mechanics	4
ME 202	Fluid Mechanics- I	3
ME 203	Material Science	3
ME 208	Manufacturing Technology- I	3
ME 217	ME Lab (Design)-I	2
ES201*	Environmental Science	0
Fourth Semester		
BT 201	Biology	3
ME 205	Thermodynamics	4

ME 209	Fluid Mechanics- II	3
ME 214	Kinematics of Machinery	3
ME 215	Mechanical Measurements and Instrumentation	3
ME 216	Manufacturing Technology- II	3
Fifth Semester		
ME 308	Heat and Mass Transfer	4
ME 311	Machine Design -II	3
ME 313	Dynamics of Machinery	3
ME 314	Applied Thermodynamics	4
ME 315	ME Lab (Manufacturing)-II	2
-	ME-Elective I	3
-	Open Elective I	3
LW 301*	Indian Constitution	0
Sixth Semester		
IC 316	Accounting and Finance Management	3
ME 312	Machine Design II	3
ME 316	Computer-Aided Engineering	3
ME 317	ME Lab (Thermal) III	2
ME 318	Mini Project	2
-	ME-Elective II	3
-	ME-Elective III	3
	Open Elective II	3
Seventh Semester		
XXXX	HSS/Management Elective	3
ME 401	Industrial System Engineering	3
ME471		

**	Industrial Summer Training #	2
ME 483	Project I	4
-	ME Elective IV	3
-	ME Elective V	3
-	Open Elective III	3
CT 465*	Essence of Indian Traditional Knowledge	0
Eighth Semester		
-	ME Elective VI	3
-	Open Elective IV	3
ME 484	Project II	8

*ES201, LW301 and CT465 are Mandatory-Non-Credit courses as per the revised-AICTE guideline. The lectures and laboratory classes assigned for these courses are not considered in the calculation of total credit structure. However, these courses are considered while calculating the number of hours.

**The credit-break up for ME471 (Industrial Summer Training) is not shown in the table. However, its contribution of 2 credit is considered while calculating the total credit of 161 for the curriculum.

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		
ME 421	Computer Graphics and Solid Modeling	3
ME 422	Optimization Methods in Engineering	3
ME 423	Mechanical Vibration	3
ME 424	Theory of Elasticity	3
ME 425	Machine Tools and Machining	3

ME 426	Reliability Engineering	3
ME 427	Productivity Improvement	
Techniques	3	
ME 428	Finite Element Methods in	
Engineering	3	
ME 429	Gas Turbine and Compressor	3
ME 430	Value Engineering	3
ME 503	Mechanics of Composite Materials	4
ME 504	Failure Analysis of Materials	3
ME 505	Advanced Dynamics	4
ME 506	Theory of Elasticity and Plasticity	3
ME 507	Theory of Plates and Shells	3
ME 508	Continuum Mechanics	3
ME 521	Robotics	3
ME 522	Quality Engineering	3
ME 523	Non-Conventional Energy	3
ME 524	Operations Management	3
ME 525	Tribology	3
ME 526	Modern Control System	3
ME 527	CAD-CAM	3
ME 528	Energy Conservation and Waste Heat Recovery	3
ME 529	Artificial Intelligence in Engineering	3
ME 601	Automobile Engineering	3
ME 602	Computational Fluid Dynamics and Heat Transfer	3
ME 605	Hybrid Electric Vehicles	3
ME 701	Advance Heat Transfer	3

ME 431	Fracture and Fatigue	3
ME 432	Engineering Optimization	3
ME 433	Experimental Stress Analysis	3
ME 434	Composite Materials	3
ME 435	Machine Tool Design	3
ME 436	Combustion Engineering	3
ME 437	Tea Machineries	3
ME 438	Petroleum and Drilling Technology	3
ME 439	Refrigeration and Air Conditioning	3
ME 440	Advanced Mechanics of Solids	3
ME 531	Project Management	3
ME 532	Power Plant Engineering	3
ME 533	Energy Management	3
ME 534	Mechatronics	3
ME 535	Advanced Engineering Thermodynamics	3
ME 537	Applied Computational Methods	4
ME 538	Computer-Aided-Design in Engineering	4
ME 539	Optimization Techniques in Engineering	3
ME 540	Evolutionary Algorithms for Optimum Design	3
ME 542	Computational Fluid Dynamics	4
ME 543	Compressible Flow	4
ME 544	Turbulent Shear Flow	3
ME 545	Viscous Fluid Flow	3
ME 546	Fluid Transportation System	3
ME 547	Two Phase Flow	3
ME 621	Energy Conservation and Waste Heat Recovery	3

ME 622	Communication Skills for Scientists and Engineers	3
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*ES201, LW301 and CT465 are Mandatory-Non-Credit courses as per the revised-AICTE guideline. The lectures and laboratory classes assigned for these courses are not considered in the calculation of total credit structure. However, these courses are considered while calculating the number of hours.

**The credit-break up for ME471 (Industrial Summer Training) is not shown in the table. However, its contribution of 2 credit is considered while calculating the total credit of 161 for the curriculum.

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.

*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 6thsemester. The report will be submitted in the 7th semester.

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

Courses offered in M.Tech. in Mechanical Engineering

Course Code	Course Title	Cr.
First Semester		
Specialization: Machine Design		
ME 501	Advanced Solid Mechanics	4
ME 623	Mathematical Methods for Engineers	4
ME 509	Advanced Dynamics and Vibration	5
xx-xxx	Open Elective I	3
xx-xxx	Programme Elective I	3*
xx-xxx	Programme Elective II	3*

Second Semester		
Specialization: Machine Design		
ME 502	Finite Element Methods	4
ME 510	Engineering Design Laboratory	3
ME 592	Term Paper	2
xx-xxx	Open Elective II	3
xx-xxx	Programme Elective III	3
xx-xxx	Programme Elective IV	3*
xx-xxx	Programme Elective V	3*
First Semester		
Specialization: Thermal and Fluid Engineering		
ME 535	Advanced Engg. Thermodynamics	3
ME 541	Advanced Fluid Mechanics	4
ME 562	Experimental Methods in Thermal and Fluid Engineering	5
xx-xxx	Open Elective I	3
xx-xxx	Programme Elective I	3*
xx-xxx	Programme Elective II	3*
Second Semester		
Specialization: Thermal and Fluid Engineering		
ME 530	Numerical methods	4
ME 548	Convective Heat and Mass transfer	3
ME 593	Seminar	2
xx-xxx	Open Elective II	3
xx-xxx	Programme Elective III	3
xx-xxx	Programme Elective IV	3*
xx-xxx	Programme Elective V	3*
Third and Fourth Semester		
Specialization: Machine Design		
ME 613	M. Tech. Thesis Part I	12

ME 614	M. Tech. Thesis Part II	12
Specialization: Thermal and Fluid Engineering		
ME 611	M. Tech. Thesis Part I	12
ME 612	M. Tech. Thesis Part II	12
Elective Courses		
ME 503	Mechanics of Composite Materials	4
ME 504	Failure Analysis of Materials	3
ME 505	Advanced Dynamics	4
ME 506	Theory of Elasticity and Plasticity	3
ME 507	Theory of Plates and Shells	3
ME 508	Continuum Mechanics	3
ME 521	Robotics	3
ME 522	Quality Engineering	3
ME 523	Non-Conventional Energy	3
ME 524	Operations Management	3
ME 525	Tribology	3
ME 526	Modern Control System	3
ME 527	CAD-CAM	3
ME 528	Energy Conservation and Waste Heat Recovery	3
ME 529	Artificial Intelligence in Engineering	3
ME 531	Project Management	3
ME 532	Power Plant Engineering	3
ME 533	Energy Management	3
ME 534	Mechatronics	3
ME 535	Advanced Engineering Thermodynamics	3
ME 537	Applied Computational Methods	4
ME 538	Computer Aided Design in Engineering	4
ME 539	Optimization Techniques in Engineering	3
ME 540	Evolutionary Algorithms for Optimum Design	3
ME 542	Computational Fluid Dynamics	4

ME 543	Compressible Flow	4
ME 544	Turbulent Shear Flow	3
ME 545	Viscous Fluid Flow	3
ME 546	Fluid Transportation Systems	3
ME 547	Two Phase Flow	3
ME 601	Automobile Engineering	3
ME 602	Computational Fluid Dynamics and Heat Transfer	3
ME 603	Hybrid Electric Vehicles	3
ME 622	Communication Skills for Scientists and Engineers	3
ME 701	Advance Heat Transfer	3
New Elective Courses (Specialization: Machine Design)		
ME 511	Experimental Stress Analysis for Design	5
ME 512	Theory of Plasticity	3
ME 513	Introduction to Fracture Mechanics	3
ME 521	Robotics	4
ME 606	Stability Problem in Applied Mechanics	3
ME 607	Soft Computing Technique in Engineering	3
ME 608	Mechatronics and Industrial Automation	3
ME 609	Design of Internal Combustion Engine	3
ME 610	Kinematics and Dynamics of Internal Combustion Engine	3
ME 624	Design of Internal Combustion Engine Auxiliary System	3

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



ASSAMESE
(Year of Establishment: 2019)

The Department of Assamese, established in 2019 is a new department. However, it may be said to have begun life as the Centre for Assamese Studies which was established in 2011. The primary aim of the Centre was to undertake and foster research in Assamese language and culture and one of its achievements was the creation of an extensive digital archive of Assamese manuscripts, books, and important documents from the medieval period to the modern. The present department incorporates such existing facilities.

In view of the paucity of standard texts of the classical and canonical works of Assamese literature (for example, the works of Madhava Kandali and Sankaradeva, Madhavadeva, Rama Saraswati and others) including concordances to the major works of Assamese literature, the department's first programme, the postgraduate degree programme in Assamese, will incorporate courses in textual criticism/text-critical studies and digital humanities. Textual criticism/text critical studies and digital humanities have also been identified as the thrust areas in research.

Programme offered

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

Faculty and Areas of Interest

Associate Professor

Subrat Jyoti Neog,* Ph.D. (GU)-HoD

Assamese Literature, Film Studies, Theatre Studies, Stylistics, Creative Writing (Play and Screenwriting)

Assistant Professor

Juri Dutta,* Ph.D. (RGU)

Regional Literatures of India, Translation Studies and Comparative Literature, Creative Writing

Sanjib Deka,* Ph.D. (GU)

Study of Assamese Language, Medieval Assamese Language, Assamese Morphology, Nineteenth Century Assam, Printing History, Women's Writing in Assamese, Creative Writing.

Jyotishman Das, M.Phil. (DU)

Modern Assamese Literature, Life Writing, Travel Writing, Creative Writing

*Recognized Ph.D. Supervisor

ACRONYMS

GU- Gauhati University; **RGU-**Rajiv Gandhi University, Arunachal Pradesh;

DU- Dibrugarh University; **HoD-** Head of the Department

Facilities

- Digital Library
- Departmental Library

Research Activities

- No. of papers published in the year 2022- 23: 07
- No. of ongoing research projects: Nil
- No. of current Ph.D. scholars: 08

Selected Publications

Dr. Subrat Jyoti Neog

Associate Professor and Head

"Mukti and Tare Zameen Par: An Intertextual Study"-Anvesan, Feb. 2022

"Agatanugatik Bhababastu Aro Abhinabasailir Chalachitrare Samridha Bharatiya Panorama"-Gariyoshi, Feb. 2022

Dr. Juri Dutta

Assistant Professor

Publication (UGC CARE Listed Journal)

Dr. Juri Dutta. "Representation of Women in the Life Writings of Colonial Assam" in *Anvesan*, ISSN 2250-2475, Volume XV (2022-2023), December, 2022. Pp 243-255

Dr. Juri Dutta. "Asamiya Upanyasat Queer Cetana"(Queer Consciousness in Assamese Novels) in *Satsori*, ISSN 2319-8893, Vol No 17, Issue No 6, January, 2022. Pp 47-51

Dr. Sanjib Deka

Assistant Professor

Publications(in UGC Care list)

Deka, S.(March, 2022). Kahini-Kathan, Bhim-Charit aru Oupanibeshik Asam : Pathanar Ek Itihas, Part I, *Satsori*, 17(8):44-48. Part II, *Satsori*, 17(10):70-75.

Jyotishman Das

Assistant Professor

Das, J. (2023). "Homen Borgohainr Kishor-Sahitya", *Satsori*, May, 2022, Vol

17, Issue 10, p.46-49.

Das, J. (2023). "Aalocanir Braman Sahitya: Upekhyita Ekhan Alocani aro Upekhyita Eti Sahitya Bidha, *Gariyoshi*, March, 2022, Vol. XXIX, Issue. 5, p.46-50.

Courses offered in M.A. in Assamese

Course Code	Course Title	Cr.
First Semester		
AS401	History of Assamese Language	4
AS402	History of Assamese Literature	4
AS403	Assamese Poetry	4
AS404	Historiography of Assamese Literature	4
AS405	Literary Theory and Criticism	4
Second Semester		
AS406	Structure of Assamese Language	4
AS407	Assamese Culture	4
AS408	Assamese Drama	4
AS409	Assamese Novel	4
AS410	Creative Writing, Editing and Assamese DTP	2
Open Elective	To be chosen from other departments	3
Third Semester		
AS411	Textual Criticism and Assamese Script	4
AS412	Introduction to Digital Humanities	4
AS413	Assamese Prose	4
AS414	Introduction to Linguistics (EC)	4

AS415	Introduction to Translation Studies (EC)	4
AS416	History of Assamese Book (EC)	4
AS417	Comparative Literature (EC)	4
Open Elective	To be chosen from other departments	3
*EC-Elective Course (Anyone)		
Fourth Semester		
AS418	Assamese Short Story	4
AS419	Non-fictional Writings from Assamese Periodicals	4
AS420	Women's Writings in Assamese: Non-Fictional Prose	4
AS421	Sanskrit Literature (EC)	4
AS422	World Literature in English/ Assamese Translation(EC)	4
AS423	Introduction to Applied Linguistics (EC)	4
AS424	Tibeto Burman Languages of Assam(EC)	4
AS425	Film and Literature(EC)	4
AS426	Dissertation	6

For more information, please visit the departmental website
<http://www.tezu.ernet.in/das>



CULTURAL STUDIES

(Year of Establishment: 1996)

We, in the Department of Cultural Studies at Tezpur University, try to create a healthy teaching-learning environment for the students. With faculty members drawn from the country and abroad (two adjunct faculties from New Zealand), the Department of Cultural Studies undertakes analysis of society, culture, film and expressive cultural forms from a wide range of disciplinary perspectives. The academic curriculum of the department looks at emergent and topical socio-cultural issues such as memory, ethnicity, migration, nationalism, gender, media, heritage, aesthetics, cyber cultures, environment, and the daily life of people in contemporary times. The department mediates global concerns and theoretical approaches of the discipline with issues that are of local importance in order to document and study the rich cultural heritage, including the folk and oral inheritances of the region. The department is currently supported by UGC-SAP (DRS-II) and has been able to build up an effective network with prominent institutions (of India and abroad) and communities through its regular field investigations and students' internships. Students

Programmes offered

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

Faculty and Areas of Interest

Professor

Debarshi Prasad Nath*, Ph.D. (RGU)

Cultural Theory and Contemporary Culture, Film and Media, Comparative Literature and Translation, Cultural Memory

Associate Professor

Madhurima Goswami*, Ph.D. (TU)

Sanskrit Poetics, Indian Classical Performing Arts

Parasmoni Dutta*, Ph.D. (TU) -HoD

Heritage Studies, Popular culture, Digital humanities

Assistant Professor

Juri Gogoi Konwar*, Ph.D. (DU)

Medical Anthropology, Anthropology of Food and Costume

Jayanta Vishnu Das*, Ph.D. (TU)

Media and Culture, Digital Media, Popular Culture

Mandakini Baruah*, Ph.D. (TU)

Gender Studies, Folklore Studies, Paremiology

Hashik, N.K*, Ph.D. (UoH)

Performance Studies, Community Studies, Research Methodology

Moushumi Kandali*, Ph.D. (MSUB)

Contemporary Visual Culture, Literary Cultures of India, Gender Studies, Translation and Creative Writing

Adjunct Faculty

Alison East, MPhEd (UO), (School of Physical Education, Sports & Exercise Sciences)

Dance Ethnography, Somatic Education & Movement Philosophies

Barbara Helen Snook, Ph.D.(UA), (Department of Dance Studies)

**Recognized Ph.D. Supervisor*

ACRONYMS

RGU: Rajiv Gandhi University, Arunachal Pradesh; **TU:** Tezpur University;

DU: Dibrugarh Universit; **UoH:** University of Hyderabad; **MSUB:** MS

University of Baroda; UO: University of Otago; UA: University of Auckland ;

HoD: Head of the Department,

Facilities

The department has a well-equipped seminar-cum-conference hall, smart classrooms and 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 and a dedicated space for visual memorization under the name and style of "Wall of Heroes". Besides, the department has recently set up the Neelpawan Baruah Museum of Modern Art which is a permanent gallery of select paintings of noted artist Neelpawan Baruah.

Research Activities

- No. of papers published in the year 2022-23: 4
- No. of ongoing research projects: 2
- No. of current Ph.D. scholars: 32

Select Publications

- Hazarika, Parismita and Debarshi Prasad Nath. "Understanding

Cultural Nationalism in Assam: Perspectives from the Plays of Jyotiprasad Agarwala and Bishnuprasad Rava" in *Rupkatha Journal on Interdisciplinary Studies in Humanities* (Scopus Indexed) Vol. 14, Issue 2, April-June 2022.

- Sarmah, Parikshit and Debarshi Prasad Nath. "Oti axamiyagiri: Assamese nationalistic masculine identity, United Liberation Front of Asom and cyberspace". *Ethnicities*, A Sage Publication. 2022, Vol. 0(0) 1-17.
- Debarshi Prasad Nath. "Myth: Its Uses and Abuses". *Myth and Tales of Koch-Rajbangshis of Western Assam*. Ed. Dwijendra Nath Bhakat. New Delhi: Sahitya Akademi. 2022.

Courses offered in M.A. in Cultural Studies

Course Code	Course Title	Cr.
First Semester		
CT420	Introduction to Cultural Studies	4
CT421	Cultural Theory: Key Concepts	4
CT422	Introduction to Popular Culture	4
CT423	Research Methods	4
CT424	Reading Culture: Perspectives from the West	3
Second Semester		
CT430	Media and Culture	3
CT431	Gender and Culture	4
CT432	Folklore and Culture	4
CT433	Exploring North East India	4
Any 1(one) course from this cluster CT434 and CT435		

CT434	Culture and Environment	3
CT435	Indian Society and Culture	3
Any 1(one) course from this cluster CT436 and CT437		
CT436	Culture and Heritage	3
CT437	Digital Culture	3
Third Semester		
CT520	Visual Culture	4
CT521	Audio-Visual Production	4
Any 1(one)course from this cluster CT522 and CT523		
CT522	Music and Culture	3
CT523	Cinema and Culture	3
Any 1 (one)course from this cluster of CT524, CT525, CT526 and CT527		
CT524	Cultural Memos	3
CT525	Community Dance in Assam	3
CT526	Dance Ethnography	3
CT527	Understanding New Media	3
Any 1 (one)course from this cluster of CT528 and CT529		

CT528	Oral History Project	4
CT529	Cyber Ethnography	4
	Open Elective (CBCS)	3
Fourth Semester		
CT 530	Dissertation	6
Any 2 (two) course from this cluster of CT31, CT532, CT533, CT534 and CT535		
CT531	Cultural Industries	3
CT532	Performance and Culture	3
CT533	Culture and Science: Select Readings	3
CT534	Cultural Policy	3
CT535	Reading India through the Cinematic Lens	3
Any 2 (two) course from this cluster of CT536, CT537, CT538, CT539, CT540, CT541, CT542		
CT536	Culture for Social Change	3
CT537	Cultural Spectacles and Infotainment	3
CT538	Reading Culture: Perspectives front Assam	3
CT539	Intercultural Communication	3
CT540	Folk and Tribal Arts	3
CT541	Cross Cultural Studies: North East India and South East Asia	3
CT542	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. At present, the department of education is running Four programmes, out of which one programme is in collaboration with the department of Mathematics, Chemical Sciences and Physics. Both B.Ed. & Integrated B.Sc.B.Ed. programmes are designed in such a way that trainee teachers become well versed in content knowledge, pedagogy and communication skills which are integrated throughout the duration of programme in an organized manner (bridging the gap between theory and practice). The department has started Postgraduate and Doctoral programmes in Education from autumn semester, 2015. These programmes provide learners a wider, and more comprehensive understanding of education as a field of knowledge. The faculty members of our department have a wide range of expertise/ specializations and are currently engaged with full dedication, enthusiasm to equip the learners with necessary competencies, skills, and knowledge in order to participate in educational actions in different areas of education effectively as a professional. The Department has a phenomenal record of student placements. Our trainee teachers are well placed not only regular/ Govt. job of teachers in Assam but also in Kendriya Vidyalaya Sangathan (KVS), Army Public School, Delhi Public School (DPS), The Assam Valley School (AVS) and other reputed schools of the country. The students enrolled in postgraduate and doctoral programmes, after completing their degrees get recruited in various prestigious institutes serving in various posts such as assistant professors/ lecturers/Graduate teacher and in other administrative jobs.

Programmes offered

1. Ph.D.
2. M.A. in Education
3. B.Ed.
4. 4-Years Integrated B.Sc.B.Ed. (*in collaboration with the department of Mathematics, Chemical Sciences and Physics*)

Faculty and Areas of Interest

Professor

Nil Ratan Roy*, Ph.D. (AUS)-HoD

Measurement and Evaluation in Education, Research Methodology, Educational Planning and Management, Curriculum Development.

Assistant Professor

Yeasmin Sultana*, Ph.D. (AUS)

Language Education and Research Methodology

R.D. Padmavathy, Ph.D. (PU)

Mathematics Education, Educational Psychology, Educational Technology, e-content Development, Research Methodology and Statistics in Education, Guidance and Counselling, Environmental Education

Hitesh Sharma*, Ph.D. (DAV)

Method of Teaching Physical Science and Biological Science, Educational Psychology, ICT in Education, Educational Administration, Guidance and Counselling, Early Childhood Education

Sashapra Chakrawarty*, Ph.D. (BHU) *Biological Science, Educational Psychology, Teacher Education, Elementary Education, Special Education, Guidance and Counselling*

Pratima Pallai*, Ph.D. (LU)

Social Science Teaching, ICT in Education, Guidance and Counselling, Measurement and Evaluation, Educational Psychology

Mohammad Asif, M.Ed. (JMI)

Contemporary Indian Education, Teacher Education, Educational Technology, Pedagogy of Social Science, History of Education

Sradhanjali Pradhan, Ph.D. (UU)

Pedagogy of Physical Science, Educational Technology and ICT in Education, Measurement and Evaluation

Rajinder Singh*, Ph.D. (PU) #

Educational Technology, Educational Research, Special Education, ICT in Education, Language Education, Environment Education, Educational Guidance and Counselling

Sanghamitra Das, Ph.D. (NUEPA)

Gender and Education Sociology of Education, Pedagogy of Social Sciences, Teacher Education, Community Participation in School Education

Gopal Singh, Ph.D. (MDSU)

Science Education, Learning & Teaching, Constructivism, Innovative Practices and Thinking Skills

***Recognized Ph.D. Supervisor**

On lien

ACRONYMS

AUS-Assam University Silchar; **PU**-Pondicherry University; **DAV**-Devi Ahilya Vishwavidyalaya, Indore; **BHU**-Banaras Hindu University, Varanasi; **LU**- Lucknow University; **JMI**- Jamia Millia Islamia, New Delhi; **UU**- Utkal

University, Odisha; PU - Panjab University; NUEPA- National University of Education Planning and Administration New Delhi; MDSU- Mharshi Dayanand Saraswati University Rajasthan; HoD- Head of the Department

Facilities

The teaching support infrastructure includes a Psychological Laboratory, Art and Craft Resource Centre, Curriculum Laboratory, Seminar Hall, Multipurpose Hall, Conference Room, Departmental Library cum Reading Room, Smart Classroom and ICT Resource Centre equipped with 25 nos. computer systems.

Research Activities

- No. of paper published in the year 2022-23: 09
- No. of ongoing research projects: 02
- No. of current Ph.D. scholars: 32

Selected Publications

- Das, P & Roy, N.R (2022). **A Study on the Secondary School Social Science Teachers' Attitudes Towards Activity-Based Teaching Learning Approach.** www.int-Jecse.net International Journal of Early Childhood Special Education (INT-JECSE)ISSN: 1308-5581, Centivens Institute of Innovative Research (CIIR).....SCOPUS (Web of Science Journal).
- Das, B. & Roy, N.R (2022). **Scientific aptitude of the Secondary Level students.** Third Concept-An International Journal of Ideas, June, 2022, ISSN No:0970-7247, pp.36-38, (UGC CARE)
- Dey, A & Roy, N.R. (2022). **Influence of Gender on Emotional Intelligence and Professional Commitment: A Study in West Bengal,** Education India: A Quarterly Refereed Journal of Dialogues on Education, ISSN: 2278-2435, Vol.11, Issue-2, May-2022. pp-1-8, Paper ID: EIJ2011000687,(UGC CARE)
- Dey, A & Roy, N.R. (2022). **A Study of Emotional Intelligence of Teachers in Relation to Gender and Teaching Experience,** European Online Journal of Natural and Social Sciences 2022; Vol.11, No 3 pp. 722-732, ISSN 1805-3602, PP. 722-732. (Web of Science)
- Pal, R & Roy, N.R. (2022). **Addressing the anomalies in the factorial**

structure of student engagement construct: A Study, Bharatiya Shiksha Shodh Patrika, Vol.41, No.1, January-June, 2022, PP.79-83. (UGC CARE)

- Pal, R & Roy, N.R. (2022). **Gender Gap in Student Engagement Across Academic GRades: A Comparative Study in West Bengal,** Education India: A Quarterly Refereed Journal of Dialogues on Education, ISSN: 2278-2435, Vol.11, Issue-3, August-2022, PP.1-9. (UGC CARE)
- Dey, A & Roy, N.R. (2022). **Construction and Validation of Emotional Intelligence Scale for Secondary School Teachers,** Educational, Cultural and Psychological Studies, ECPS Journal – 26/2022 - <https://www.ledonline.it/ECPS-Journal/Online> ISSN 2037-7924 - Print ISSN 2037-7932 - ISBN 978-88-5513-090-5

STANDARDIZATION OF RESEARCH TOOLS:

1. Dey, Antara & Roy, Nil Ratan (2022). **Fivefold Emotional Intelligence Scale for Teachers**, published by National Psychological Corporation (NPC), Agra, New Delhi.
2. Dey, Antara & Roy, Nil Ratan (2022). **Social Intelligence Scale for Teachers**, published by National Psychological Corporation (NPC), Agra, New Delhi.
3. Pal, Raj Kumar & Roy, Nil Ratan (2021). **Student engagement in Learning Scale**, published by National Psychological Corporation (NPC), Agra, New Delhi.
4. Pal, Raj Kumar & Roy, Nil Ratan (2022). **Perceived Teachers Engagement Scale**, published by National Psychological Corporation (NPC), Agra, New Delhi.

Courses offered in B.Ed.

Course Code	Course Title	Cr.
First Semester		
BD 401	Human Growth and Development	5

BD 402	Contemporary Indian Education	5
BD 403	Language Across the Curriculum	4
BD 404	Understanding Disciplines	4
BD 405	Reading and Reflecting on Texts	2
-	Open Elective- I	3
Second Semester		
BD 501	Teaching Learning and Management	4
BD 502/ BD 503/ BD 504	Teaching of Assamese -Part I/ Teaching of English –Part I/ Teaching of Hindi -Part I	3
BD 507 / BD 508	Teaching of Mathematics -Part I/ Teaching of Biological Science- Part I	3
BD 505/ BD 506	Teaching of Social Science -Part I/ Teaching of Physical Science-Part I	
BD 509	Knowledge and Curriculum -Part I	3
BD 510	Assessment and Evaluation of Learning	3
BD 511	Drama and Art in Education	2
BD 512	Pre-Internship	4
-	Open Elective- II	3
Third Semester		
BD 550/ BD 551/ BD 552	Teaching of Assamese -Part II/ Teaching of English – Part II/ Teaching of Hindi -Part II	3
BD 555/ BD 556	Teaching of Mathematics -Part II/ Teaching of Biological Science- Part II	3
BD 553/ BD 554	Teaching of Social Science -Part II/ Teaching of Physical Science-Part II	3
BD 557	School Internship	16
Fourth Semester		
BD 575	Gender, School, and Society	3
BD 576	Knowledge and Curriculum -Part II	3
BD 577	Creating an Inclusive School	3
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

Course Code	Course Title	Cr.
First Semester		
MA 106	Philosophical Underpinnings of Education	4
MA 107	Psychology Foundations of Education	4
MA 108	Methodology of Educational Research	4
MA 109	Sociological Foundations of Education	4
MA 110	Teacher Education	4
Second Semester		
MA 206	Educational Technology	4
MA 207	Measurement and Evaluation in Education	4
MA 208	Inclusive Education	4
MA 209	Psychological Experiments	4
MA 210	Academic Writing (Practicum)	2
-	Open Elective- I (CBCT)	3
Third Semester		
MA 306	History of Education: India and World	4
MA 307	Statistics in Education	4
MA 308	Curriculum Studies	4
MA 309/ MA 310/ MA 311/ MA 312	Open and Distance Learning/ Human Rights, Peace and Value Education/ Education for Sustainable Development/ ICT in Education	4
MA 313	Research Proposal and Review Presentation	2

-	Open Elective-II (CBCT)	3
Fourth Semester		
MA 405	Educational Administration and Management	4
MA 406	Politics and Economics of Education	4
MA 407 / MA 408/ MA 409/ MA 410	Principles and Techniques of Teaching / Educational Guidance and counseling / Indian Intellectual Traditions / Yoga & Personality Development	4
MA 411	Dissertation	6

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

**4-Years Integrated B.Sc.B.Ed. (in collaboration with
the department of Mathematics, Chemical Sciences
and Physics)**

Course Code	Course Title	Cr.
First Semester		
ED 105	Basics in Computer Applications	3
ED 106	Education: An Evolutionary Perspective	3
Second Semester		
ED 107	Education and Development	3
NS 106 or NC001	National Service Scheme Or NCC for Youth Empowerment	2
Third Semester		
ED 205	Environmental Education	3
ED 202	Learner and Learning	3
Fourth Semester		

ED 203	Contemporary Issues in Education	3
ED 204	Assessment and Evaluation	3
Fifth Semester		
ED 301	Teaching Approaches and Strategies	3
ED 302	Classroom Organization and Management	3
Sixth Semester		
ED 308	Pedagogy A: Physical Science-I	3
ED 307 or ED 309	Pedagogy B: Mathematics I or Pedagogy B: Biological Science-I	3
ED 303	School Education in North East India	2
Seventh Semester		
ED 408	Pedagogy A: Physical Science-II	3
ED 407 or ED 409	Pedagogy B: Mathematics II or Pedagogy B: Biological Science-II	3
ED 404	Initial School Experience/ School Internship-I	4
Eighth Semester		
ED 405	School Internship-II	16



ENGLISH

(Year of Establishment: 1994)

The Department of English 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, Translation Studies, New Literatures in English and Gender and Literature. The Department of English is supported by the UGC under the Special Assistance Programme-Departmental Research Support (Phase II).

Programmes offered

1. Ph.D.
2. M.A. in English
3. Integrated M.A. in English

Faculty and Areas of Interest

Professor

Bijay Kumar Danta,* Ph.D. (UU)
American Literature, Critical Theory, Fiction Studies

Farheena Danta,* Ph.D. (DU) , Dean HSS
American Literature, Postcolonial Studies, Modernist Poetics

Prasanta Kumar Das,* Ph.D. (GU)
Indian Writing in English, British Literature, Book History

Sravani Biswas,* Ph.D. (NEHU), HoD
Indian Writing in English, Postcolonial Studies, British Romantic Poetry

Associate Professor

Debasish Mohapatra,* Ph.D. (EFLU, Hyderabad)
Curriculum Development, Materials Production, Language Policy

Sanjib Sahoo,* Ph.D. (TU)
Life Writing, Translation Studies, Travel Writing, Contemporary British Literature

Hemjyoti Medhi,* Ph.D. (DU^)
Gender and Literature, New Literatures in English, Indian Vernacular Literature

Assistant Professor

Reetamoni Narzari, Ph.D. (TU)
Women's Writing, Indian Writing in English, Postcolonial Literature

Pallavi Jha, Ph.D. (UoH)

Children's Literature, Popular Culture and Literature, Postcolonial Writing

Bashabi Gogoi*, Ph.D. (GU)

Critical Theory, Adaptation Studies, Indian Writing in English & Film Studies

Esther Daimari*, Ph.D. (GU)

South Asian English Literature

Sarat Kr. Doley,* Ph.D. (EFLU, Shillong)

English Language Education, Language Testing, SLA

Raktima Bhuyan, M.A. (TU)

American Literature, Modernity Studies

***Recognized Ph.D. Supervisor**

ACRONYMS

UU-Utkal University, Odisha; **DU**-Dibrugarh University; **HSS**- Humanities and Social Sciences; **GU**-Gauhati University; **NEHU**- North Eastern Hill University, Shillong; **EFLU**- English and Foreign Language University; **TU**- Tezpur University, **DU^**- Delhi University; **UoH**-University of Hyderabad ; **HoD**- Head of the Department.

Facility

Department Library

Select books relating to literature, Linguistic and ELT are available in the Departmental Library. The Department also has a collection of audio cassettes of English Pronunciation and spoken English and a number of Video CDs on library texts.

Research Activities

- No. of papers published in the year 2022- 2023: 06
- No. of ongoing research projects: 01
- No. of current Ph.D. scholars: 47

Select Publications

Journals

- Saikia, Bonjyotshna and Hemjyoti Medhi. (2022) "Pretty thing, is it not": Portrait Miniatures in Victorian Fiction". Victorian: A Journal of Culture and Literature. Vol. 121, Summer 2022. PP 24-36.
- Daimari, Esther and Ivy Daimary. (2022). "Ecofeminism and Bodo folktales And folksongs". In Douglas Vakoch and Nicole Anne (Eds),

- Indian Feminist Ecocriticism. Lanham: Lexington Books. pp.93-106.
- Daimari, Esther. (2022). "The EcoGothic and Contemporary Sri Lankan English Literature: Reading Ecophobia in Patricia Weerakoon's Empire's Children and Roma Tearne's Mosquito." Southeast Asian Review of English, Vol 59 No. 1, pp. 29-50.
- Gogoi, Bashabi (2022). Reading the Novel and Film Adaptation of John Fowles' The French Lieutenant's Woman. Drishti: The Sight. Vol XI Issue I, May- October 2022. ISSN 2319 8281, pp 26-30.

Book Chapters

- Danta, Farheena. (2021), "Protocols of Colonial Hunting: Surveillance, Transgression and the Allegory of Empire in F. T. Pollok's Wild Sports of Burma and Assam" "Narrative Cultures of North-East India: Traditions, Texts and Representations" Pencraft International, ISBN 978-93-8278-30-9.

Courses offered in Integrated M. A. in English*

Course Code	Course Title	Cr.
First Semester		
EG111	Reading Literature	4
EG112	English for Communication	3
CS101	Basics in Computer Application	3
MIL (ANY ONE)		
AS101	MIL Assamese: Poetry (Early and Modern)	3
HN101	Madhyakalin aur Adhunik Kabya (in Hindi)	3
EG106	Alternative English -I	3
OPTIONAL COURSES (ANY TWO)		
SO102	Introduction to Sociology	2
CT161	Basic Concepts in Cultural Studies -I	2
MC101	Introduction to Communication	2
Second Semester		
EG113	History of English Literature	4

EG114	English Poetry I: Chaucer to Dryden	3
ES103	Environmental Science	3
NS102	NSS/NCC	2
MIL (ANY ONE)		
AS102	Assamese : Drama	3
HN102	Kahani aur Upayas (in Hindi)	3
EG109	Alternative English-II	3
OPTIONAL COURSES (ANY TWO)		
SO103	Introduction to Sociological Thought	2
CT162	Introduction to Folklore Studies	2
MC201	Journalism	2
Third Semester		
EG211	British Drama I: Beginning to Shakespeare	4
EG212	English Fiction-I	3
EG213	English Poetry-II: Pope to Romantics	4
To be chosen by students	CBCT-I	3
MIL (ANY ONE)		
AS201	MIL (Assamese): Short Story and Novel	2
EG209	Alternative English -III	2
HN201	Natak Aur Ekanki (Hindi)	2
OPTIONAL COURSES (ANY TWO)		
SO201	Society in India	2
CT163	Basic Concepts in Cultural Studies-II	2
MC301	Advertising and Public Relations	2

Fourth Semester		
EG214	Literary Criticism-I	4
EG215	Drama-II: Jacobean to Eighteenth Century	4
EG216	Fiction-II: Victorian to Modern	4
To be chosen by students	CBCT-II	3
MIL (ANY ONE)		
AS202	MIL (Assamese) Essay, Structure of Assamese	2
EG211	Alternative English -IV	2
HN202	Nibandh Aur Hindi Bhasa Ki Bhasik Sangrachana	2
OPTIONAL COURSES (ANY TWO)		
SO202	Social Research Method	2
CT164	Cultural Studies: Its Development and Trends	2
MC401	Electronic Media	2
Fifth Semester		
EG311	Poetry-III: Victorian to Modern	4
EG312	Non-Fictional Prose	4
EG313	Drama-III: Shaw to Beckett	4
EG314	Phonetics of English and ELT	4
To be chosen by students	CBCT-III	3
Sixth Semester		
EG315	Literary Criticism-II	4
EG316	Introduction to Postcolonial Literature	4
EG317	Introduction to Children's Literature	3
EG318	Introduction to South Asian Writing	3

To be chosen by students	CBCT-IV/Open Elective	3
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*Subject to revision.

Courses offered in M. A. in English

Course Code	Course Title	Cr.
First Semester		
EG451	Literary and Critical Theory-I	4
EG452	English Literature from Chaucer to Marlowe	4
EG453	Shakespearean Drama	4
EG454	Fiction-I (Early to Jane Austen)	4
EG417	Academic and Critical Writing in English	3
Second Semester		
EG455	Language and Language Education	4
EG456	Puritan to Eighteenth Century Literature (Poetry and Drama)	4
EG457	Romantic Poetry and Prose	4
EG458	Fiction-II (Nineteenth Century)	4
EG460	Fundamentals of Research	4
To be Chosen by students	CBCT	3
Third Semester		
EG501	Literary and Critical Theory -II	4
EG502	Modern Drama	4
EG503	Modern Fiction	4
-	Elective- I	4
To be chosen by students	CBCT	3
Fourth Semester		

EG504	Modern Poetry	4
EG505	Modern Prose	4
EG506	Postcolonial Literatures in English	4
-	Elective-II	4
EG519	Term Paper	4

Elective -I (Any One from the following Courses)

EG507	Translation-I	4
EG509	Gender and Literature-I	4
EG511	American Literature-I	4
EG513	Indian Writing in English-I	4
EG515	ELT-I	4

Elective -II (Any One from the following Courses)

EG508	Translation-II	4
EG510	Gender and Literature-II	4
EG512	American Literature-II	4
EG514	Indian Writing in English-II	4
EG516	ELT-II	4

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



FOREIGN

LANGUAGES

(Year of Establishment: 2019)

Tezpur University has been offering German since 2001, Chinese since 2003, and French since 2007 as foreign language courses under the Department of English and Foreign Languages. The Department of Foreign Languages, established in 2019, offers a full-time Certificate Course in Chinese, and Open Elective Choice Based Credit courses in German, French and Chinese languages. The new department has plans to extend the number of programmes at all levels and is committed to fostering professionals with competent skills in languages, intercultural communication, international affairs and cultural understanding from various nuanced perspectives.

Programmes offered

1. One Year Certificate Course in Chinese
2. CBCS (Basic Chinese – I & II, Basic German – I & II, Basic French – I & II)

Faculty and Areas of Interest

Professor

Prasanta Kumar Das, Ph.D. (GU) (HoD)

Indian Writing in English, Mission History in Northeast India, Book History

Assistant Professor

Rathijit Chakraborty, M.Phil. (Chinese Studies), (JNU)

Chinese Language and literature

Daveirou Lanamai, M.A. (Chinese Studies) (JNU)

Chinese Language, Literature & Culture, Intercultural Studies

Pallavi, Ph.D. (German Studies), (JNU)

German Literature, Partition Literature, Literature, Gender and Emotions, Comparative Studies

ACRONYMS

GU-Gauhati University; **JNU**- Jawaharlal Nehru University, New Delhi;

HoD- Head of the Department

Facilities

The department is in the process of creating Information and Communication Technology facilities. It has a small language laboratory, audio-visual teaching aids, and a small library of foreign-language books.

Research Activities

- No of papers published in the year 2022-23:
- No of ongoing research projects:
- No of current Ph.D. scholars:

Selected Publications

- Pallavi: "Gaining Visibility Through Emotions in Partition-Narrative: Jealousy, Fear and Shock of Male Character in 'Lajwanti'", in: Arzuman Ara (ed.): *Revisiting Partition: Identity, History and Memory*. Pencraft International (Delhi 2022), pages 189-201.
- Pallavi, "The Role of Emotions in Identity Formations of Female Literary Characters in Partition-Narratives", *Shodh Sarita*, Vol. 7, issue 8, October-December
- Kedilezo Kikhi and Daveirou Lanamai. "Contested Borders and Borderlands in Northeast India: (IL) Legitimate Claims of Naga Identity Assertion". *Sociological Bulletin*, August 2020, 69 (2), 141-157
- Daveirou Lanamai, 2019. Parallels and Contrasts in the Popular Folklore of the Chinese and the Nagas. *Journal of Northeast Indian Cultures*, 4(2), 44 - 56, Assam Don Bosco University. ISSN 2322-0988
- Pallavi: "Fictional Representation of Rape and Sexual Violence in Battle of Berlin, 1945", in Rao, Vijaya et. al. (ed.): *Displacement and Citizenship. Histories and Memories of Exclusion*. Tulika Books (December 2019), page 241-260.

Courses offered in One Year Certificate Course in Chinese

Course Code	Course Title	Cr.
First Semester		
CL110	Read and Write Chinese -I	3
CL112	Chinese Comprehension	3
CL114	Speaking Chinese- I	3
CL116	China in Brief-I	3

Second Semester

CL111	Read and Write Chinese -II	3
CL113	Chinese Composition	3
CL115	Speaking Chinese- II	3
CL117	China in Brief-II	3

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

家之產深
力惜十夫聖性愛一庶可怡離群暑炎下請建





HINDI
(Year of Establishment: 2010)

The Department of Hindi was established in January 2010. The department aims to provide instruction in Hindi Literature, Language, and various aspects of Functional Hindi. It also envisages carrying out meaningful and relevant research in Hindi Literature, Language, Folk Lore, Comparative Literature, Translation Studies, etc. The department is running a Certificate Course in Official Hindi, Level-1 for the employees to help them to develop self-confidence and skill in writing and communicating in Hindi. The department has also started M.A. Programme, Ph.D. programme and Post Graduate Diploma in Translation. The department of Hindi is committed to developing human resources in Hindi teaching. It always tries to develop the methodology of Hindi teaching in higher education. The department of Hindi has developed with many objectives, out of which the department is making continuous efforts to make it one of the best Hindi departments in the field of Hindi Teaching-Learning, the department has developed quality research in various areas of Hindi Literature, Hindi Language, Comparative Studies, and Folklore. Emphasizes on promoting more publications in Hindi as well as developing a Hindi teaching-learning department for foreign students was also another objective.

Programmes offered

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

Faculty and Areas of Interest

Professor

सूर्यकांत त्रिपाठी

Suryakant Tripathi*, Ph.D. (BHU)

Anuprayukt Bhashavigyan, Bharatiya Kavyashastra, Lok-Sahitya

प्रमोद मीणा

Promod Meena, Ph.D. (IGNOU)- HoD

Dalit-Tribal Studies, Hindi Cinema Studies

Associate Professor

अंजु लता

Anju Lata*, Ph.D. (TU)

Hindi Katha Sahitya, Vimarshmulak Adhyayan, Adhunik Kavita

Assistant Professor

अनुशब्द

Anushabda*, Ph.D. (DU)

Kavita Kavyashastra, Media Bhaashaavigyaan

प्रमोद कुमार शर्मा

Pramod Kumar Sharma, Ph.D. (UoH)

Madhyakaaleen Kavita

शिप्रा शुक्ला

Shipra Shukla, M.Phil. (DU)

Adhunik Hindi Sahitya, Hindi Sahitya Ka Itihas

शंभुनाथ मिश्रा

Shambhunath Mishra, Ph.D. (JMI)

Hindi Katha Sahitya aur Aalochna, Madhyakalin Hindi Kavita , Bhartiya Kavyashastra

*Recognized Ph.D. Supervisor

ACRONYMS

BHU-Bhanarash Hindu University Uttar Pradesh; **IGNOU**- Indira Gandhi National Open University New Delhi; **TU**-Tezpur University; **DU**-Delhi University; **UoH**- University of Hyderabad; **JMI**- Jamia Millia Islamia New Delhi ; **HoD**- Head of the Department

Facilities

The department lays emphasis on discussing various topics and issues referred to the departmental curriculum and co-curricular. Keeping this objective in mind, the seminar hall has been arranged. These halls are useful for group discussions, educational meetings and other important conferences of the department, online interviews, video conferences etc.

An official meeting room has been arranged in the department for official meetings of the department and for presentation of plans and progress reports of Research Scholar etc., which are related to the official administrative work of the department.

The departments are in favor of using the tools of educational technology in teaching. Sound system, project presentation and white projector skin have been arranged in the department to make learning effective by creating, utilizing and managing appropriate technical processes and resources of educational technology

Keeping in mind the convenience of the girls, the department has one girl's common room, where their health-related primary services are

provided.

In the department, there is a computer room cum study room for research scholars as well as other students for easy and smooth study and doing research works.

There is a conference hall well equipped with up-to-date technical equipment, like a smart screen with sound system and projector, etc.

Research Activities

Number of papers published in the year 2022-23:

- No. of research articles- 8
- No. of book chapters - 4
- No. of books- 1

Details:

Faculty	No. of Research Articles	No. of Book Chapters	No. of Books
Dr. Promod Meena	5	1	
Dr. Suryakant Tripathi		2	
Dr. Anju Lata	1		
Dr. Anushabda	2		1
Dr. Shambhunath Mishra		1	

Number of ongoing research projects:

Number of current Ph.D. scholars: 14

Publications

Research Papers

- Meena, Pramod, 'Ik Kathit Naxal Ki Aatmkatha' published by 'Samayantar', New Delhi, ISSN 2249-0469, January 2022 (Year 53, Issue 4), Page No. 25-27

- Meena, Pramod, 'Buniyadi Sawalon Se Muh Chhipati Rajneeti' by Dr. Pramod Meena, published by 'Samayantar', New Delhi, ISSN 2249-0469, April 2022 (Year 53, Issue 7), Page No. 25-27
- Meena, Pramod, 'Sarkari Aur Gair Sarkari Hinsa Ke Beech Visthapit Hoti Adivasi Asmita' published by Banas Jan, New Delhi, ISSN : 2231-6558, Special issue on Bastar Bastar, Year 14, Issue 58, Sept., 2022, Page No. 32-57
- Meena, Pramod, 'Nafrat Aur Ghrana Ke Beech Rasta Dikhata Gaandhivadi Rashtrevad' by Dr. Pramod Meena, published by 'Apani Maati' E Magazine, ISSN 2322-0724, Year 9, Issue 45, October-December, 2022. Link: https://www.apnimaati.com/2022/12/blog-post_93.html
- Anushabda, 'Abki agar lauta to Manushyatar Lautunga' published by Bhasha, New Delhi, ISSN : 0523-1418 Vol. No. 300, Issue: January-February 2022, Page No. 86-90.
- Anushabda, 'Rashtriya Shiksha Niti 2020 ke Bhashai Sarokar', Dwibhashi Rashtrasewak, ISSN : 2321-4945, Vol. No. 10, Issue: January 2022, Page No. 39-44.

Book Chapter

- Tripathi.Suryakant (2022), "Kahani aur Kahanikaar 'Nishank' ki Kahani" in the book- Dr. Nishank ki rachanashilata ke vividh aayam Edited by Dr. Yogendra nath Sharma 'Arun', Anang Prakashan, Delhi, ISBN : 978-93-80845-51-7, Page no.167-173.
- Tripathi.Suryakant (2022), "Rashtriya Chetna aur Bhartendu ka Sahitya" in the book 'Aadhunik Hindi Kavita mein Rashtriay Chetna', Edited by Dr. Madhuri Garg, Naman Prakashan, New Delhi, ISBN : 978-93-90868-03-2, Page no.55-63.
- Meena, Pramod (2022), "Ambedkar, Gandhi And The Right to Conversion" in the book - Ambedkar And Ambedkar, Edited by Pramod Ranjan, BFC Publication, Lucknow, ISBN: 978-93-5632-022-2, First Edition 2022, Page No. 57-77
- Mishra, Shambhu Nath (2022), 'Mannushyata ke Kayantaran Ka Pratipaksh' in the book Jitendra Sriivastava ki kavitayen: Ek moolyankan Edited by Dr. Chainsingh Meena, Kalamkaar Publishersh, Dwaraka (New Delhi)

Book:

- Anushabda (2022), 'Assam ki lok sanskriti mein Ram', Vani Prakashan, Delhi, ISBN: 978-93-5518-276-0

Course Offered in Master of Arts

Course Code	Course Title	Cr.
प्रथम-सत्र (First Semester)		
HN 430	आदिकालीन एवं निर्गुण काव्य	04
HN 431	छायावादी काव्य	04
HN 432	हिंदी साहित्य का इतिहास : आदिकाल और मध्यकाल	04
HN 433	भारतीय काव्यशास्त्र	04
HN 434	पाश्चात्य काव्यशास्त्र	04
द्वितीय-सत्र (Second Semester)		
HN 435	सगुण भक्ति एवं रीति काव्य	04
HN 436	छायावादोत्तर काव्य	04
HN 437	हिंदी साहित्य का इतिहास : आधुनिक काल	04
HN 438	हिंदी भाषा एवं लिपि	04
	Open elective	03
तृतीय-सत्र (Third Semester)		
HN 540	हिंदी कथा साहित्य : उपन्यास एवं कहानी	04
HN 541	हिंदी नाटक और निबंध	04
HN 542	भाषा विज्ञान	04
HN 543	हिंदी आलोचना	04
	Open elective	03
चतुर्थ-सत्र (Fourth Semester)		
वैकल्पिक-पत्र (Elective Course)		
प्रयोजनमूलक हिंदी (Prayojanmoolak Hindi)		
HN 544	प्रयोजनमूलक हिंदी : सिद्धांत-संदर्भ	04

HN 545	राजभाषा हिंदी: संवैधानिक स्थिति एवं उसका	04
HN 546	हिंदी पत्रकारिता और जनसंचार	04
HN 547	अनुवाद विज्ञान : सिद्धांत एवं अनुप्रयोग	04
HN 548	लघु शोध-प्रबंध / परियोजना कार्य	06
आधुनिक हिंदी साहित्य (Adhunik Hindi Sahitya)		
HN 549	प्रेमचंद	04
HN 550	जयशंकर प्रसाद	04
HN 551	सूर्यकांत त्रिपाठी 'निराला'	04
HN 552	सच्चिदानन्द हीरानन्द वात्सायन 'अङ्गौल'	04
HN 553	लघु शोध-प्रबंध / परियोजना कार्य	06
अनुप्रयुक्त भाषा विज्ञान (Anuprayukt Bhasha vigyan)		
HN 554	भाषा शिक्षण	04
HN 555	शैलीविज्ञान	04
HN 556	समाज भाषाविज्ञान	04
HN 557	कोश विज्ञान	04
HN 558	लघु शोध-प्रबंध / परियोजना कार्य	06
तुलनात्मक साहित्य (Tulnatmak Sahitya)		
HN 559	तुलनात्मक साहित्य:स्वरूप, उद्भव और विकास	04
HN 560	भारतीय साहित्य : अवधारणा और विशेषताएँ	04
HN 561	पूर्वोत्तर की संस्कृति और साहित्य	04
HN 562	असम की संस्कृति और साहित्य	04
HN 563	लघु शोध-प्रबंध / परियोजना कार्य	06
लोक साहित्य (Lok Sahitya)		
HN 564	लोक साहित्य : सिद्धांत-संदर्भ	04

HN 565	लोकगीत और लोकगाथा	04
HN 566	लोक कथा एवं लोक नाटक	04
HN 567	लोक सुभाषित	04
HN 568	लघु शोध-प्रबंध / परियोजना कार्य	06
विमर्शमूलक अध्ययन (Vimarshmoolak adhayan)		
HN 569	अस्मितामूलक विमर्श	04
HN 570	स्त्रीमूलक विमर्श	04
HN 571	दलितमूलक विमर्श	04
HN 572	आदिवासीमूलक विमर्श	04
HN 573	लघु शोध-प्रबंध / परियोजना कार्य	06

Courses offered in PG Diploma in Translation (Hindi)

Course Code	Course Title	Cr.
प्रथम-सत्र (First Semester)		
HN 411	प्रयोजनमूलक हिंदी, भाषाप्रयुक्ति और अनुवाद	04
HN 412	हिंदी भाषा की संवैधानिक स्थिति और अनुवाद	04
HN 413	अनुवाद विज्ञान और उसका सिद्धांत	04
HN 414	कार्यालय हिंदी और अनुवाद	04
HN 415	परियोजना कार्य-I	06
द्वितीय-सत्र (Second Semester)		
HN 421	अनुवाद का व्यवहारिक पक्ष	04
HN 422	जनसंचार माध्यम और अनुवाद	04
HN 423	पारिभाषिक शब्दावली, कोश विज्ञान और अनुवाद	04
HN 424	परियोजना कार्य-II	06

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





LAW

(Year of Establishment: 2017)

The Department of Law was established in the year 2017 under the School of Humanities and Social Sciences with a vision to produce legal luminaries to add value in the field of teaching, judiciary, law making, law enforcement agencies and most importantly, work for the society as a good citizen. Presently, the department is offering two-year Master of Laws (LL.M.) programme with specializations in Human Rights Laws and Criminology & Criminal law. The objective of the programme is to make the department a vibrant centre of legal education and research and give an opportunity to all aspirants who wants to be a good academician, researcher, and work for social transformation. Three batches of the department have successfully post graduated in the year 2020, 2021, and 2023 respectively.

The department is making progress with existing four young and energetic permanent faculties along with Guest faculties who are giving meaning to the designed curriculum not only from theoretical but pragmatic aspects emphasizing on teaching inter-disciplinary facets. The faculty members have a wide range of interests and expertise in areas such as Constitutional Law, Judicial Process, Jurisprudence, Human Rights, Migration Laws, Environment Laws, Criminal Laws, Juvenile Justice, etc. The department tries to expose the students to the prevailing social realities and legal developments through activities such as outreach programmes, Seminars, Workshops, Panel Discussions etc. Moreover, it is the department's priority to inculcate among student's teaching methods & ethics, promote inter-disciplinary research, provide free legal assistance for persons in need and inspire students for competitive examinations. The department is proposed to start subsequently the Five-Year B.A.LL.B.(Hons.); and Ph.D. programmes.

Programmes offered

1. Master of Laws (LL.M.) Two-Year with the following specializations:
 - a. Criminology and Criminal Law
 - b. Human Rights Laws

Faculty and Areas of Interest

Associate Professor

Priya Ranjan Kumar, Ph.D. (GU)- HoD

Constitutional Law, Administrative Law, Judicial Process, Jurisprudence, Law of Contract, and Socio Economic Offences

Assistant Professor

Ms. Angel Habamon Syiem, LL.M.(SIU)

Human rights, International Law, and Tribal issues

Ms. Madhumita Acharjee, LL.M. (AU)

Criminal Law, Criminology, Juvenile Justice, and Rights of elderly persons

Mr. Debajit Kumar Sarmah, LL.M. (IP)

Criminology and Criminal Law

Guest Faculty

Miss. Devapreeti Sharma, LL.M. (TU)

Criminology & Criminal Laws, Constitutional Law

ACRONYMS

GU-Gauhati University; **SIU**-Symbiosis International (Deemed) University

Pune; **AU**-Assam University; **IP**-Guru Gobind Singh Indraprastha University

Delhi; **HoD**- Head of the Department; **TU**- Tezpur University

Facilities

- ICT enabled classroom
- Computer Lab
- Central Library with Law textbooks, reference books and journals
- Subscription of SCC Online and Manupatra
- Central Hostels for Boys and Girls

Research Activities

- Number of papers published in the year 2022-23:
- Number of current Dissertation works: 16

Selected Publications

- Mr. Debajit Kumar Sarmah, "Policy and Laws related with Environment Protection in India", *Sambodhi Indological Research Journal of L.D.I.I.*, Vol-44., No.01(XV): 2021, ISSN:2249-6661
- Mr. Debajit Kumar Sarmah, "Investigation under the Code of Criminal Procedure", *Kashmir Journal of Legal Studies*, Vol IX KJLS (2021-22) ISSN:2250-2084
- Angel H. Syiem & Priya Ranjan Kumar, "Trans Rights Are Human Rights: An Evaluation of Law on the Protection of Transgender Rights in India", *Indian Journal of Law and Justice*, March 2022, Vol. 13 No. 01, ISSN:0976-3570

- Priya Ranjan Kumar, "Raashtreeya Shiksha Neeti Va Kaanoonee Shiksha", *Mekal Meemaansa*, July-Dec 2021 ISSN:0974-0118
- Prof. Madhumita Dhar Sarkar and Ms. Madhumita Acharjee, Crime Against Senior Citizens in India: A Glaring Reality, *Indian Journal of Law and Justice*, September, 2020, ISSN:0976-3570
- Madhumita Acharjee and Dr. Samraggi Chakraborty, "Right to Livelihood of Elderly Persons With Special Reference to Assam", *Journal of Education: Rabindra Bharati University*, Vol. : XXV, No. :4(II), April 2022, ISSN 0972:7175
- Ms. Angel H. Syiem, The United Nations Declaration on The Rights of Indigenous Peoples vis-a-vis The Sixth Schedule of The Constitution of India: A Study on Tribal Right to Self-Governance, *Indraprastha Law Review*, Winter 2020: Vol. 1: Issue 2.
- Priya Ranjan Kumar (2020). Right to Food and Food Safety in India: Constitutional Mandate and Judicial Precedent. *Delhi Journal of Contemporary Law*, (III): 1-16.
- Mr. Debjit Kumar Sarmah (2020). Disqualification Attaching to Conviction Under the Probation of Offenders Act, 1958. *Delhi Journal of Contemporary Law*, (III): 33-42.
- Prof. Chandan Kumar Sharma & Angel Habamon Syiem, COVID-19 Pandemic and its impact on the Indian Education System, 'Coronasphere: Narratives on COVID-19 from India and its neighbours', Chandan Kumar Sharma & Reshma Banerjee (Edn.) 1st Publication (2023), Routledge: London & New York.

Courses offered in Master of Laws

Course Code	Course Title	Cr.
First Semester		
LW401	Indian Constitutional Law and Emerging Challenges	5
LW402	Research Methodology	5
LW403	Legislation-Principles, Methods & Interpretation	4
SPECIALISATION ELECTIVE (compulsory)		
LW404	Criminology, Penology and Victimology	5

LW405	Human Rights Jurisprudence	5
LW406	General principles of Criminal law	5
LW407	International Human Rights Law	5
	AUDIT COURSE	0
LW408	Interpretation of Status	
Second Semester		
LW420	Judicial Process	5
LW421	Project	3
SPECIALISATION ELECTIVE (Two elective courses to be opted for each specialization)		
LW422	Socio Economic Offences	5
LW423	Law Relating to Cyber Crime	5
LW424	Emerging Challenges in Evidence Law	5
LW425	Criminal Justice and Human Rights	5
LW426	Protection and Enforcement of Human Rights in India	5
LW427	Environment and Human Rights	5
-	Open Elective (to be chosen from other departments)	3
Third Semester		
LW501	Law and Social Transformation	5
LW502	Research Seminar	3
ELECTIVE (Two elective courses to be opted for each specialization)		
LW503	Correctional Law and Administration in India	5
LW504	Comparative Criminal Procedure	5
LW505	Human Rights and Criminal Justice Administration	5
LW506	International Humanitarian Law	5

LW407	International Refugee Law	5
LW408	Media and Human Rights	5
-	Open Elective (to be chosen from other departments)	3
Fourth Semester		
LW520	Legal Drafting Skills and Outreach Activities	5
LW521	Pedagogy in Law	3
LW522	Dissertation and Viva -Voce	8

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





LINGUISTICS AND LANGUAGE TECHNOLOGY

(Year of Establishment: 2002)

Established in March 2023 as an independent department, the Department of Linguistics and Language Technology, which was part of the Dept. of English before, offers a two-year Master's in Linguistics and Language Technology and guides Ph.D. research in the discipline. The department has expertise in Syntax, Cognitive Linguistics, Philosophy of Language, Language Documentation, Field Linguistics, Phonetics, Phonology, Experimental Phonology, Sociolinguistics, and Computational Linguistics. The department, in collaboration with the Centre for Endangered for Endangered Languages, which was established 2014 at the university and is now attached to it, carries out research in linguistics with a special focus on the languages of the Northeast, perhaps linguistically the richest yet most diverse area in India with its majority of lesser-known or under-studied languages.

Programmes offered

1. Ph.D.
2. M.A. in Linguistics and Language Technology

Faculty and Areas of Interest

Professor

Madhumita Barbora*, Ph.D. (TU)

Linguistics (Syntax, Psycholinguistics), Field Linguistics, Documentation

Gautam K. Borah*, Ph.D. (NTNU) -HoD

Linguistics (Syntax: Construction Grammar, Semantics), Cognitive Linguistics, Philosophy of Language, Cognitive Poetics, Literary Theory

Assistant Professor

Arup Kumar Nath*, Ph.D. (JNU)

Language Typology, Morphology, Sociolinguistics, Language Documentation, Field Linguistics

Bipasha Patgiri, Ph.D. (TU)

Phonology, Historical Linguistics, Semantics

Amalesh Gope*, Ph.D. (IITG)

Acoustic Phonetics, Experimental Phonology, Computational Linguistics, and Language Documentation

* Recognized Ph.D. Supervisor

ACRONYMS

TU-Tezpur University; NTNU: Norwegian University of Science and

Technology, Norway; JNU: Jawaharlal Nehru University, New Delhi; IITG: Indian Institute of Technology, Guwahati; HoD: Head of the Department

Facilities

Departmental Library

The department houses the Centre for Endangered for Languages so that the students, the research scholars, the faculty and the staff of the department have easy access to the Library of the Centre which is well-stocked with books on all important areas of linguistics, language endangerment, and language documentation. The department has also easy access to the Centre's state-of-the-art Linguistic and the Documentation-Archiving-cum-Recording Laboratories, and also to its two advanced multipurpose Seminar-cum Conference Halls. Furthermore, the classrooms of the department have most facilities of a smart class room.

Research Activities

- No. of papers published in the year 2022-2023: 5
- No. of ongoing research projects:
- No. of current Ph.D. scholars:

Selected Publications

- Barborah, Madumita and Gautam K. Borah (eds). 2021. *The Syntax of Biate, Hrangkhol, Khelma, Onaeme, Purum, Liangmai and Yimchunger*. Lesser Studies Language Series, Vol III. Guwahati: S.S. Graphics. ISBN:978-93-91902-14-8.
- Nath, Arup Kumar, Monali Longmailai and Dhanapati Shrougrakpam (eds). 2021. *The Morphology of Biate, Hrangkhol, Khelma, Onaeme, Purum, Liangmai and Yimchunger*. Lesser Studies Language Series, Vol II. Guwahati: S.S. Graphics. ISBN: 978-93-91902-12-4.
- Patgiri, Bipasha, Amalesh Gope and Bobita Sarangthem (eds). 2021. *The Phonology of Biate, Hrangkhol, Khelma, Onaeme, Purum, Liangmai and Yimchunger*. Lesser Studies Language Series, Vol I. Guwahati: S.S. Graphics. ISBN: 978-93-91902-13-4.
- Patgiri, Bipasha. 2021. "Voicing Assimilation as a Universal Phonological Process: A Case Study of Nalbaria Assamese." *International Journal of Dravidian Linguistics (IJDL)* Vol. 50 No. 2 June 2021. pp 134–164. ISSN 0378-2484.
- Gope, Amalesh. 2021. "The Phonetics of Tone and Voice Quality Interactions in Sylheti." *Languages* 6, no. 4: 154. <https://doi.org/10.3390/languages6040154>.

- org/10.3390/languages6040154
- Mahanta, Shakuntala, Amalesh Gope and Priti Raychoudhury. 2021. "Pitch Range and voice Quality in Dimasa Focus Intonation" *Languages* 6, no. 4: 185. <https://doi.org/10.3390/languages6040185>

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

Course Code	Course Title	Cr.
First Semester		
LG 421	Philosophy of Linguistics	3
LG 422	Phonetics and Phonology I	4
LG 423	Morphology	3
LG 424	Basic Syntax	4
LG 425	Introduction to Computational Linguistics	3
Second Semester		
	Open Elective	3
LG 426	Phonetics and Phonology II	3
LG 427	Syntax	3
LG 428	Semantics	3
LG 429	Field Linguistics	3
LG 430	Cognitive Linguistics	4
Third Semester		
	Open Elective	3
LG 501	Language Typology and Language Universals	4
LG 502	Sociolinguistics	4
LG 503	Natural Language Processing	4
LG 511	Research Methodology	3
(Elective Courses (any one of the following to be opted for)		

LG 504	Advanced Phonology	4
LG 505	Advanced Cognitive Linguistics-I	4
LG 506	Generative Syntax	4
LG 507	Lexicography	4
LG 508	Acoustic Phonetics: Instrumental Techniques and Data Analysis	4
LG 517*	Language Documentation and Grammar Writing*	4
Fourth Semester		
LG 509	Historical Linguistics	4
LG 510	Advanced Computational Linguistics	4
LG 518	Introduction to Psycholinguistics*	4
LG 521	Dissertation	6

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



MASS COMMUNICATION AND JOURNALISM

(Year of Establishment: 2001)

The Department of Mass Communication and Journalism offers an energetic learning environment driven by a passion for Media and Communication Studies. The department is dedicated to the interdisciplinary examination of communication in an increasingly-networked society. It is a universal happening technological advancements yields a social environment that is changing and evolving in a constant way. So, both of our M.A. programmes – i) Mass Communication and Journalism (MCJ) and ii) Communication for Development (C4D) equip the students with the most recent developments in theory and practice. At the same time remaining true to our mission of emphasizing professional excellence along with social commitment.

Over the years the department has evolved as a nodal centre for teaching-learning, training and research in communication studies with national and international collaborations and recognition. This is epitomized in the numerous accolades it is reckoned with. It has been placed at the top position among Indian universities in the Times Higher Education Asia University Ranking 2018 in the Communication & Media Studies category. Moreover, our students are well placed in some of the reputed academic institutions, national & international media houses and government and non-government organizations engaged in the development sector.

The department is committed to exploring ways in which media and communications connect us with the world and how these relationships help shape the societies in which we live. Our faculty, with variety of specializations and wide-ranging experience, not only stimulate the students with intellectual curiosity but also facilitate professional competency that is much demanded in an ever changing communication environment.

Programme offered

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

Eligibility Criteria

1. Ph.D. - Master's degree in Mass Communication and Journalism/ Communication/Public relations/Journalism/media studies/ Electronic media with a minimum aggregate of 55%. For ST/SC the minimum aggregate of 50%.

2. MA MCJ/MA C4D - Bachelor's degree with minimum 45% in honours and 50% without honours in any stream from a recognised university. For ST/SC 5% relaxation as per government rules.

Selection process:

Selection of students for both MA MCJ and MA C4D programmes shall be done on the basis of the same entrance exam.

1. Ph. D. – TUEE score (70 %) and Personal Interaction (30 %). Only those candidates with JRF are exempted from appearing in TUEE, but PI is compulsory. Additional scores will be given to candidates with NET/JRF.
2. M.A. in Mass Communication and Journalism (MCJ) - TUEE score and Personal Interview / viva voce. (70 % weightage from TUEE and 30 % from PI)
3. M.A. in Communication for Development (C4D) – TUEE score and Personal Interview / viva voce. (70 % weightage from TUEE and 30 % from PI)

Faculty and Areas of Interest

Professor

Abhijit Bora*, Ph.D. (GU)-HoD

Print Journalism, Community Radio, Specialized Reporting, Science Communication, Media Literacy

Joya Chakraborty*, Ph.D. (UoH)

ICT for Development, Communication for Social Change, Gender and Media, Alternative and Community Media

Assistant Professor

Anjuman Borah, Ph.D. (TU)

Development Communication, Television and Traditional Media

Perosh Jimmy Daimari, Ph.D. (TU)

Television Production, Photography, Visual Communications, Film Studies

Kapou Malakar, Ph.D. (TU)

New Media for Development, Multimedia Journalism, Political Communication, Online Journalism, Media Studies,

Manoj Deori *, Ph.D. (BU)

Online Journalism, Multimedia Productions, Media and Disaster

Management

Junali Deka*, Ph.D. (AUS)

Cultural Studies, Visual Communication, New Media and Society

*Recognized Ph.D. Supervisor

ACRONYMS

GU- Gauhati University; **UoH**-University of Hyderabad, Telangana **JMI**- Jamia Millia Islamia, New Delhi; **TU**-Tezpur University, **BU**- Berhampur University, Odisha; **AUS**- 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 all in broadcast quality. Students get hands-on experience in multi-camera production in the well-equipped studios. 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 2022-23: **6**
- Number of ongoing research projects: **2**
- Number of current Ph.D. scholars: **14**

Selected Publications

- Hazarika, M., and Chakraborty J. (June 2023). 'Reaching Child Audience through Folktale-based Assamese VCD Films: A Textual Analysis'. Global Media Journal-Indian Edition. Volume 14 (1). ISSN: 2249-5835
- Chattapadhyay, R., and Chakraborty J. (June 2023) 'Rethinking Folk Media in the Digital Era: A Study on Bhaona Performances of Assam, India'. Global Media Journal-Indian Edition. Volume 14 (1). ISSN: 2249-5835
- Bora, A. (April-June, 2022).Unity in Diversity in Indian Media. Sanchar Srijan. Indian Institute of Mass Communication, Delhi. Vol. 2, No. 2

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

Course Code	Course Title	Cr.
First Semester		
MC 572	Communication Theories	3
MC 573	Principles of Journalism	4
MC 574	Advertising	4
MC 575	Broadcast media: Radio	4
MC 576	New Media: Evolution, principles & theory	4
MC 577	Media in Northeast India	3
Second Semester		
MC 578	Writing for Media	4
MC 579	Photojournalism	3
MC 580	Broadcast Media: Television	3
MC 581	PR & Corporate communication	4
MC 582	Portfolio Preparation and Comprehensive Viva-Voce-I	2
Third Semester		
MC 588	Communication research methods	4
MC 589	Communication for social change and development	3
MC 590	Media law and ethics	3
MC 591	Internship	4
Fourth Semester		
MC 599	Understanding Cinema	3
MC 600	Science Communication	4
MC 601	Political and International Communication	3
MC 602	Communication research project	4

MC 603	Portfolio preparation and Comprehensive Viva-Voce-II	2
Elective III	4	
Electives Semester II for MA-MCJ		
MC 583	Media Management	4
MC 584	Graphic design for media	4
MC 585	Health Communication	4
MC 586	Film appreciation and criticism	3
MC 587	Digital media literacy	3
Electives Semester III for MA-MCJ		
MC 592	Media Culture and Society	3
MC 593	Television Program Production	3
MC 594	Folk and Community Media	3
Electives Semester IV for MA-MCJ		
MC 604	New media production	4
MC 605	Documentary production	4
MC 606	Community radio	4

Courses offered in M.A. in Communication for Development

Course Code	Course Title	Cr.
First Semester		
CD416	Theories of Communication and Media	3
CD417	Theories of Communication for Development	3
CD418	Issues in Development	4
CD419	Development Journalism	5
CD420	Introduction to Audio and Video Production	5

Second Semester		
CD 421	Research Monitoring and Evaluation	4
CD 422	Participatory Audio and Video Production	6
CD 423	Human Rights	4
CD 424	Media Message Designing for Development	5
-	CBCS	3
Third Semester		
CD 425	Campaign Planning	5
CD 426	Folk and Community Media	5
CD 427	New Media for Development	4
CD 428	NGO participation and Management	3
CD 414	Internship	4
-	CBCS	3
Fourth Semester		
DC 415	Project *	16

* Students would be attached to different governmental/non-governmental development agencies/International Organization to carry out semester-long communication campaign.

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



SOCIAL WORK

(Year of Establishment: 2014)

The Department of Social Work was started in 2014 with the objective to create a just and equal society that ensures freedom from all forms of oppression and exploitation. It aims to develop human resources for competent and effective professional social work practice, teaching, and research with a diverse range of individuals, groups and communities by using a framework of social justice and human rights. The focus of the Department is on sustainable and participatory development. The department envisages to provide human resources in the fields of social welfare, development, and allied areas through imparting education and training in Professional Social Work. Besides developing critical thinking and the ability to apply theory to field experience, the students develop knowledge, skills, attitudes, and values appropriate to the practices of the social work profession. The courses are designed with an interdisciplinary perspective to enhance the understanding of social problems and development issues..

Programme offered

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

Selection process for MA in Social Work:

Candidates will be selected based on TUEE score and Personal Interview Viva Voce (70% weightage from TUEE and 30% weightage from PI)

Faculty and Areas of Interest

Professor

Chandan Kumar Sharma, Ph.D. (DU)-HoD

Development, Environment, Urbanisation, Migration, Agrarian Studies, Ethnicity, Social Movements, Society and Politics of Northeast India

Assistant Professor

Apurba Saha*, Ph.D. (NIMHANS)

Social Work and Mental Health, Psychosocial Care in Disaster Management, Street Children and Application of Social Work Methods

Rajesh Kalarivayil*, Ph.D. (JNU)

Biomedical Governance, Innovation Studies, Science and Technology in Rural Development

Namami Sharma, Ph.D. (DU)

Environment and Ecology, Tribal Studies, Community development

Prerana Banik, M.Phil. (TISS Mumbai)

Gender and livelihood, Community Organisation & Social Development, Development Administration and Governance.

Samhita Barooh, Ph.D. (TISS Guwahati)

Gender Queer Movements, Social Work Education and Practice, Feminist Research Methodologies, Participatory Communication

*Recognized Ph.D. Supervisor

ACRONYMS

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.

Research Activities

- Number of papers published in the year 2022-23:
- Number of ongoing research projects: 3
- Number of current Ph.D. scholars: 8

Selected Publications

- Saha A & Kerketta E. (2023). Sustainable Development Goals and Small Tea Growers of North-east Assam. Economic & Political Weekly, February 4, 2023 vol. LVIII no 5: 24-27
- Sharma N . (2023). Traditional Knowledge in Modern Classrooms. Learning Curve, August 2023. 33-35

Courses offered in M.A. in Social Work

Course Code	Course Title	Cr.
First Semester		
SW451	Understanding Society	2
SW452	Human Behaviour and Social Environment	2
SW453	Political Economy: State, Society and Social Development	2
SW454	Social Work Profession	3
SW455	Social Work Methods: Working with Individuals and Families	3

SW456	Community Health	2
SW457	Social work with Children and Older adults	2
SW458	Field Work	6
Second Semester		
SW 459	Research Methods (Part-I; Qualitative)	2
SW 460	Social Work Methods: Work with Communities	3
SW 461	Social Work Methods: Working with Groups	3
-	Electives (Choose any one group) Group A or Group B	2+2
-	Open Elective	3
SW 463	Field Work	5+1*
Open Elective Courses Offered by the Department		
SW 462	Engaging with Communities	3
Elective Courses for the Second Semester (Any two) Both the Courses from any of Elective Group A or B		
Elective Group A		
SW421	Urban Community Development	2
SW422	Rural and Tribal Community Development	2
Elective Group B		
SW423	Social Work in Schools	2
SW424	Development Communication for Social Work	2

Third Semester		
SW521	Development Administration	2
SW522	Social Action, Advocacy and Movements	2
SW523	Research Methods (Part II); Quantitative)	2
SW524	Gender issues	2
	Electives (Choose any one group) Group A or Group B	2+2
SW 525	FIELD WORK	5+1*
SW 526	Dissertation	2
-	Open Elective	3
* Credit is for Urban Camp		
Fourth Semester		
SW 527	Human Rights and Social Justice	2
SW528	Social Policy and Planning	2
-	Electives I (Choose any one course)	2
-	Electives II (Choose any one group) Group A or Group B	2+2
SW529	BLOCK FIELD WORK	6
SW530	Dissertation	4
Internship non-credited but mandatory		
Elective Courses for the Third Semester (Any two) Both the Courses from any of Elective Group A or B		
Elective Group A		

SW571	Social Work and Mental Health	2
SW572	Social Work Practice in HIV and Other Infectious Diseases	2
Elective Group B		
SW573	Ecology and Social Work	2
SW574	Social Work and Livelihoods Promotion	2
Elective Courses for the Fourth Semester (Any two) One Course from Elective I and from Elective II: Both the Courses from any of Elective Group A or B		
Elective I		
SW575	Introduction to Dalit Studies	2
SW576	Social Works with Persons with Disabilities	2
Elective II Group A		
SW577	Disaster Management	2
SW577	Peace Education and Conflict Management	2
Elective II Group B		
SW579	Labour Legislation	2
SW580	H.R. Management and CSR	2

*For more information, please 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 Master's programme. Subsequently, it launched a Ph.D. programme in 2008. The department is dedicated towards 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 theoretical approaches and perspectives in the classroom, but also have to conduct fieldwork visits as part of their mandatory research projects. The department also makes an effort to expose the students to the prevailing social realities through outreach programmes, regular film screening, seminars and other activities collaboration with other social organizations. The department was awarded the UGC-SAP (DRS-I) of University Grants Commission in 2016.

Programmes Offered

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

Faculty and Areas of Interest

Professor

Chandan Kumar Sharma*, Ph.D. (DU^A)

Development, Environment, Migration, Agrarian Studies, Identity Politics, Social Movements, Urbanisation

Rabin Deka*, Ph.D. (DU)-HoD

Sociological Theories, Sociology of Movement, Agrarian Sociology

Kedilezo Kikhi*, Ph.D. (NEHU)

Research Methodology, Gender and Society, Sociology of Northeast India, Tribal Studies

Associate Professor

Amiya Kumar Das*, Ph.D. (TU)

Sociology of Development, Sociology of Health and Illness, Sociology of Governance

Assistant Professor

Sumesh, S. S.*, Ph.D. (UK)

Social Stigma and Exclusion, Sociology of Body, Sexuality

Nirmali Goswami*, Ph.D. (IITK)

Sociology of Education, Identity Politics, Multiculturalism

Sarmistha Das*, Ph.D. (TU)

Gender Studies, Sociology of North East India, Land and Livelihood

Subhadeepa Ray*, Ph.D. (DU^A)

Sociology of Science and Sociology of India

A.S. Shimreiwung*, Ph.D. (JNU)

Sociology of Religion, Northeast India Studies, Sociology of Mass Media

Pamidi Hagger*, Ph.D. (GU)

Ritual Studies, Kinship, Sociological Theories

*Recognized Ph.D. Supervisor

ACRONYMS

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

Facilities

- Departmental library with selected books especially on Northeast India.
- A smart classroom with all modern ICT facilities.
- A state-of-the-art seminar hall
- ICT enabled classrooms.
- Dedicated room for research scholars with individual cubicles.

Research Activities

- No. of papers published in the year 22-23: 15
- No. of ongoing research projects: 03
- No. of current Ph.D. scholars: 37

Selected Publications

- Borkataki, D & Sharma, C.K. (2023) Social network, trust, and rural informalities: transfer of tribal land ownership in

protected areas of Assam, Northeast India, Asian Ethnicity, DOI: 10.1080/14631369.2023.2165034

- Dutta, M & Das, A.K. (2022) 'When orange becomes sweeter': understanding climate variability, situated knowledge and development in an Eastern Himalayan region of India, *Third World Quarterly*, DOI: 10.1080/01436597.2022.2140037
- Gogoi N, Sumesh SS. (2023) We Are Just Mazdoors! A Decolonial Ethnographic Account of Health Inequalities, and Inequities Among Tea Garden Laborers in Assam, India. *NEW SOLUTIONS: A Journal of Environmental and Occupational Health Policy*. doi:10.1177/10482911231152445
- Goswami, N & Ahmed, S. (2022) Girls' Education in a Madrasa: Narratives on the Dress, Conduct and Future Aspirations. *The Heritage*, 8(2).
- Kikhi, K., & Hibo, V. (2022). Cartographic Lines, Oral Narratives and Linguistic Contours in Northeast (India) Borders: A Case of Manipur-Nagaland Border Site.
- Journal of the Anthropological Survey of India. <https://doi.org/10.1177/2277436X221132960>
- Sarma, I & Das, S (2022) Urbanisation and its impact on the Peri-Urban Areas: A Study in Guwahati, Assam, *Explorations*. 6(1).

Courses offered in M.A. in Sociology

Course Code	Course Title	Cr.
First Semester		
SC451	Classical Sociological Traditions	4
SC452	Research Methodology	4
SC453	Sociology of Family and Kinship	4
SC454	Sociology of India – I	4
-	CBCT	3
Second Semester		
SC455	Sociology of India – II	4
SC456	Modern Sociological Theories and Perspectives	4
SC457	Economic Sociology	4
SC458	Social Stratification	4
-	Elective – I	3

-	CBCT	3
Third Semester		
SC521	Political Sociology	4
SC522	Sociology of Development	4
SC523	Sociology of Northeast India	4
-	Elective –II	3
-	CBCT	3
Fourth Semester		
SC524	Sociology of Religion	4
SC525	Social Movements in India	4
SC526	Research Project	8
-	Elective –III	3
-	Elective- IV	3
-	CBCT	3
Elective courses offered by the Department		
SC 471	Social Statistics	3
SC 472	Population and Society	3
SC 571	Gender and Society	3
SC 572	Industrial Sociology	3
SC 573	Sociology of Health and Illness	3
SC 574	Environmental Sociology	3
SC 575	Sociology of Mass Media	3
SC 576	Sociology of Governance	3
SC 577	Sociology of Education	3
SC 578	Identity and Violence	3
SC 579	Sociology of Science	3
SC 580	Urban Sociology	3
SC 581	Body, Gender and Sexuality	3

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



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, System Management and Tourism. 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 was awarded 3rd Asia's Best B-school award for its innovation in teaching methodology and rated A+ by Business India, rated "A" by Discovery Education Media. It is also the 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 is presently conducting research on livelihood through tourism under UGC SAP DRS II research grant.

Programmes offered

1. Ph.D. in Business Administration
2. Master of Business Administration (M.B.A.).
(Admission is in the month of March-April every Year; advertised separately)
3. Master in Tourism and Travel Management (M.T.T.M.).
4. Post Graduate Diploma in Human Resource Management (Distance Mode)
5. M.B.A. (Executive) **(Admission is in the month of March-April every Year, advertised separately)**

Apart from these the Department also conducts a short-term certificate course on National Stock Exchange Certified Capital Market Professional (NCCMP) Programme.

The programme of Master in Tourism and Travel Management (M.T.T.M.) is primarily focussed at three primary objectives :

- To impart knowledge and training required for professionals in tourism sector.
- To equip youth for small business development and tourism entrepreneurship.
- To deliver sectoral and interdisciplinary education related to tourism studies.

- Key takeaways of this programme, or value additions expected at end can be summarised as :
- Develop strong foundation of practices followed in industries related to tourism
- Exposure to local destinations and tourism resources
- Integrating basic management functions with field level practices
- Development of strong written, oral and presentation skills
- Development of core competencies for becoming a tourism professional
- Exposure to varied dimensions of the tourism industry

Contents of this programme is delivered through a judicious mixture of class-sessions, seminars, project works, internships, and most importantly through extensive and multiple field visits to Tourist destinations.

A special feature of this program of MTTM is the emphasis on Foreign language, that the students are expected to take up.

Faculty and Areas of Interest

Professor

Mrinmoy Kumar Sarma*, Ph.D. (TU)

*Dean, Academic Affairs
Services Marketing, Tourism Marketing*

Subhrangshu Sekhar Sarkar*, Ph.D. (TU),

*Director(TLC)
Accounting, Taxation, Social Development Issues*

Debabrata Das*, Ph.D. (RGU), (On lien)

Financial Management, Financial Markets and Development Finance

Chandan Goswami*, Ph.D. (TU)

*Dean, SoMS
Marketing and Promotional Strategies, Consumer Behaviour, Tourism*

Papori Baruah*, Ph.D. (TU),

*Chief Proctor
Human Resource Management, Organization Behaviour, Change Management, Rural Development, NGOs*

Associate Professor

Tridib Ranjan Sarma*, Ph.D. (TU)

*Head of Department
Operations Management, Project Management, Tourism*

Anjan Bhuyan*, Ph.D. (TU)

Economics

Arup Roy*, Ph.D. (TU)

Microfinance, Stock Market, Development Finance, Social Entrepreneurship

Assistant Professor

Heera Barpujary*, Ph.D. (TU)

Knowledge Management, Web Technology

Kakali Mahanta*, Ph.D. (DU)

Human Resource Management, Organization Behaviour

Runumi Das*, Ph.D. (GU)

Marketing, Rural Marketing, Human Resource Management

Mridul Dutta*, Ph.D. (GU)

Community Based Tourism, Intellectual Property Rights

Prayash Baruah, M.B.A. (SIU)

Supply Chain Management, Logistics, Transportation

***Recognized Ph.D. Supervisor**

ACRONYMS

TU-Tezpur University; **CDOE**-Centre for Distance and Online Education; **RGU**-Rajiv Gandhi University, Itanagar; **SoMS**-School of Management Sciences; **DU**-Dibrugarh University; **GU**- Gauhati University; **SIU**- Symbiosis International University, Pune;

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 2022-2023:
- No. of ongoing research projects:
- No. of current Ph.D. scholars:

Selected Publications

- Dutta, D. & Sarma, M. K. (2022). Adoption of Digital Innovations: A Special Reference to Routinised Incremental Innovations. Review of

Market Integration, First Online (),1-25. 10.1177/09749292211073636

- Mehdi, M M., & Sarma, T. R. (2022). Systematic Review on Performance and Growth Drivers of SMEs. Global Business and Economics Review (ABDC-C, CABS, Scopus), First Online (),. 10.1504/GBER.2023.10046438
- Bhatia, R & Baruah, P.(2022). Evaluating the Attitude of Employees from the Practice of Exclusive Talent Management: A Study of Hotel Employees in Delhi. South Asian Journal of Human Resource Management , Sage publication, Scopus indexed, (),.
- Singh, V. & Bhuyan, A. (2022). Recovery of Tourism Sector - A Scientometric Analysis. Prayukti Journal of Management Applications, 2 (2),98-112. <http://doi.org/10.52814/PJMA.2022.2204>

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

Course Code	Course Title	Cr.
First Semester		
TM 501	Fundamentals of Tourism	3
TM 502	Destination Geography, History and Heritage	3
TM 503	Fundamentals of Management	3
TM 504	Tourism and Travel Industry	3
TM511/ TM 512	Department Centric Elective -I	3
-	Open Elective- IT Base	3
Second Semester		
TM 541	Finance and Accounting for Tourism	3
TM 542	Marketing in Tourism	3
TM 543	Human Resource Management	3
TM 544	Travel Agency and Tour Operation	3
TM 561 / TM 562	Department Centric Elective -II	3
-	Open Elective- Foreign Language Base	3
Third Semester		
TM 601	Research Methods	3
TM 602	Tourism Entrepreneurship	3

TM 603	Foundation of Information Technology and Computerised Reservation System	3
TM 604	Hospitality Management	3
TM 605	Summer Internship	5
TM 611/ TM 612	Department Centric Elective - III	3
-	Open Elective- Foreign Language Base	3
Fourth Semester		
TM 641	Destination Planning and Management	3
TM 642	Sustainable Tourism	3
TM 643	Legal and Ethical Issues in Tourism	3
TM 661/ TM 663	Department Centric Elective -IV	3
-	Department Centric Elective-V	3
-	Open Elective	3
TM 665	Dissertation based on outdoor activities	3
Department Centric Elective -I		
TM 511	Soft Skill Development	3
TM 512	Leisure Delivery System	3
Department Centric Elective -II		
TM 561	Tour Guiding and Local Handling	3
TM 562	Basic Cargo Rating and Handling	3
Department Centric Elective -III		
TM 611	Tourism in North East India	3
TM 612	Promotional Strategies in Tourism	3
Department Centric Elective -IV and V		
TM 661	Managerial and Financial Decisions for Small Business	3
TM 662	MICE Management	3
TM 663	Tourist Behaviour	3
TM 664	Basic Airfare	3

For students taking admission as a Research Scholar for PhD, following

courses are offered in the basket of core and elective courses. Students are expected to pick up courses at his discretion, as advised by the Research Supervisor.

Core Courses

Code	Course Name
BM 701	Research Methods in Business
BM 714	Managerial Orientation
BM 727	Research Ethics

Elective Courses

Code	Course Name
BM 715	Organisational Behaviour
BM 716	Emerging Trends in Human Resource Development
BM 717	Leading Change
BM 718	Financial Management Decisions
BM 719	Trends in Corporate Accounting
BM 720	Advanced Quantitative Research
BM 721	Advanced Marketing Management
BM 722	Consumer Psychology
BM 723	Service Marketing
BM 724	Entrepreneurship Development: Strategies and Models
BM 713	Livelihood and Microfinance

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



COMMERCE

(Year of Establishment: 2014)

The Department of Commerce was established in the year 2014 under the School of Management Sciences. The department currently offers the Integrated M. Com. and Ph. D Programme. The programme is designed to provide the basis for developing the skills necessary to face the challenges of the dynamic business environment. The Department is preparing to revise the curriculum as per NEP 2020 guidelines focusing more on Multidisciplinary, Value Added and Skill Enhancement Courses.

Programme currently Offered

1. Ph.D.
2. M. Com
3. Integrated M.Com.

Faculty and Areas of Interest

Associate Professor

Santi Gopal Maji*, Ph.D. (UB)-HoD
Finance and Accounting

Assistant Professor

Reshma Tiwari*, Ph.D. (GU)
Accounting and Auditing

Farah Hussain*, Ph.D. (DU)
Econometrics, Mathematical Economics

Manish Kumar*, Ph.D. (DU^A) {On Lien}
Corporate Finance, Accounting

Dhritarata Jyoti Bharadwaz,
M.Phil. (DU) *Accounting and Finance, Micro Finance and Risk Management*

Biswajit Ghose*, Ph.D. (NEHU)
Accounting and Finance.

Prasenjit Roy, Ph.D. (NEHU)
Finance and Banking.

Guest / Visiting Faculty

CS Amitava Banerjee, NFCG, New Delhi
Corporate Governance

Anjan Choudhury, Indian Skills Academy, Guwahati.

Inter-personal Skills

Ananya Sarmah
Banking & Finance

Atanu Hazarika
Econometrics & Mathematical Economics

Akankhya Bhuyan
Finance & Management

***Recognized Ph.D. Supervisor**

ACRONMS

UB: University of Burdwan; **GU:** Gauhati University; **DU:** Dibrugarh University; **DU^A:** University of Delhi; **NEHU**—North Eastern Hill University, Shillong; **NFCG**- National Foundation for Corporate Governance, New Delhi; **HoD**- Head of the Department

Facilities

Smart Classroom, 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. ACE Equity corporate database for conducting research.

Research Activities

- No. of paper published in the year 2022-23: 11
- No. of research projects completed: 01
- No of current Ph.D. scholars: 13

Selected Publications

- Maji, S.G. and Lohia, P. (2022). Environmental, social and governance (ESG) performance and firm performance in India. Society and Business Review (online), <https://doi.org/10.1108/SBR-06-2023-0162>
- Ghose, B. and Maji, S.G. (2022). Internet banking intensity and bank profitability: evidence from emerging Indian economy, Managerial Finance, 48(11), 1607-1626, <https://doi.org/10.1108/MF-09-2021-043>
- Saha, R. and Maji, S.G. (2022). Board human capital diversity and firm performance: evidence from top listed Indian firms, Journal of Indian Business Research, 14(4), 382-402, <https://doi.org/10.1108/JIBR-08-2021-0289>

- Maji, S.G. and Kalita, N. (2022). Climate Change Financial Disclosure and Firm Performance: Empirical Evidence from Indian Energy Sector based on TCFD Recommendations, Society and Business Review, 17(4), 594-612, <https://doi.org/10.1108/SBR-10-2021-0208>
- Maji, S.G. and Goswami, M. (2022). The association between human capital efficiency and credit risk of Indian banks: a change point analysis. International Journal of Learning and Intellectual Capital, 19(3), 194-216, <https://doi.org/10.1504/IJLIC.2021.10039336>.
- Ghose, B., Makan, L. T., & Kabra, K. C. (2022). Impact of carbon productivity on firm performance: Moderating role of industry type and firm size, *Managerial Finance*, Online First. <https://doi.org/10.1108/MF-07-2022-0319>
- Ghose, B., & Kabra, K. C. (2022). Impact of dividend payment on firms' leverage: Moderating role of firm size, *Vision: The Journal of Business Perspectives*, Online First. <https://doi.org/10.1177/09722629221131103>
- Ghose, B., Baruah, D., & Gope, K. (2022). Propensity to Propose and Pay Dividend: Does Firm Characteristics Matter?, *Global Business Review*, Online First. <https://doi.org/10.1177/09721509221110314>
- Tiwari, R.K. & Debnath, J. (2022). Forensic Accounting and Non-Audit Services: Indian Context. *Finance India*, 36 (1), 281-295.
- Tiwari, R.K. & Debnath, J. (2021). Joint Provision of Non-audit Services to Audit Clients: Empirical Evidences from India. *VIKALPA The Journal for Decision Makers*, 46 (3), 153–165. DOI: 10.1177/02560909211041796
- Gogoi, N. & Hussain, F. (2023). Investigating the Environmental Kuznets Curve Hypothesis and Pollution Haven Hypothesis in India: An ARDL Approach. *International Journal of Sustainable Economy (in press)*. DOI: 10.1504/IJSE.2023.10050571

**Courses offered in Integrated M.Com. and M.Com.
*(pre revised)**

Course Code	Course Title	Cr.
First Semester		
IC 107	Business Organization and Environment	4
IC 108	Micro Economics	4

IC 110	English Comprehension Skill	4
IC 111	Business Regulatory Framework-I	4
IC 112	Financial Accounting – I	5
Second Semester		
IC 122	Principles and Practice of Management	4
IC 124	Business Mathematics- I	4
IC 126	Financial Accounting – II	5
IC 127	Macro Economics	4
ES 103	Environmental Studies	4
Third Semester		
IC 201	Business Regulatory Framework-II	3
IC 205	Functional Communicative Skill	3
IC 207	Inter-Personal Skills	3
IC 208	Basic Statistics	5
IC 209	Cost Accounting	4
IC 210	Corporate Accounting- I	4
Fourth Semester		
IC 222	Indirect Taxes	4
IC 224	Banking Laws and Practice	4
IC 225	Corporate Accounting -II	4
IC 227	Fundamentals of Insurance	3
IC 228	Business Mathematics- II	4

	Open Elective	3
Fifth Semester		
IC 301	Company Law	2
IC 304	Income Tax – Law and Practice	4
IC 307	Entrepreneurship	4
IC 308	Business Finance	4
IC 309	Corporate Accounting-III	5
-	Open Elective	3
Sixth Semester		
IC 321 Or IC 341	Computer and Its Application in Accounting and Taxation	4
	Computer and Its Application in Banking and Finance	
IC 327 Or IC 342	Auditing and Assurance	3
	Indian Financial Market and Financial System	
IC 323 or IC 343	Management Accounting	4
	Financial Services	
IC 324 or IC 344	Public Finance	4
	Banking Regulatory Framework	
IC 325 Or IC 347	Tax Planning and Procedures	4
	Capital Market Operations	
IC 326 or IC 346	Dissertation (Accounting, Taxation Area)	3
	Dissertation (Banking, Finance Area)	
Seventh Semester (Integrated M.Com.) / First Semester (M.Com.)		
IC 501	Organizational Theory and Behaviour	4
IC 502	Financial Statement Analysis	4

IC 503	Statistics for Business Decisions	4
IC 504	Corporate Governance and Business Ethics	3
IC 505	International Business	3
Eighth Semester (Integrated M.Com.) /Second Semester (M.Com.)		
IC 521	Human Resource Management	3
IC 522	Marketing Management	3
IC 523	Managerial Economics	4
IC 524	Operations Research	4
IC 525	Methodology for Business Research	4
-	Open Elective	3
Ninth Semester (Integrated M.Com.) /Third Semester (M.Com.)		
	Management Information System	4
IC 605	Project Work	4
IC 608	Strategic Management	4
	Open Elective	3
Group A: Accounting and Taxation		
IC 603	Corporate Financial Reporting	4
IC 604	Business Valuation	3
IC 606	Retail Banking	4
IC 607	Insurance Management	3
Tenth Semester (Integrated M.Com.) /Fourth Semester (M.Com.)		
IC 625	Strategic Financial Management	4

	GROUP 'A': Accounting And Taxation				
IC 622	Strategic Cost & Management Accounting		3		
IC 624	Corporate Tax Management		4		
IC 631	Advanced Auditing		4		
IC 633	Project Planning and Control		4		
	GROUP 'B': Banking and Finance				
IC 626	Security Analysis and Portfolio Management		4		
IC 627	International Finance		3		
IC 634	Marketing of Financial Services		4		
IC 632 or IC 633	Credit and Risk Management or Project Planning and Control		4		

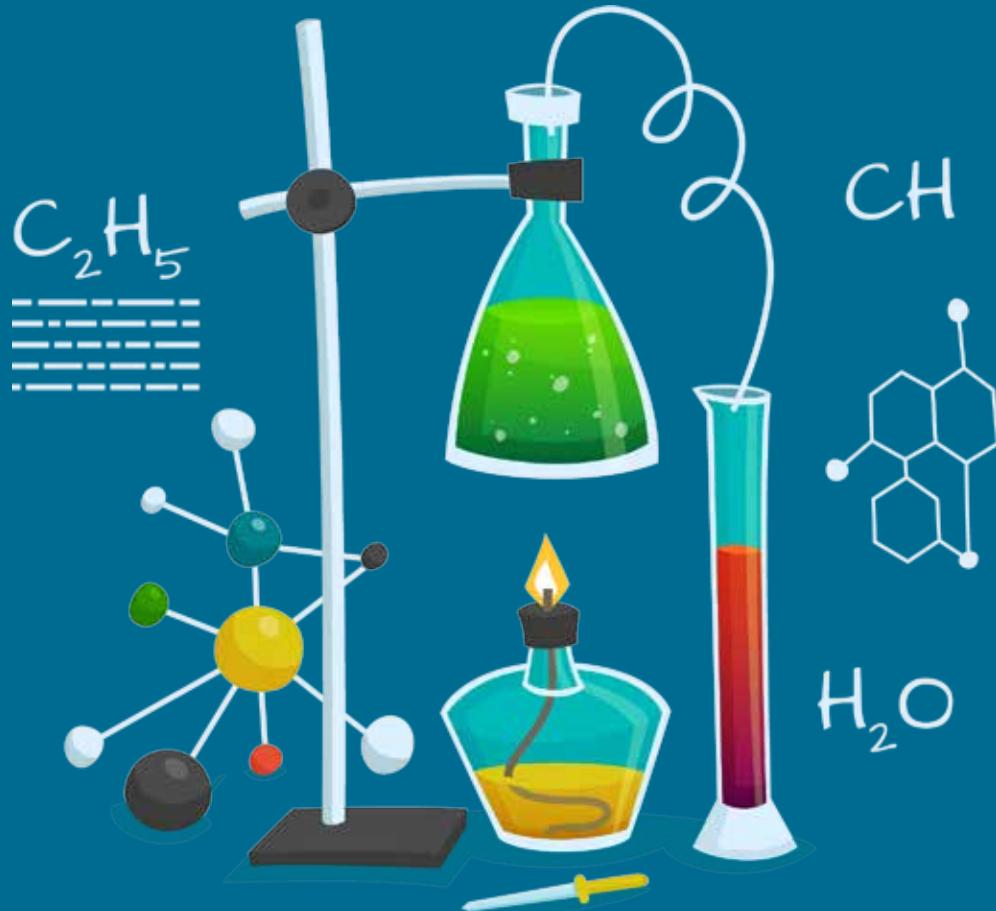
Ph. D in Commerce

Course type	Course title	L	T	P	CH	Cr
Core	RP799 Research and Publication Ethics	2	0	0	2	2
	IC701 Research Methodology in Commerce	3	0	1	5	4
	IC 702 Quantitative Modelling	1	0	1	3	2
	IC 703 Term Paper	1	0	3	7	4
Open Elective	IC704 Trends in Business and Economics Research	4	0	0	4	4

*Subject to revision as per NEP guideline.

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





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. Ph.D.
2. M.Sc. in Chemistry
3. Integrated M.Sc. in Chemistry

Faculty and Areas of Interest

Professor

Nashreen Islam*, Ph.D. (NEHU)

Synthetic Inorganic Chemistry and Biomimetic Chemistry of Transition Metals, Catalysis

Tarun Kumar Maji*, Ph.D. (CU)

Polymer composite, Drug Delivery

Robin Kumar Dutta*, Ph.D. (NEHU)

Drinking water and traditional manuscripts writing and paintings

Niranjan Karak*, Ph.D. (IITKgp)

Synthesis of Advanced Polymers, Polymer Nanocomposites and Nanomaterials

Ramesh Chandra Deka*, Ph.D. (NCL),

Theoretical Chemistry, Catalysis and Drug Design

Ashim Jyoti Thakur*, Ph.D. (NEIST)

Heterocyclic Chemistry, Organic Synthesis and Molecular Container Chemistry

Ashwini Kumar Phukan*, Ph.D. (UoHyd)

Theoretical Inorganic and Organometallic Chemistry

Ruli Borah*, Ph.D. (NEIST)

Ionic liquids and Catalysis, Greener Organic Synthesis

Panchanan Puzari*, Ph.D. (IITG) -HoD
Biosensors, Chemical Sensors & Molecular Dynamics

Associate Professor

Utpal Bora*, Ph.D. (NEIST)
Synthetic Organic Chemistry

Kusum Kumar Bania*, Ph.D. (TU)
Heterogeneous Catalysis, Fuel Cell and Photocatalysis

Assistant Professor

Pankaj Bharali*, Ph.D. (IICT)
Inorganic Materials, Heterogeneous Catalysis, Electrocatalysis

Nayanmoni Gogoi*, Ph.D. (IITB)
Molecular Magnet, Functional Metal Organic Framework

Bipul Sarma*, Ph.D. (UoH)
Pharmaceutical crystallization, Porous Materials

Sajal Kumar Das*, Ph.D. (CDRI & JNU)
Synthetic Organic Chemistry

Sanjeev Pran Mahanta*, Ph.D. (UoHyd)
Physical Chemistry, Molecular Engineering and Molecular Recognition

Mohini Mohan Konai, Ph.D. (JNCASR)
Medicinal Chemistry

*Recognized Ph.D. Supervisor

ACRONYMS

NEHU- North Eastern Hill University ; **CU** -Calcutta University, **IITKgp**- Indian Institute of Technology Kharagpur, **NCL**- National Chemical Laboratory Pune, **NEIST**-North East Institute of Science and Technology Jorhat , **UoH**-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, **JNCASR**- Jawaharlal Nehru Centre for Advance Scientific Research Karnataka, **HoD**-Head of the Department.

Facilities

In addition to the laboratory facilities required for undergraduate and postgraduate level studies 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, ICP-AES, GPC, HPLC, etc.

Research Activities

- No. of papers published in the year 2022-23: 110
- No. of ongoing research projects: 21
- No. of current Ph.D. scholars: 97

Areas of PhD: Catalysis, Water Quality Analysis and Treatment, Computational chemistry, Electrochemical Sensors, Biosensors, Medicinal Chemistry

Selected Publications

- Das A. J., Chouhan R., and Das S. K. (2021). Hexafluoroisopropanol-Mediated Intramolecular Ring-Opening Cyclization of Indolyl-N-Tethered Epoxides: Tether-Length-Controlled Synthesis of 1,7- and 1,2-Fused Indoles. *J. Org. Chem.*, 86, 12, 8274–8285.
- Ghosh B., Fantuzzi F., and Phukan A. K. (2021). Understanding, Modulating, and Leveraging Transannular M→Z Interactions. *Inorg. Chem.*, 60, 12790–12800.
- Baruah M. J., Dutta A., Biswas S., Gogoi G., Hoque N., Bhattacharyya P. K., and Bania K. K. (2022). Fe₂O₃ Nanocatalysts Supported on Zeolite-Y for the Selective Synthesis of C2 Di-Indolyl Indolones and Isatins. *ACS Appl. Nano Mater.*, 5, 1, 1446–1459
- Gullit D., Basumatary, M., Hussain, N., Hazarika, R., Kalita, S., Njanja, E., Puzari, P., (2022) Eggshell nano-CaCO₃ decorated PANi/rGO composite for sensitive determination of ascorbic acid, dopamine, and uric acid in human blood serum and urine. *Mater Today Commun* 33, 104357.

Courses offered in M.Sc. in Chemistry:

Course Code	Course Title	Cr.
First Semester		
CH 401	Principles of Inorganic Chemistry	3
CH 403	Chemical and Statistical Thermodynamics	3

CH 407	Principles of Organic Chemistry	3
CH 409	Quantum Chemistry and Chemical Bonding-I	3
CH 411	Principles and Applications of Spectroscopy	3
CH 405	Laboratory Course in Organic Chemistry	6
Second Semester		
CH 408	Chemistry of Transition Elements	3
CH 410	Chemical Dynamics and Electro chemistry CH 414: Quantum Chemistry and	3
CH 414	Quantum Chemistry and Chemical Bonding-II	3
CH 412	Laboratory Course in Inorganic Chemistry	6
CH 418	Organic Reactions and Mechanism	3
CH 416	History of Chemistry	3
Third Semester		
CH 501	Bio-Organic Chemistry	3
CH 519	Physical Chemistry of Surface and Condensed Systems	3
CH 521	Analytical Methods in Chemistry	3
CH 525	Organometallic Chemistry	3
CH 505	Laboratory Course in Physical Chemistry	6
CH 523	Chemical Technology and Society	3
Fourth Semester		
CH 530	Project Work*	8
CH 506/CH 508/CH 528/ CH 532	Elective I	3
CH 514/ CH516/ CH518/ CH520/ CH534	Elective II	3
CH 522/ CH 524/ CH 526/ CH 536	Elective III	3

Elective I: Any one from the following group		
CH 506	Catalysis	3
CH 508	Methods in Organic Synthesis	3
CH 528	Special Topics in Inorganic Chemistry	3
CH 532	Chemistry of Paints and Surface Coating	3
Elective II: Any one from the following group		
CH 514	Biomolecular Chemistry	3
CH 516	Computational Chemistry and Numerical Analysis	3
CH 518	Organic Solid States Chemistry	3
CH 520	Environmental and Green Chemistry	3
CH 534	Industrial Polymer	3
Elective III: Any one from the following group		
CH 522	Polymer Chemistry	3
CH 524	Heterocyclic Compounds and Medicinal Application	3
CH 526	Bio-inorganic Chemistry	3
CH 536	Chemistry of Materials	3

Courses offered in Integrated MSc.

Syllabus is under revision as per NEP 2020 and UGC Guidelines

Area of Ph.D: Catalysis, water quality analysis & treatment

Programme: Computational Chemistry, Electrochemical sensors, Biosensors, Medicinal Chemistry.

For more information, please 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, which was upgraded as 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, Ecohydrology, Vulnerability and Adaption, Hydro geochemistry, Vermicomposting, Pollution Remediation, Biodiversity Conservation and Atmospheric System Modeling. The department is a recipient of grant under UGC-SAP and DST-FIST.

Programme offered

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

Faculty and Areas of Interest

Professor

Raza Rafiqul Hoque*, Ph.D. (JNU)-HoD

Atmospheric chemistry, Air Pollution Source Apportionment and Transport, Environmental PAHs

Apurba Kumar Das*, Ph.D. (JNU)

Geomorphology & Regional Climate

Ashalata Devi*, Ph.D. (NEHU)

Forest Ecology, Ecosystem Dynamics, & Wildlife and Biodiversity Conservation

K. Marimuthu, Ph.D. (MSUT)

Aquatic biology, aquatic toxicology, aquatic biodiversity conservation

Associate Professor

Nirmali Gogoi*, Ph.D. (DU)

Stress Physiology & Biochemistry

Assistant Professor

Satya Sundar Bhattacharya*, Ph.D. (VB)

Vermiculture, Plant Nutrition and Soil Fertility Management, Soil C Management, Plant Products & Nano Fertilizers

Sumi Handique*, Ph.D. (TU)

Geochemistry of River Basins & Hydrogeochemistry

Amit Prakash*, Ph.D. (JNU)

Air pollution Meteorology, Noise Pollution Monitoring and Modelling, Environmental System Modelling & Urban Climate

Nayanmoni Gogoi*, Ph.D. (IITG)

Ecohydrology, Ecosystem Functions, Nanotechnology in Environmental Research

Santa Kalita*, Ph.D. (GU)

Entomology & Environmental Physiology

Pratibha Deka*, Ph.D. (TU)

Environmental Pollution, Air, Water & Soil; Human Environment Interactions

***Recognized Ph.D. Supervisor**

ACRONYMS

JNU-Jawaharlal Nehru University, **NEHU** -North Eastern Hill University;

MUST-Manonmaniam Sundaranar University Tamilnadu, **DU**-Dibrugarh University; **VB**-Visva Bharati Santiniketan; **TU**- Tezpur University; **IITG**- Indian Institute of Technology, Guwahati; **GU**- Gauhati University; **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 a GIS laboratory and Plant experimental site/shed.

Research Activities

- No. of papers published in the year 2022-2023: 39
- No. of ongoing research projects: 09
- No of current Ph.D. scholars: 56

Selected Publications

- Paul, S., Goswami, L., Pegu, R., Chatterjee, S. K., & Bhattacharya, S. S. (2022). Epigenetic regulations enhance adaptability and

valorization efficiency in Eisenia fetida and Eudrilus eugeniae during vermicomposting of textile sludge: Insights on repair mechanisms of metal-induced genetic damage and oxidative stress. *Bioresource Technology*, 345, 126493.

- Sarania, B., Kumar, A., Sarma, K., Brahma, B. S., Basumatary, H., & Devi, A. (2021). A comparative assessment of external morphological traits between Macaca munzala, Tawang and Macaca assamensis, Goalpara population in Northeast India. *Primates*, 62(2), 343-360.
- Mondal, S. C., Gogoi, N., Nath, D., & Gayan, A. (2022). Soil amendments for improving grain quality of grass pea (*Lathyrus sativus* L.) under drought. *JSFA Reports*, 2(1), 27-36.
- Paul, B., Bhattacharya, S. S., & Gogoi, N. (2021). Primacy of ecological engineering tools for combating eutrophication: An ecohydrological assessment pathway. *Science of The Total Environment*, 762, 143171.
- Paul, B., Mishra, M. K., & Das, A. K. (2022). Spatial heterogeneity and estimation of PM10 concentration over Brahmaputra Valley using geographic weighted regression model assimilating surface, MODIS, and ERA-interim reanalysis data. *Air Quality, Atmosphere & Health*, 1-11.

Courses offered in M.Sc. in Environmental Science

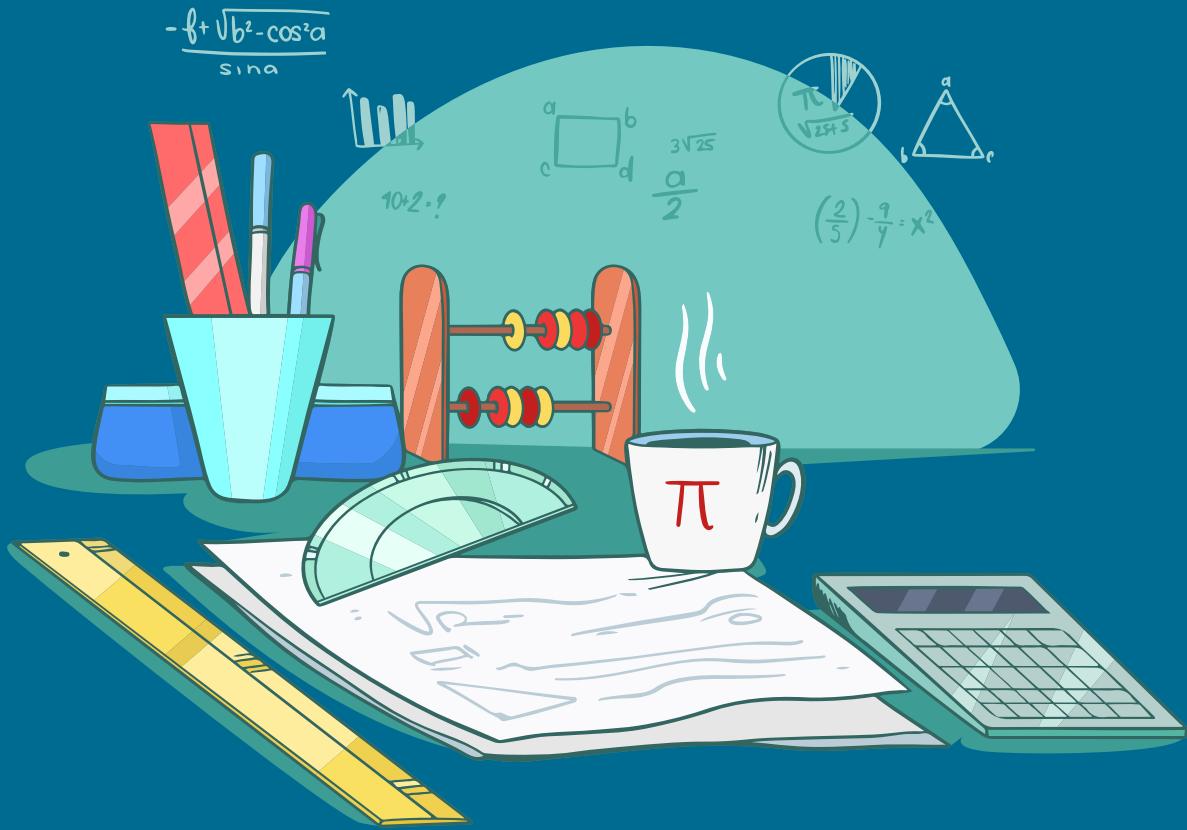
Course Code	Course Title	Cr.
First Semester		
ES551	Fundamentals of Environmental Science	2
ES552	Statistical Methods and Environmental Application	3
ES553	Ecology and Ecosystem Dynamics	3
ES554	Earth Processes and Natural Hazards	3
ES555	Environmental Chemistry and Toxicology	3
ES559	Environmental Physics	3
Second Semester		
ES556	Solid Waste Management and Technology	3
ES557	Climatology and Meteorology	2

ES558	Environmental Biology	3
ES573	Environmental Extension and Field Survey	1
ES560	GIS-Remote Sensing and application	2
ES572	Natural Resource and Biodiversity Conservation	3
Discipline Centric Elective (one out of the courses below: -)		
ES570	Environmental Laws and Policies	2
ES548	Environmental Economics	2
Third Semester		
ES562	Analytical Methods	3
ES564	Agriculture and Environmental Sustainability	2
ES565	Environmental Pollution and Management	3
ES566	Soil Science	3
ES567	Environmental Plant Physiology and Biochemistry	3
ES568	Hydrogeochemical Processes	2
ES543	Environmental Economics and Management	1
	*Open elective (one course)	3
	Departmental Elective (one course of 2 credit to be chooses from offered courses)	2
Fourth Semester		
ES563	Environmental Impact Assessment	2
ES579	Energy and Environment	2
ES550	Project	10
Discipline Centric Elective (one out of the courses below: -)		
ES546	Environmental Biotechnology	2

ES571	Climate Change and Its Impact	2
<p>*Students are to choose a total of 06 Credits of Open Elective courses offered by other departments, preferably to be finished within 3rd semester.</p>		
Discipline Centric Elective Courses		
ES545	Human Population, Social issues and the Environment	2
ES546	Environmental Biotechnology	2
ES547	Agro-Forestry and Forest Management	2
ES548	Environmental Economics	2
ES574	Laboratory Safety	2
ES570	Environmental Laws and Policies	2
ES575	Atmospheric Chemistry	2
Open Elective Courses		
ES 541	Contemporary Environmental Issues	3
ES 542	Laboratory Guidance and Safety	3
ES 543	Environmental Economics and Management	3
ES 544	Introductory Air Pollution	3
ES 577	Indoor Air Pollution and Human Health	3
ES 578	Environmental Pollution	3
ES576	Environmental System Analysis	3
<p>*Open elective (one course) from other department by each student</p>		

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





MATHEMATICAL SCIENCE

(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. It is one of the three oldest departments with which Tezpur University started its journey. So far 26 batches of students have successfully completed their M.Sc. in Mathematics, 9 batches of students have successfully completed their Integrated M.Sc. in Mathematics and 3 batches of students have successfully completed their Integrated B.Sc. B.Ed. (Major 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, Ring Theory), Computational Fluid Dynamics, Probability Distributions, Coding Theory, Fractional Differential Equations etc. The Department has been supported by the UGC-SAP and DST-FIST grant.

Programmes offered

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

Faculty and Areas of Interest

Professor

Nayandeep Deka Baruah*, Ph.D. (TU)

Number Theory, Ramanujan's Mathematics

Debajit Hazarika*, Ph.D. (JMI) Dean, School of Sciences

General Topology, Fuzzy Sets and Applications

Munmun Hazarika*, Ph.D. (TU)

Functional Analysis, Operator Theory

Milan Nath*, Ph.D. (IITG)-HoD

Ordinary Graph Spectra, Inverse Eigen Value Problem

Santanu Dutta*, Ph.D. (TU)

Statistics (Non-parametric)

Dhiren Kumar Basnet*, Ph.D. (DU)

Algebra

Shuvam Sen*, Ph.D. (IITG)

Computational Fluid Dynamics

Associate Professor

Bhim Prasad Sarmah, Ph.D. (GU)

High Energy Astrophysics, Relativity

Pankaj Kumar Das*, Ph.D. (DU^A)

Coding Theory

Assistant Professor

Bipul Kumar Sarmah*, Ph.D. (TU)

Theory of Partition, Ramanujan's Mathematics

Rajat Kanti Nath*, Ph.D. (NEHU)

Theory of Finite Groups

Debajit Kalita*, Ph.D. (IITG)

Algebraic Graph Theory

Deepjyoti Goswami*, Ph.D. (IITB)

Finite Element Method

Jayanta Borah*, Ph.D. (IITG)

Abstract Fractional Differential Equations

Biswajit Das, Ph.D. (IITG)

Numerical Linear Algebra, Matrix Analysis

* Recognized Ph.D. Supervisors

ACRONYMS:

TU-Tezpur University, **JMI**-Jamia Millia Islamia New Delhi, **IITG**-Indian Institute of Technology Guwahati, **GU**- Gauhati University, **DU**- Dibrugarh University, **NEHU**- North Eastern Hill University Shillong, **IITB**-Indian Institute of Technology Bombay, **DU^A**-Delhi University, **HoD**-Head of the Department

Facilities

The department has a computer laboratory established with financial assistance from the DST and UGC. Diverse software relating to mathematics and computing 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 2022-23: 33
- No. of ongoing research projects: 02
- No of current Ph.D. scholars: 33

Selected Publications

- N.D. Baruah and H. Das, Matching coefficients in the series expansions of certain q-products and their reciprocals, *The Ramanujan Journal*, 2022. DOI: <https://doi.org/10.1007/s11139-021-00534-4>.
- H. Hazarika, D. K. Basnet and S. D. Cohen, The existence of primitive normal elements of quadratic forms over finite fields, *Journal of Algebra and its Applications*, DOI:2022. <https://doi.org/10.1142/S021949822500682>
- D. Kalita and K. Sarma, On the inverse of unicyclic 3-coloured digraphs, *Linear and Multilinear Algebra*, 2021. DOI: <https://doi.org/10.1080/03081087.2021.1948956>
- D. Deka and S. Sen, A new transformation free generalized(5,5)HOC discretization of transient Navier-Stokes/Boussinesq equations on nonuniform grids, *International Journal of Heat and Mass Transfer*, 2021. DOI: <https://doi.org/10.1016/j.ijheatmasstransfer.2020.120821>
- A. Bose and S. Dutta, Kernel based estimation of the distribution function for length biased data, *Metrika*,2023. DOI: [10.1007/s00184-021-00824](https://doi.org/10.1007/s00184-021-00824)

Courses offered in Integrated B.Sc. B.Ed. (Major in Mathematics) *

Course Code	Course Title	Cr.
First Semester		
PD 101	Physics-I	3
CD 101	Chemistry-I	3
CD 107	Chemistry-Lab	3
ED 105	Basics in Computer Applications	3
ED 106	Education: An Evolutionary Perspective	3

MD 103	Foundation of Mathematics	3
MD 105	Real Analysis-I	3
ED 104	Communicative English	3
Second Semester		
PD 102	Physics-II	3
PD 197	Physics-Lab	3
CD 102	Chemistry-II	3
ED 107	Education and Development	3
MD 104	Real Analysis-II	3
MD 106	Group Theory	3
NS 102	National Service Scheme	2
ES 103	Environmental Studies	4
Third Semester		
MD 221	Introductory Statistics & Probability	3
MD 223	Calculus-I	3
PD 201	Physics-III	3
CD 201	Chemistry-III	3
ED 205	Environmental Education	3
ED 202	Learner and Learning	3
DM 301	Fundamentals of Disaster Management	3
Fourth Semester		
MD 218	Introductory ODE & PDE	4
MD 220	Linear Algebra-I	4
MD 222	Co-ordinate Geometry	4
MD 224	Numerical Methods and Boolean Algebra	4
ED 203	Contemporary Issues in Education	3

ED 204	Assessment and Evaluation	3
Fifth Semester		
MD 311	Calculus-II	4
MD 313	Programming Algorithm and Mathematical Software	4
MD 315	Statics and Dynamics	4
MD 317	Elementary Complex Analysis	4
ED 301	Teaching Approaches and Strategies	3
ED 302	Classroom Organization Management and Management	3
Sixth Semester		
MD 318	Introductory Topology	4
MD 314	Elementary Number Theory	4
MD 316	Introduction to Optimization	4
MD322	Seminar	3
ED 308	Pedagogy A: Physical Science-I	3
ED 307	Pedagogy B: Mathematics I	3
ED 303	School Education in North East India	2
Seventh Semester		
MD 425	Combinatorics	4
MD 414	Computer Programming+	4
MD 421	Computer Lab	2
ED 408	Pedagogy A: Physical Science-II	3
ED 407	Pedagogy B: Mathematics II	3
ED 404	Initial School Experience/ School/Internship-I	4
-	Open Elective I #	3
Eighth Semester		

MD 422	Elementary Coding and Information Theory	4
ED 405	School Internship	16

Courses offered in Integrated M.Sc. in Mathematics*

Course Code	Course Title	Cr.
First Semester		
PI 101	Physics-I	3
CI 101	Chemistry-I	3
CI 107	Chemistry-Lab	3
BI 101	Biology-I	3
MI 103	Foundation of Mathematics	3
MI 105	Real Analysis-I	3
EG 101	Communicative English	3
Second Semester		
PI 102	Physics-II	3
PI 197	Physics-Lab	3
CI 102	Chemistry-II	3
BI 107	Biology-Lab	3
MI 104	Real Analysis-II	3
MI 106	Group Theory	3
ES 103	Environmental Studies	4
Third Semester		
MI 221	Introductory Statistics & Probability	3
MI 223	Calculus-I	4
MI 225	Combinatorics	4
PI 201	Physics-III	3
CI 201	Chemistry-III	3

CS 535	Introduction to Scientific computing	3
NS 102	National Service Scheme	2
Fourth Semester		
MI 218	Introductory ODE & PDE	4
MI 220	Linear Algebra-I	4
MI 222	Co-ordinate Geometry	4
MI 224	Numerical Methods and Boolean Algebra	4
MI 226	Introductory Topology	4
DM 301	Fundamentals of Disaster Management	3
Fifth Semester		
MI 311	Calculus-II	4
MI 313	Programming, Algorithm and Mathematical Software	4
MI 315	Statics and Dynamics	4
MI 317	Elementary Complex Analysis	4
MI 319	Graph Theory	4
MS 554	Commutative Algebra	4
MS 558	General Theory of Relativity	4
MS 561	Stochastic processes-I	4
Sixth Semester		
MI 312	Ring Theory	3
MI 314	Elementary Number Theory	4
MI 316	Introduction to Optimization	4
MI 318	Elementary Integral Transforms and Special Functions	4
MI 322	Seminar	3
MI 320	Elementary Coding and Information Theory	4

Seventh Semester		
MI 412	Abstract Algebra	4
MI 417	Linear Algebra-II	4
MI 413	Real analysis-III	4
MI 414	Computer Programming	4
MI 415	Lebesgue Measure and Integration	4
MI 421	Computer Lab	1
Eighth Semester		
MI 408	Complex analysis	4
MI 418	Theory of Ordinary Differential Equations	4
MI 419	Topology	4
MI 416	Numerical Analysis	4
MI 424	Computer lab	1
-	Open elective	3
Ninth Semester		
MI 507	Partial Differential Equations	4
MI 510	Functional Analysis	4
-	DSE-I	4
-	Open Elective II#	3
MI 517	Project	4
Tenth Semester		
MI 599	Probability Theory	4
MI 508	Mathematical Methods	4
MI 509	Classical Mechanics	4
-	DSE-II	4
-	DSE-III	4

* Subject to revision.

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 courses

MI 538	Theory of Partial Differential Equation	4
MI 539	Advanced Numerical Analysis	4
MI 541	Fluid Mechanics	4
MI 543	Relativity	4
MI 552	Operator Theory-I	4
MI 554	Commutative Algebra	4
MI 558	General Theory of Relativity	4
MI 561	Stochastic processes-I	4
MI 565	Fuzzy Sets and Applications-I	4
MI 566	Fourier Analysis	4
MI 567	Continuum Mechanics	4
MI 568	Theory of Distribution and Sobolev Spaces	4
MI 595	Numerical Solutions of ODE	4
MI 569	Coding Theory-I	4
MI 570	Coding Theory-II	4
MI 572	Operator Theory -II	4
MI 573	Analytic Number Theory	4
MI 574	Galois Theory	4
MI 581	Stochastic Process - II	4
MI 585	Fuzzy Sets and Applications -II	4
MI 588	Applied Matrix Theory	4

MI 591	Computational Fluid Dynamics	4
MI 594	Advanced Topology-I	4
MI 596	Advanced Topology-II	4
MI 547	Numerical Linear Algebra	4

Courses offered in M. Sc. in Mathematics

Course Code	Course Title	Cr.
First Semester		
MS 401	Abstract Algebra	4
MS 403	Linear Algebra	4
MS 405	Real Analysis	4
MS 411	Computer Programming+	4
MS 425	Lebesgue Measure and Integration	4
MS 421	Computer Lab	1
Second Semester		
MS 406	Complex Analysis	4
MS 414	Theory of Ordinary Differential Equations	4
MS 408	Topology	4
MS 416	Numerical Analysis+	4
MS 424	Computer Lab	1
-	Open Elective-I#	3
Third Semester		
MS 507	Partial Differential Equations	4
MS 510	Functional Analysis	4
-	DSE-I	4
-	Open Elective II#	3

MS 517	Project	4
Fourth Semester		
MS 599	Probability Theory	4
MS 508	Mathematical Methods	4
MS 501	Classical mechanics	4
-	DSE -II	4
-	DSE-III	4
# 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 courses		
MS 538	Theory of Partial Differential Equation	4
MS 539	Advanced Numerical Analysis	4
MS 541	Fluid Mechanics	4
MS 543	Relativity	4
MS 552	Operator Theory-I	4
MS 554	Commutative Algebra	4
MS 558	General Theory of Relativity	4
MS 561	Stochastic processes-I	4
MS 565	Fuzzy Sets and Applications-I	4
MS 566	Fourier Analysis	4
MS 567	Continuum Mechanics	4
MS 568	Theory of Distribution and Sobolev Spaces	4
MS 595	Numerical Solutions of ODE	4
MS 569	Coding Theory-I	4

MS 570	Coding Theory-II	4
MS 572	Operator Theory -II	4
MS 573	Analytic Number Theory	4
MS 574	Galois Theory	4
MS 581	Stochastic Process - II	4
MS 585	Fuzzy Sets and Applications -II	4
MS 588	Applied Matrix Theory	4
MS 591	Computational Fluid Dynamics	4
MS 594	Advanced Topology-I	4
MS 596	Advanced Topology-II	4
MS 547	Numerical Linear Algebra	4
MS 549	Graph Theory	4

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



MOLECULAR BIOLOGY AND BIOTECHNOLOGY

(Year of Establishment: 1997)

The department of Molecular Biology and Biotechnology (MBBT) was established in the year 1997 with the objectives to create quality human resource and to engage in quality research work in the challenging and frontier areas of modern biotechnology. The department has strong collaboration with various industries and academic institutes of the country and abroad. Department of MBBT is supported by UGC-SAP (DRS-II) and DST-FIST program. The department has ongoing research activities in diverse areas of modern biotechnology and molecular biology. Some of the key research areas are - microbial and petroleum biotechnology, plant biotechnology, snake venom biochemistry, enzymology, protein chemistry, immunology, immune genetics and evolutionary genetics, computational biology, system biology, nano-biotechnology, plant microbe interactions, cancer genetics and chemoprevention, and molecular virology. ONGC-Center for Petroleum Biotechnology (ONGC-CPBT), a industry-academia collaborative research centre is presently housed in the department.

Programmes offered

1. Ph. D.
2. M. Sc. in Molecular Biology and Biotechnology
(Supported by the department of Biotechnology of the Ministry of Science and Technology, Government of India)
3. Integrated M. Sc. in Life Sciences

Faculty and Areas of Interest

Professor

Bolin Kumar Konwar*, Ph.D. (IC)

Petroleum Biotechnology, Plant Biotechnology, Genetic Engineering and Metagenomics, Bioenergy

Ashis Kumar Mukherjee*, Ph.D. (BU), D.Sc. (CU) (On deputation)

Snake Venom Biochemistry and Microbial Biotechnology

Anand Ramteke*, Ph.D. (JNU) (Study leave)

Cancer Genetics and Chemoprevention

Suvendra Kumar Ray*, Ph. D. (CCMB-JNU)

Molecular Plant-Microbe Interactions, Molecular Evolution, Food and Activities on Human Health

Manabendra Mandal*, Ph.D. (IGIB), DSW

Probiotics and Nutrition, Microbial Biofilm, Bioenergy

Robin Doley*, Ph.D. (TU)-HoD
Snake Venomics and Antivenomics

Associate Professor

Rupak Mukhopadhyay*, Ph.D. (IACS-JU)
Inflammation, Cancer Biology

Thiyam Ramsing Singh*, Ph.D. (CDRI)
Genomic Instability and Cancer Biology

Assistant Professor

Surya Prakash G. Ponnam*, Ph.D. (LVPEI-UoH)
Molecular Genetics and Synthetic biology

Anupam Nath Jha*, Ph.D. (IISc)
Computational Biophysics, Bioinformatics, Systems Biology

Nima D. Namsa*, Ph.D. (IISc)
Molecular Biology of Rotavirus

Suman Dasgupta*, Ph.D. (VB)
Insulin Resistance and Type 2 Diabetes

Mattaparthi V. Satish Kumar*, Ph.D. (IITG)
Computational Biotechnology and Bioinformatics

Jyoti Prasad Saikia*, Ph. D (TU)
Plant Biotechnology

Aditya Kumar*, Ph.D. (IISc)
Computational Biophysics, Genomics and Bioinformatics

Pankaj Barah*, Ph.D. (NTNU)
Genomics, System Biology, Big Data in Biology, Molecular Evolution

*** Recognized Ph.D. Supervisor**

ACRONYMS

IC-Imperial College London, **DU**- Dibrugarh University, **BU**-Burdwan University West Bengal, **CU**-Calcutta University, **CCMB**- Centre for Cellular and Molecular Biology Hyderabad, **CDRI**-Central Drug Research Institute Uttar Pradesh; **IGIB**-Institute of Genomics and Integrated Biology Delhi, **DSW**- Dean Students Welfare ; **JNU**-Jawaharlal Nehru University New Delhi, **TU**-Tezpur University, **IITKgp**-Indian Institute of Technology

Kharagpur, **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**- Visva Bharati Santiniketan Kolkata, **IITG**-Indian Institute of Technology Guwahati, **NTNU**- 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, FACs Bioanalyzer, Spectrofluorimeter, Immunofluorescence Microscope, GC-MS 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 2022-2023: 74
- No. of ongoing research projects: 17
- No of current Ph.D. Scholars: 65

Selected Publications

- Singh, P. K., Singh, J., Medhi, T., & Kumar, A. (2022). Phytochemical Screening, Quantification, FT-IR Analysis, and In Silico Characterization of Potential Bio-active Compounds Identified in HR-LC/MS Analysis of the Polyherbal Formulation from Northeast India. *ACS Omega*, 7(37), 33067–33078. <https://doi.org/10.1021/acsomega.2c03117> [IF=4.1]
- Patowary, P., Bhattacharyya, D. K., & Barah, P. (2022). SNMRS: An advanced measure for Co-expression network analysis. *Computers in Biology and Medicine*, 143, 105222. [IF=6.698].
- Thakur, S., Blotra, A., Vasudevan, K., Malhotra, A., Lalremsanga, HT., Santra, V and **Doley, R.** Proteome Decomplexation of Trimeresurus erythrurus Venom from Mizoram, India. *J. Proteome Res.* 2023, 22, 1, 215–225, 2022 [IF=5.371]
- Rather, M. A., Deori, P. J., Gupta, K., Daimary, N., Deka, D., Qureshi, A., ... & Mandal, M. Ecofriendly phytofabrication of silver nanoparticles using aqueous extract of *Cuphea carthagenensis* and their antioxidant potential and antibacterial activity against clinically

important human pathogens. *Chemosphere*, 300, 134497, 2022 [IF=8.943]

- Banerjee, D., Patra, D., Sinha, A., Roy, S., Pant, R., Sarmah, R., Dutta, R., Bhagabati, S.K., Tikoo, K., Pal, D AND Dasgupta, S. Lipid-induced monokine cyclophilin-A promotes adipose tissue dysfunction implementing insulin resistance and type 2 diabetes in zebrafish and mice models of obesity. *Cellular and Molecular Life Sciences* 79: 282 (2022). [IF= 9.234]

Courses offered in Integrated M.Sc. in Life Science*

Course Code	Course Title	Cr.
First Semester		
LI 101	Biology Major I (Biodiversity, Microbes, Algae, Fungi and Archegoniate)	3
LI 103	Biology Major I Lab	3
PI 101	Physics I	3
CI 101	Chemistry I	3
MI 101	Mathematics I	3
PI 197	Physics I Lab	3
EG 101	Communicative English	3
Non-Biology~		
LI 105	Biology I	3
LI 107	Biology I Lab	3
Second Semester		
LI 102	Biology Major II (Animal Diversity)	3
LI 104	Biology Major II Lab	3
PI 102	Physics II	3
CI 102	Chemistry II	3
MI 102	Mathematics II	3
CI 107	Chemistry I Lab	3

ES 103	Environmental Studies	4
LI 106	Biology II (GE for Non-Bio)	3
LI 107	Biology I Lab (for Chem, Math)	3
Third Semester		
LI 201	Plant Ecology and Taxonomy	3
LI 203	Comparative anatomy of vertebrates	3
LI 205	Plant Anatomy and Embryology	3
LI 207	Biology Major III Lab (Anatomy: Plant and animal)	3
LI 209	Introduction to computing	3
PI 201	Physics III	3
CI 201	Chemistry III	3
NS 201	NSS	2
Fourth Semester		
LI 202	Genetics and Evolutionary Biology	3
LI 204	Microbiology	3
LI 206	Cell Biology-I	3
LI 208	Biochemistry I	3
LI 210	Biology Lab-IV (Biochemistry)	3
LI 212	Biology lab V(Cell Biology)	3
LI 214	Seminar	1
DM 101	Disaster Management	3
Fifth Semester		
LI 301	Plant Physiology	3
LI 303	Animal Physiology	3
LI 305	Basic Bioinformatics	3
LI 307	Molecular Biology	3

LI 309	Biology lab VI (Physiology)	3
LI 311	Biology lab VII (Molecular Biology)	3
LI 313	Public Health and Hygiene	3
Sixth Semester		
LI 302	Immunology I	3
LI 304	Biocomputing and Biostatistics	3
LI 306	Developmental Biology	3
LI 308	Analytical Techniques	4
LI 310	Mini Project	8
Seventh Semester		
LI 401	Biochemistry – II	3
LI 403	Molecular Genetics	3
LI 405	Immunology II	3
LI 407	Biological Database Management System	3
LI 409	Cell Biology II	3
LI 411	Biology Lab VIII (Biochemistry)	3
LI 413	Biology Lab –IX (Immunology)	3
Eighth Semester		
LI 402	Biophysics &Structural Biology	3
LI 404	Genetic Engineering	3
LI 406	Applied Microbiology and Bioprocess Engineering	3
LI 408	Computational Biology	3
LI 410	Cell and Tissue culture	3
LI 412	Biology Lab X (Genetic Engineering)	3
LI 414	Biology Lab XI (Applied Microbiology)	3
Ninth Semester		

LI 501	Genomics and Proteomics	3
LI 503	Bioinformatics Software and Algorithm	3
LI 505	Lab on Advanced programming	2
LI 507	Biosafety and IPR	2
Option I		
LI 509	Plant Biotechnology	3
LI 511	Economic Botany	3
LI 513	Biology Lab XII (Plant Sciences)	4
Option II		
LI 515	Animal Biotechnology	3
LI 517	Economic Zoology	3
LI 519	Biology Lab XII (Animal Science)	4
Tenth Semester		
LI 502	Project – I (Dissertation/Project)	15
Elective (s) for Option I (DSE)		
LI522	Evolutionary Biology	3
LI524	Ethnomedicine and Herbal Technology	3
LI526	Plant metabolism & secondary metabolites	3
LI528	System Biology	3
Elective(s) for Option II (DSE)		
LI530	Wildlife and Animal Behaviour	3
LI532	Fish Biology	3
LI534	Cancer Biology	3
LI536	Pyschoneuro immunology	3
LI538	Insect vector and Diseases	3
LI540	Immunotechnology	3

LI542	Computer aided drug designing	3
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* Subject to revision.

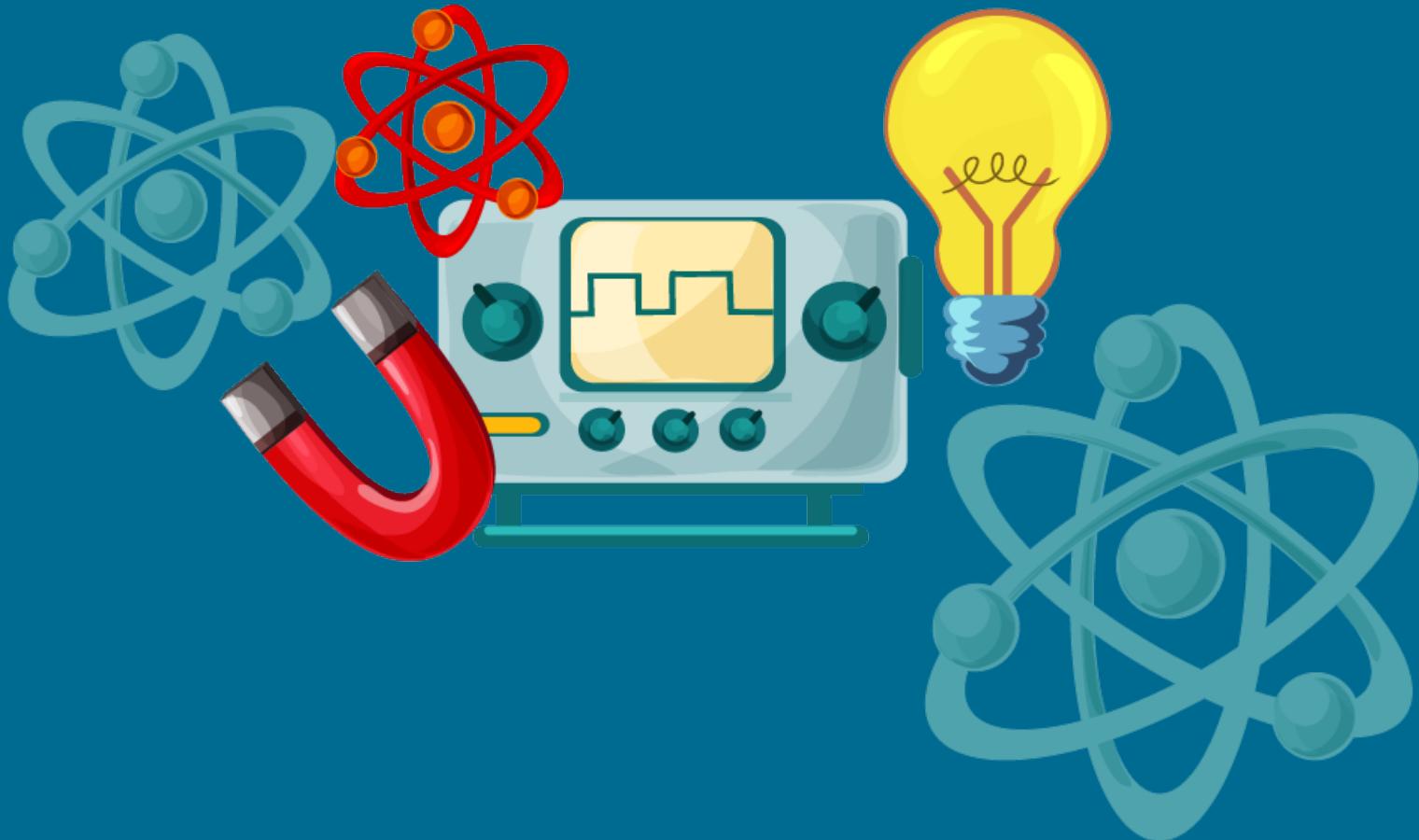
Courses offered in M. Sc. in Molecular Biology and Biotechnology

Course Code	Course Title	Cr.
First Semester		
BT 441	Biochemistry	3
BT 443	Cell Biology	3
BT 478	Microbiology	3
BT 447	Genetics	3
BT 449	Basics of Mathematics and Statistics	2
BT 451	Basics of Chemistry and Physics	2
BT 453	Lab-I Biochemistry and Analytical Techniques	3
BT 455	Lab-II Microbiology	3
Second Semester		
BT 440	Molecular Biology	3
BT 442	Immunology	3
BT 444	Developmental Biology	3
BT 446	Bioinformatics	3
BT 448	Genomics and Proteomics	3
BT 450	Lab-III Molecular Biology	3
BT 452	Lab-IV Immunology	3
BT 454	Biophysical methods and emerging technologies	2
Third Semester		
BT 457	Genetic Engineering	3
BT 459	Molecular Diagnostics	2

BT 461	Bioprocess Engineering and Technology	3
BT 463 BT 465 BT 467 BT 477 BT 479 BT 499	Elective-I Plant Biotechnology Animal Biotechnology Microbial Biotechnology Computational Biology Nanobiotechnology Environmental Biotechnology	3
BT 469	Intellectual Property Rights, Biosafety and Bioethics	2
BT 471	Lab-V Genetic Engineering	3
BT 473	Lab-VI Bioprocess Engineering and Technology	3
BT 475	Critical Analysis of classical papers and scientific communication skills	2
Fourth Semester		
BT 462	Project	20
BT 466	Bioentrepreneurship	2

For more information one can visit departmental website
[www://tezu.ernet.in/dmbbt](http://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, IASST, Guwahati, CAT Indore, VECC Kolkata, SAMEER Mumbai, India based Neutrino observatory, University of Southampton UK, Queen's University Belfast, University of Tokyo Japan, Max Planck Institute Germany, Hyper-Kamiokande, Japan 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. Ph.D. in Physics
2. M. Sc. in Physics
3. Integrated B.Sc. B.Ed. (Major in Physics)
4. Integrated M. Sc. in Physics

Faculty and Areas of Interest

Professor

Jayanta Kumar Sarma,* Ph.D. (GU)
Theoretical High Energy Physics, Particle Physics

Nidhi Saxena Bhattacharyya,* Ph.D. (DU^A)
Microwave Devices, Antennas and EMI Materials

Gazi Ameen Ahmed,* Ph.D.(GU)
Laser Physics, Optoelectronics

Nilakshi Das,* Ph.D. (GU)
Dusty Plasma Physics, Laser-Plasma Interaction

Dambarudhar Mohanta,* Ph.D. (TU)
Condensed Matter Physics, Nanoscience

Pritam Deb,* Ph.D. (JU)
Nanoscience and Nano Technology, Physics of Materials

Pralay Kumar Karmakar,* Ph.D. (GU)
Plasma Physics, Astrophysics, Nonlinear Dynamics

Mrinal Kumar Das,* Ph.D. (GU)-HoD

Theoretical High Energy Physics: Physics Beyond Standard Model, Neutrino Physics, BAU, Dark Matter

Pabitra Nath,* Ph.D. (GU)
Photonics

Associate Professor

Ng K. Francis,* Ph.D. (GU)
Particle Physics Phenomenology and Particle Cosmology

Assistant Professor

Rajib Biswas,* Ph.D. (DU)
Fiber Optic Instrumentation, PCFs, Geophysical Instrumentation

Rupjyoti Gogoi,* Ph.D. (GU)
Astrophysics

Shyamal Kumar Das,* Ph.D. (IISc)
Material Science

Ritupan Sarmah,* Ph.D. (IISc)
Computational Material Science

Moon Moon Devi,* Ph.D. (TIFR)
Experimental High Energy and Astro-particle Physics, Neutrino Physics, UHE Cosmic Rays and Extensive Air Showers, Detector Instrumentation and Data Acquisition

Jugal Lahkar, Ph.D. (GU)
Cosmology & High Energy Physics

Diana Thongjaomayum, Ph.D. (NEHU)
Condensed Matter Physics (Theory)

Inspire Faculty

Sorokhaibam Nilakash Singh, Ph.D. (TIFR)
String Theory, Black Hole Physics

* Recognized Ph.D. Supervisor

ACRONYMS

GU-Gauhati University; **DU^A**-Delhi University; **JU**-Jadavpur University, West Bengal; **TU**-Tezpur University; **DU**-Dibrugarh University; **IISc**-Indian Institute of Science, Bangalore; **TIFR**- Tata Institute of Fundamental Research, Mumbai; **NEHU**-North Eastern Hill University Shillong; **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, FESEM, TRPL, 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

- No. of papers published in the year 2022-2023: 82
- No. of ongoing research projects: 21
- No. of current Ph.D. scholars: 85

Selected Publications

- Borgohain, A., Saha. K., Elmegreen. B., Gogoi. R., Combes.F., & Tandon.S.N., Extended far-ultraviolet emission in distant dwarf galaxies, *Nature*, Volume 607, Issue 7919 , Pages 459-462 (2022).
- Ansari, A., Dey, S., and Mohanta, D. (2022). Significant red-luminescence from citrate-gel and hydrothermally derived nanoscale Eu³⁺: Gd₂O₃ with alkali metal ion (Na⁺, K⁺) co-doping. *Bulletin of Materials Science*, 5:21. DOI:10.1007/s12034-021-02592-2.
- Dutta, B., Sarma, H., Bezbaruah, P., & Das, N. (2022). Tunable rheological rapheme of magnetized complex plasma. *Physics Letters A*, 438: 128110.

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

Course Code	Course Title	Cr.
First Semester		
PD 101	Physics-I	3
PD 103	General Physics-I	3
CD 101	Chemistry-I	3
MD101	Mathematics-I	3
PD 197	Physics Lab-1	3
ED 106	Education: An Evolutionary Perspective	3
ED 104	Communicative English (Language Proficiency)	3
ED 105	Basics in Computer Applications	3
Second Semester		
PD 102	Physics-II	3
PD 104	General Physics-II	3
CD 102	Chemistry-II	3
MD 102	Mathematics-II	3
PD 198	Physics Lab-II	3
CD 107	Chemistry Laboratory	3
ES 103	Environmental Studies	4
ED 102	Education and Development	3
NS 106	National Service Scheme	2
Third Semester		
PD 203	Classical Mechanics	3
PD 301	Mathematical Physics-I	3
CD 201	Chemistry-III	3
ED 201	Environmental Education	3

ED 202	Learner and Learning	3
MD219	Mathematics-III	3
PD 297	Physics Lab-III	4
PD 201	Physics III (for non-major)	3
-	Open Elective-I	3
Fourth Semester		
PD 205	Electromagnetism	3
PD 214	Electronics	3
PD 218	Modern Physics	3
PD 216	Thermodynamics and Statistical Physics	3
ED 203	Contemporary Issues in Education	3
ED 204	Assessment and Evaluation	3
PD 298	Physics Lab-IV	4
Fifth Semester		
PD 303	Physical and Geometrical Optics	3
PD 202	Introductory QM	3
PD 315	Mathematical Physics II	3
PD 309	Analog Electronics and Communications	3
PD 204	Atomic and Nuclear Physics	4
PD 399	Physics Lab-V	3
ED 301	Teaching Approaches and Strategies	3
ED 302	Classroom Organization and Management	3
Sixth Semester		
PD 307	Basic Material Science	3
PD 317	Basic Computational Techniques	3
PD 311	Waves and Acoustics	3

ED 308	Pedagogy A: Physical Science I	3
ED 307 or ED 309	Pedagogy B: Mathematics I or Pedagogy B: Bio Science I	3
ED 303	School Education in NE India	2
PD 300	Physics Lab-VI	4
-	Elective I	3
Seventh Semester		
ED 408	Pedagogy A: Physical Sciences	3
ED 407 or ED 409	Pedagogy B: Mathematics II or Pedagogy B: Bio-Science	3
ED 404	Initial School Experience/School Internship -I	4
PD 308	Laser Physics	4
PD 400	Laboratory-VII	4
-	Open Elective-II	3
Eight Semester		
PD 314	Measurement Physics	3
ED 405	School Internship	15

*Subject to revision.

Courses offered in Integrated M. Sc. in Physics*

Course Code	Course Title	Cr.
First Semester		
PI 101	Physics-I	3
PI 103	General Physics-I	3
CI 101	Chemistry-I	3
MI 101	Mathematics-I	3

BI 101	Biology-I	3
PI 197	Physics Lab -I	3
BI 107	Biology Laboratory	3
EG 110	Communicative English	3

Second Semester

PI 102	Physics-II	3
PI 104	General Physics-II	3
CI 102	Chemistry-II	3
BI 102	Biology-II	3
MI 102	Mathematics-II	3
PI 198	Physics Lab-II	3
CI 105	Chemistry Lab	3
ES 103	Environmental Studies	4

Third Semester

PI 203	Classical Mechanics	3
PI 217	Mathematical Physics-I	3
CI 201	Chemistry III	3
MI 201	Mathematics III	3
PI 297	Physics Lab-III	4
NS 106	NSS	2
CS 535	Introduction to Scientific Computing	3
PI 201	Physics III (for Non-major)	3

Fourth Semester

PI 205	Electromagnetism	3
PI 214	Electronics	4
PI 325	Thermodynamics and Statistical Physics	3

PI 218	Modern Physics	3
PI 298	Physics Lab-IV	4
-	Elective I	3
DM 302	Fundamentals of Disaster Management	3

Fifth Semester

PI 303	Physical and Geometrical Optics	3
PI 202	Introductory QM	3
PI 315	Mathematical Physics II	3
PI 309	Analog Electronics and Communications	3
PI 204	Atomic and Nuclear Physics	3
PI 308	Laser Physics	3
PI 399	Physics Lab-V	4

Sixth Semester

PI 307	Basic Material Science	3
PI 317	Basic Computation Techniques	3
PI 314	Measurement Physics	3
-	Elective II	3
PI 311	Waves and Acoustics	3
-	Open Elective	3
PI 300	Project cum Physics Lab-VI	4

Seventh Semester

PI 403	Electromagnetic Theory I	3
PI 413	Advanced Classical Mechanics	3
PI 414	Quantum Mechanics –I	3
PI 416	Condensed Matter Physics and Material Science	3
PI 499	Physics and Computational Lab	4

PI 405	Semiconductor Devices	3
PI 400	Physics Lab-VII	4
Eighth Semester		
PI 552	Quantum Mechanics-II	3
PI 310	Statistical Physics	3
PI 551	Electromagnetic Theory II	3
PI 417	Advanced Mathematical Physics	3
PI 302	Analog and Digital Electronics	4
PI 450	Seminar	1
PI 498	Physics Lab-VIII	4
Ninth Semester		
PI 559	Project-1	6
PI 402	Nuclear and Particle Physics	3
PI 553	Atomic and Molecular Spectroscopy	3
-	Elective I	3
-	Elective II	3
-	Open Elective	3
Tenth Semester		
PI 500	Project-II	10
-	Elective III	3
-	Elective IV	3
-	Open Elective	3
Elective Courses offered by the Department in Semester IX and X		
PI 501	Quantum Field Theory	3
PI 507	Digital Signal Processing	3
PI 508	Digital Communication Systems	3

PI 510	Advanced Condensed Matter Physics and Material Science	3
PI 516	Microprocessors and Digital Signal Processing Based Systems	3
PI 517	Microwave Systems and Antenna Propagation	3
PI 540	Particle Physics	3
PI 521	Fundamentals of Plasma Physics	3
PI 525	Nonlinear Plasma Physics	3
PI 554	Soft Condensed Matter Physics	3
PI 557	Photonics	3
PI 559	Nanophotonics	3
PI 562	Quantum Effects in Low Dimensional Systems	3
PI 563	Physics of Nano devices	3
PI 564	Introductory Astrophysics	3
PI 565	Elements of GTR and Cosmology	3

*Subject to revision.

Courses offered in MSc. Physics

Course Code	Course Title	Cr.
First Semester		
PH 405	Semiconductor Devices	3
PH 408	Electromagnetic Theory I	3
PH 416	Condensed Matter Physics and Material Science	3
PH 417	Advanced Classical Mechanics	3
PH 418	Quantum Mechanics-I	3
PH 400	Physics and Computational Lab	4
PH 498	Physics Lab-I	4
Second Semester		

PH 411	Statistical Physics	3
PH 412	Analog and Digital Electronics	4
PH 417	Advanced Mathematical Physics	3
PH 551	Electromagnetic Theory II	3
PH 552	Quantum Mechanics-II	3
PH 455	Seminar	2
PH 499	Physics Lab-II	4

Third Semester

PH 500	Project I	6
PH 415	Nuclear and Particle Physics	3
PH 553	Atomic and Molecular Spectroscopy	3
-	Elective I	3
-	Elective II	3
-	Open Elective-I	3

Fourth Semester

PH 599	Project-II	10
-	Elective III	3
-	Elective IV	3
-	Open Elective II	3

Electives Courses offered by the Department in Semester III and Semester IV

PH 519	Quantum Field Theory	3
PH 522	Communication Systems	3
PH 523	Microwave systems and Antenna Propagation	3
PH 524	Digital Signal Processing	3
PH 525	Microprocessors and Digital Signal Processing Based Systems	3

PH 539	Advanced Condensed Matter Physics and Material Science	3
PH 540	Particle Physics	3
PH 545	Fundamentals of Plasma Physics	3
PH 547	Nonlinear Plasma Physics	3
PH 554	Soft Condensed Matter Physics	3
PH 557	Photonics	3
PH 559	Nanophotonics	3
PH 562	Quantum Effects in Low Dimensional Systems	3
PH 563	Physics of Nano devices	3
PH 564	Introductory Astrophysics	3
PH 565	Elements of GTR and Cosmology	3

For more information one can visit departmental website [www://tezu.ernet.in/dphy](http://tezu.ernet.in/dphy)

A detailed portrait of Dr. B.R. Ambedkar, an Indian social reformer, jurist, and the chief architect of the Indian Constitution. He is shown from the chest up, wearing a dark suit, a white shirt, and a black tie. He has dark hair and is wearing round-rimmed glasses. He is seated at a desk, looking slightly to his left with a thoughtful expression. His right hand rests on an open book or document, while his left hand holds a pen, suggesting he is in the middle of writing or reviewing a document.

Dr. Ambedkar Chair

Dr. Ambedkar Chair, Tezpur University was established by Dr. Ambedkar Foundation, Ministry of Social Justice and Empowerment, New Delhi in the year 2016, to serve as core centre for North East India furthering ideas and philosophy of Dr. B.R. Ambedkar and emancipation of the disadvantaged sections. The thrust area of the Chair is to conduct research on issues related to disadvantaged communities in the context of North East India with particular emphasis on their marginalisation, development and participation. The Chair was set up with the objectives of Teaching and research, Building a library, Conducting research projects, Organising public lectures and, Conducting awareness and skill development programmes.

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. Centre is also offering open elective courses on disaster management at UG and PG levels. One Diploma Programme on Environment and Disaster Management is being offered by the centre in association with Department of Environmental Sciences under CDOE of Tezpur University.

Programme offered

Diploma Programme in Environment and Disaster Management under CDOE.

Faculty and Areas of Interest

Assistant Professor & Head (i/c)

Dipak Nath, Ph.D. (GU)

Disaster Risk Assessment and Risk Mitigation Approaches

Acronym

GU-Gauhati University

Selected Publications

- Nath, D. & Nath, R. D. (2023). Scopes and barriers for effective management of biological hazard induced pandemic: Lessons from 1918 Spanish flu and 2020 COVID19. International Journal of Health Sciences, 6(S2), 10840–10850. (<https://doi.org/10.53730/ijhs.v6nS2.7902>).
- Deb Nath, R. & Nath, D. (2018) Status of Tribal Women: A Case Study on Barman Women of Dhanipur Village, Cachar, Assam, Intellection: A biannual interdisciplinary research journal, Vol.VI, No.I (ISSN: 2319-8192).
- Nath, R. D. & Nath, D. (2016) 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.

For more information one can visit centre website [www://tezu.ernet.in/cdm](http://tezu.ernet.in/cdm)

Centre for Distance and Online Education

(Year of Establishment: 2011)

The Centre for Open and Distance Learning (CODL) was established in 2011 and renamed as **Centre for Distance and Online Education (CDOE)** in 2020 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.

Director

Dr. Rajeev K. Doley, Ph.D. (IITG)

Inclusive Development, Child rights and governance, Communication skills

Faculty and Areas of Interest

Assistant Professor

Suchibrata Goswami, Ph.D. (DU)

English (American Literature, Post-Colonial Writing)

Madhusmita Boruah, Ph.D. (TU)

Mass Communication (Advertising and Public Relation)

Guest Faculty

Shofiqul Alam Pathan, MA. (University of Hyderabad)

NET (2017), M. Phil (JNU)

Sociology.

Programme Coordinators

Kapou Malakar*, Ph.D. (TU)

Programme: M.A. in Mass Communication

Amiya Kumar Das*, Ph.D. (TU)

Programme: M.A. Sociology

Esther Daimari, M.A. (GU), Ph.D. (GU), M. Phil. (GU)

Programme: M.A. English

Programme Coordinators(continued)

Runumi Das*, Ph.D. (GU)

Programme: Diploma in Human Resource Management

Dipak Nath, Ph.D. (GU)

Programme: Diploma in Environmental and Disaster Management

Nirmali Gogoi*, Ph.D. (DU)

Programme: Diploma in Environmental and Disaster Management

Mrs. Krishna Moni Bordoloi, PGDCRG, 5 Yrs and 3 Yrs LLB, LLM,

PARALEGAL

Programme: Diploma in Child Rights and Governance

Administrative Officer

Mr. Partha Pratim Kalita, MBA (TU) (Assistant Registrar)

Office Staff

Mrs. Anita Ghosh Roy

Technical Staff

Mr. Kalpadroom Almanyia

ACRONYMS

IITG- Indian Institute of Technology Guwahati, **TU**- Tezpur University, **DU**- Dibrugarh University, **JNU**- Jawaharlal Nehru University New Delhi, **GU**- Gauhati University

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 Distance and Online Education (CDOE) 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 Distance and Online Education separately. The same shall also be put in the official website: http://www.tezu.ernet.in/tu_codl
- Fees: The fees and other charges payable by the candidates shall be decided by the statutory authorities of the University from time to time.
- Learner Support Centres of CDOE Tezpur University:**
- Moridhal College, Moridhal, Assam
 - Barpeta Law College, Barpeta, Assam
 - Jengraimukh College, Majuli, Assam
 - Silapathar Town College, Silapathar, Assam
 - Mazbat College, Udaguri, Assam
 - Rangachahi College, Majuli, Assam
 - Goalpara College, Goalpara, Assam
 - Jorhat Kendriya Mahavidyalaya, Jorhat, Assam
 - Tezpur University, Tezpur, Assam

Degree and Diploma programmes offered by CDOE

Sl. No.	Programme	Eligibility	Department and School	Fees in Rupees (Under revision)	Duration (No. of semesters)	
					Min	Max
1	M.A. in Mass Communication and Journalism	Bachelor's degree in any discipline	Mass Communication and Journalism (School of Humanities and Social Sciences)	16,950/-	4	8
2	M.A. in English	Bachelor's degree in any discipline	English (School of Humanities and Social Sciences)	16,300/-	4	8
3	M.A. in Sociology	Bachelor's degree in any discipline	Sociology (School of Humanities and Social Sciences)	16,300/-	4	8
4	Diploma in Human Resource Management	Bachelor's degree in any discipline	Business Administration (School of Management Sciences)	10,450/-	2	4
5	Diploma in Environmental and Disaster Management	Bachelor's degree in any discipline	Environment Science (School of Sciences) and Business Administration (School of Management Sciences)	11,800/-	2	4
6	Diploma in Child Rights and Governance	Bachelor's degree in any discipline	Centre for Inclusive Development	11,800/-	2	4

All the programmes offered by CDOE are permitted and recognized by University Grants Commission (Distance Education Bureau), New Delhi. For more information one can visit the Centre website at http://www.tezu.ernet.in/tu_codl

Centre for Endangered Languages

(Year of Establishment: 2014)

The University was awarded with Centre for Endangered Languages under the UGC scheme: "Establishment of Centres for Endangered Languages in Central Universities". This Centre is the nodal Centre for the consortium of northeast India comprising of Tezpur University, Rajiv Gandhi University and Sikkim University. The Centre is attached to the Department of Linguistics and Language Technology.

Courses offered

Two CBCS courses during each semester (Academic session):

1. LE223: Language Society and Endangerment
2. LE224: Language Policy, Education and Language Revitalization

Faculty and Areas of Interest

(The faculties associated with the Centre are of the Department of Linguistics and Language Technology)

Professor

Madhumita Barbora *, Ph.D. (TU) -Coordinator
Linguistics (Syntax, Psycholinguistics), Field Linguistics, Documentation

Gautam K. Borah*, Ph.D. (NTNU)-HoD
Linguistics (Syntax: Construction Grammar, Semantics), Cognitive Linguistics, Philosophy of Language, Cognitive Poetics, Literary Theory

Assistant Professor

Arup Kumar Nath*, Ph.D. (JNU)
Language Typology, Morphology, Sociolinguistics, Language Documentation, Field Linguistics

Bipasha Patgiri, Ph.D. (TU)
Phonology, Historical Linguistics, Semantics

Amalesh Gope, Ph.D. (IITG)
Acoustic Phonetics, Experimental Phonology, Computational Linguistics, and Language

Faculties of the Centre

Bobita Sarangthem, Ph.D. (MU)
Phonetics and Phonology, Field Linguistics and Socio- Linguistics

* *Recognized Ph.D. Supervisor*

ACRONYMS

TU- Tezpur University; **NTNU**: Norwegian University of Science and Technology Norway; **JNU**: Jawaharlal Nehru University New Delhi; **IITG**: Indian Institute of Technology Guwahati,; **MU**- Manipur University

Facilities

1. 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; Presonus Audio box i2 Soundcard; PresonusHP4 Head-phone Amplifier; Video Camera full HD recording (MODEL: HTC- MDH2M); Video Camera (MODEL: HC-X1000); Camera (MODEL: COOLPIX P900); Recorder - Olympus LS-100 &Mobile- Samsung
2. The Centre has two laboratories for various purposes
 - Phonetic Lab (With 20 seat capacity)
 - Documentation Lab (Recording and Editing Suite)
3. The Centre has three smart classrooms and a Multipurpose Hall, well equipped for Workshops, Seminars and Conferences etc.
4. The Centre has newly set up an Audio-Video Conference Room and a Archival-Cum Library Room.
5. The Centre has number of books available for use for the Master's and Ph.D. students for references.

Research Activities

- No. of papers published in the year 2022-2023:
- No. of ongoing research projects:
- No. of current Ph.D. scholars:

Selected Publications

Barbora, Madhumita and Gautam K. Borah (eds). 2021. The Syntax of Biate, Hrangkhola, Khelma, Onaeme, Purum, Liangmai and Yimchunger. Lesser Studies Language Series, Vol III. Guwahati: S.S. Graphics. ISBN:978-93 91902-14-8.

Nath, Arup Kumar, Monali Longmailai and Dhanapati Shrougrakpam (eds). 2021. The Morphology of Biate, Hrangkhola, Khelma, Onaeme, Purum, Liangmai and Yimchunger. Lesser Studies Language Series, Vol II. Guwahati: S.S. Graphics. ISBN: 978-93-91902-12-4.

Patgiri, Bipasha, Amalesh Gope and Bobita Sarangthem(eds). 2021. The Phonology of Biate, Hrangkhola, Khelma, Onaeme, Purum, Liangmai and Yimchunger. Lesser Studies Language Series, Vol I. Guwahati: S.S. Graphics. ISBN: 978-93-91902-13-4.

Patgiri, Bipasha. 2021. "Voicing Assimilation as a Universal Phonological Process: A Case Study of Nalbaria Assamese." International Journal of Dravidian Linguistics(IJDL) Vol. 50 No. 2 June 2021. pp 134–164. ISSN 0378–2484.

Gope, Amalesh. 2021. «The Phonetics of Tone and Voice Quality Interactions in Sylheti.» Languages 6, no. 4: 154. <https://doi.org/10.3390/languages6040154>

Mahanta, Shakuntala, Amalesh Gope and Priti Raychoudhury. 2021. «Pitch Range and voice Quality in Dimasa Focus Intonation» Languages 6, no. 4: 185. <https://doi.org/10.3390/languages6040185>

Barbora, M. «The languages of the seven sisters» Preserving linguistic diversity in north-east India» in Endangered Languages, The ACU Review, The Association of Commonwealth Universities Review. Vol-I, Issue-I, pg. 26-29 2019. UK

Outreach activities of the Centre as research work:

The faculty, research associates and field assistants of the Centre are divided into six (7) 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 7 groups. An Awareness Programme for Documentation and Revitalization of the endangered Language was organized by the CFEI staff with the community members at their respective fields.

Outreach activities of the Centre as research work (continued):

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:

Table with areas, language of research

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

Centre's publications

Seven Learner 's Book written on the seven endangered languages are published and handed over to the endangered language community. The books are:

- i. A Learner's Book of the Biate Language
- ii. A Learner's Book of the Khelma Language
- iii. A Learner's Book of the Hrangkhola Language
- iv. A Learner's Book of the Onaeme Language
- v. A Learner's Book of the Purum Language
- vi. A Learner's Book of the Liangmai Language
- vii. A Learner's Book of the Yimchunger Language
- The Phonetics and Phonology of Biate, Khelma, Hrangkhola, Onaeme, Purum, Liangmai and Yimchunger
- The Morphology of Biate, Khelma, Hrangkhola, Onaeme, Purum, Liangmai and Yimchunger

- The Syntax of Biate, Khelma, Hrangkhol, Onaeme, Purum, Liangmai and Yimchunger

Manpower of the Centre as approved by UGC:

The Centre is approved with the following numbers of faculties and staff (academic and administrative):

1. 3 Assistant Professors
2. 4 Research Associates
3. 8 Field Assistants
4. 2 Office staff

For more information, one can visit the centre website

<http://www.tezu.ernet.in/wmcfel/>

Centre for Inclusive Development

(Year of Establishment: 2013)

As enshrined in the Tezpur University Act. 1993, one of the objectives of the University is to educate and train manpower in an equal learning space. In line with the spirit of this objective, the Centre for Inclusive Development was established in 2013. The prime objective of the Centre is to play a catalytic role in uplifting the needy and underprivileged students at the university, particularly, in the academic, intellectual and employability spheres, through education, training & engagement and counselling. In pursuance of this, the Centre proactively makes all out efforts to identify areas requiring intervention and takes appropriate measures for improvement through special remedial programmes such as need-based training, remedial classes and employability enhancing programmes.

The Centre also offers academic programmes with the objective of making meaningful contributions to the society by developing professional human resource in relevant areas. At present, the thrust area of academic programme is Child Rights and Governance. The current programme is designed in consonance with the belief that the university as an institution of higher education must endeavour to protect and strengthen the lives of our future citizens, i.e., the children. The Centre also envisions to engage with the issues pertaining to development of the marginalized section of the society, particularly in the north-east India, in future.

Facilities

The Centre has well-equipped classrooms and a computer laboratory with internet connectivity 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.

Academic Programmes offered

1. P.G. Diploma in Child Rights and Governance in partnership with UNICEF (Conventional Mode; *kept in abeyance since 2023*)
2. P.G. Diploma in Child Rights and Governance (Open & Distance Mode)

Courses offered in P.G. Diploma in Child Rights and Governance (Conventional Mode / Distance Mode)

Course Code	Course Title	Cr		Course Code	Course Title	Cr
Semester I				Second Semester II		
CG401	Understanding Childhood	4		CG406	Social Policies for Children	4
CG402	Child Rights as Human Rights-Part I	4		CG407	Child Rights as Human Rights-Part II	4
CG403	Vulnerabilities of Children in the North East	4		CG408	Governance and Child Rights	4
CG404	Field Work / Observational Field Visit (Not in ODL Mode)	3		CG409	Research in Child Rights	4

CG405	Communication Skills (Eng.) (Not in ODL mode)	4		CG410	Research Project / Dissertation	4
					Open Elective (Optional)	3
Total Credits: Regular Mode - 39; ODL Mode - 32 without OE						

For more information one can visit the Centre's website: <http://www.tezu.ernet.in/cid/>

Dr. Ambedkar Centre of Excellence

The Centre is also taking care of the activities under Dr. Ambedkar Centre of Excellence established by Dr. Ambedkar Foundation, Ministry of Social Justice & Empowerment, Govt. of India, under a Memorandum of Understanding (MoU) with Tezpur University. Currently, 48 students belonging to the Scheduled Caste (SC) category are undergoing a year-long training/coaching programme for the UPSC Civil Services Examination which also encompasses other similar examinations.

Faculty and Areas of Interest

Director

Rajeev K. Doley, Ph.D. (IITG)

English, Sociolinguistics

Visiting Faculty

Subhrangshu Dhar, Ph.D. (VB)

Child Rights, Human Rights

Krishna Moni Bordoloi, LL.M. (DU)

Child Rights, Human Rights, International Law

Acronyms

IITG- Indian Institute of Technology Guwahati, **VB**-Visva Bharatai Santiniketan , **DU**-Dibrugarh University,

Centre For Innovation Incubation and Entrepreneurship (CIIE)

The centre for Innovation Incubation and Entrepreneurship (CIIE) has started with the objective for promoting specialized knowledge in the field of entrepreneurship development, innovation, and creative ideas. In view of the worldwide shortage of jobs (both government and private sectors) leading to unemployment problems and lack of proper utilization of human resources; the CIIE strives to identify talented youth and motivate them to entrepreneurial and innovation works. The centre plans to develop various innovative ideas with the students and local youth.

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

TUNOVATION

There is an active Innovation Club in the University. The Centre for Innovation, Incubation and Entrepreneurship encourage the students in innovation and creative works. There is an Exhibition Hall (TUNOVATION) which displays the innovations developed by the students and faculty of the University. The several innovations in the field of energy saving, food processing etc. can be seen in the display hall.



Centre For Multidisciplinary Research

(Year of Establishment: 2020)

Multidisciplinary has been a unique feature of educational programmes offered by Tezpur University since the beginning. This feature was further strengthened with the introduction of open electives/ CBCS (Choice based credit system). The courses of discipline-specific programmes are designed integrating courses of several other disciplines covering STEM, Humanities, and Social sciences. Similarly, the research carried out as per academic requirements (viz., PhD, PG and UG) also integrates disciplines other than parent disciplines. The majority of the externally funded research projects are also multidisciplinary in nature, with the involvement of more than one Department. The Centres and Chairs of Tezpur University are functioning with multidisciplinary set-up. A major chunk of research publications of Tezpur University has Multidisciplinary authorship. With such a proven background, Tezpur University formally instituted the Centre for Multidisciplinary Research (CMDR) in the year 2020 to widen up multidisciplinary education further. Centre offers courses for its PhD Scholars and also for PG students as Open Elective Course. Indian Knowledge Systems Division of Ministry of Education (MoE) has awarded a Multidisciplinary IKS Centre titled 'Exploring Knowledge on Medieval Assam' to Centre for Multidisciplinary Research (CMDR) in 2023.

Focus areas of research of the centre:

- Climate change, livelihood, natural calamities
- Net zero target: technologies and issues
- Technology disruption: prospect, issues and impact of new technologies (viz., robotics, IoT, big data etc) in the contexts of society, environment and economy
- Sustainable development and developmental disparity
- Indian Knowledge System towards holistic approaches for well being and sustainability
- Mental Health and well-being – innovative and technology driven approaches of investigation
- Intellectual Property Rights: policy, issues and impact
- Modern Energy Storage system: Applications (e.g., e-vehicles, drones, biomedical applications) and contemporary issues
- Communication for health, culture, social issues and development

Programmes Offered

1. Ph.D. in Multidisciplinary Research

Facilities

The centre has a well-equipped classroom, computer facilities with internet connection. The research laboratories and other facilities of the University are availed by the Research Scholars of the Centre.

Contact

Center for Multidisciplinary Research
Tezpur University, Napaam
Tezpur, Sonitpur
Assam, 784028, INDIA.
Email: cmdr@tezu.ernet.in

Director

Debendra Ch. Baruah, PhD (PAU)
Professor, Department of Energy
Email: baruahd@tezu.ernet.in

Centre Advisory Committee (CAC)

- Prof. Debendra Chandra Baruah, Dept of Energy, Chairman
- Prof. Smriti Kumar Sinha, Dept of CSE
- Prof. Papori Baruah, Dept of BA
- Prof. Charu Lata Mahanta, Dept of FET
- Prof. Bijay K. Danta, Dept of English
- Prof. Nayandeep Deka Baruah, Dept of Mathematical Sciences
- Prof. Robin Dutta, Dept of Chemical Sciences
- Prof. Utpal Sharma, Dept of CSE
- Prof. Chandan Kumar Sharma, Dept of Social Work
- Prof. Rabin Deka, Dept of Sociology
- Prof. Debarshi P. Nath, Dept of Cultural Studies

- Prof. Manabendra Mandal, Dept of MBBT
- Prof. Suvendra Kumar Ray, Dept of MBBT
- Prof. Dambarudhar Mohanta, Dept of Physics
- Prof. Joya Chakraborty, Dept of MCJ
- Dr. Siddhartha S. Satapathy, Dept of CSE
- Dr. Sanjib Deka, Dept of Assamese

Structure of PhD Coursework

Minimum credit requirement for PhD: 16

Course Code	Title	Credit Structure & Course Type				
		L	P	T	Cr.	CT
MR 701	Research Methodology					
MR 702	Literature Review	4	0	0	4	C
MR 703	Philosophy of Research	4	0	0	4	C
MR 704	History of Science	3	0	0	3	E
MR 705	Reductionist and Holistic Approaches to Life and Research	3	0	0	3	E
RP 799	Research and Publication Ethics	2	0	0	2	C

(L=Lecture, P=Practical, T=Tutorial, Cr=Credit, CT=Course Type, C=Core, E=Elective)

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

Chandraprabha Saikiani Centre For Women 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. No 7-1/2012(WS) 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 Northeast 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. Ph.D.
2. P.G. Diploma in Women Studies

Faculty and Areas of Interest

Associate Professor

Madhurima Goswami *, Ph.D. (TU)- HoD
Gender Studies, Critical Theory, Performance Studies

Assistant Professor

Mousumi Mahanta., Ph.D. (TU)
Women Studies, Women and Mental Health, Feminist Research Methodology

* Recognized Ph.D. Supervisor

ACRONYMS

TU- Tezpur University, **HoD** - Head of the Department

Research Activities

- No. of papers published in the year 2022-2023:4
- No. of ongoing research projects: 3
- No. of current Ph.D. scholars: 3

Project

Indian Council of Historical Research funded a project grant for the study entitled «Lives of the Ritual Priestesses of Assam: A Study with Special Reference to the Institution of Doudini in the Bodo Society» for a

period of two years (2021-2023).

Courses offered in P.G. Diploma in Women Studies

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

For more information one can visit the centre website <http://www.tezpuruniversity.in/wsc>

Computer Centre

The Computer Centre (CC) serves the whole university with ICT services. It is the main ICT resource centre for the whole University. Computer centre maintains and offers two well-equipped Computer Laboratories with modern computational capabilities. Computer laboratories maintained by Computer Centre are used by students and university employees for the purposes like classes, assignments, workshops, online interviews, computational needs, etc.

ICT services across the whole campus of the university are served by the Computer Centre through its dedicated team. The Computer Center team comprises technical staff of various levels and directions of skills. Computer Centre also serves as the support system for the University Community in the terms of Computing Hardware, Software and Network related activities and there is a constant endeavour to envisage better services under its umbrella.

The campus-wide Local Area Network (LAN) is equipped with 10 Gigabit backbone and high speed Switching Network Devices. Most of the components in its Local Area Network (LAN) are Internet Protocol (IP) based and therefore has its manageability mostly centralized. All academic departments, offices, hostels, facilities and residential apartments are connected over LAN and WiFi network. There are a number of medium to high range of servers and storages which run on a 24x7 basis on a dedicated air-conditioned server room. Also, a High Performance Cloud (HPC) Server is introduced into the pool of servers in the Computer Centre.

The Website, Email and Internet services are fully hosted in-house with its own set of servers and storages and run on a 24x7 basis. A number of applications developed in-house by the Computer Centre Staff are used extensively in the automation process of administration, academic departments and other user departments. Most of such applications are also self hosted in-campus.

The Computer Centre has a multifunctional 70-seater state-of-the-art Video Conferencing facility for Online Meetings, Interviews, conferences and Virtual Classes etc. Furthermore, a recording studio cum virtual classroom is also established to aid in recording and preparation of audio/video lectures and conducting online classes of University.

Other important services rendered by the Computer Centre are the Campus Telephony System and the Video Surveillance System which runs over the Campus's LAN. The Internet facility is being provided through the high performance 1Gbps link of National Knowledge Network (NKN) and an additional leased line of capacity 100Mbps.

The *Campus Connect WiFi* Scheme of the MHRD has been operational since 2017 which mostly covers academic complexes, administration, student hostels and student activity areas with a user base of 4300. The WiFi services under this scheme are fully maintained and managed by resident company engineers.

Services provided by the Computer Centre

The primary goal of the Computer Centre is to provide quality ICT services including computational and internet facilities to the University community. In addition to maintenance of computational infrastructure, the following services are supported by the Computer Centre:

- Email & Internet Services
- Credit/audit practical courses of different Departments
- Organizing practical sessions for various workshops and refresher courses of various Academic Departments.
- Organizing training programmes for the University Employees
- Assist Administration in selection and procurement of computing resources
- Providing maintenance services for computers/ peripherals to the Faculty/Staff /Departments
- Maintaining and monitoring the Campus LAN.
- Maintaining and monitoring various Internet Links.

- System Administration, Network Administration and monitoring of various servers - Email, Web, Application, Database, Proxy, Firewall, etc.
- Maintaining University Website and intranet portal.
- Develop, procure and maintain software for administration and others sections of the University.
- Software maintenance Services.
- Providing presentation assistance in the auditorium and conference halls.
- EPABX system administration and maintenance.
- IP CCTV Surveillance Management.

Academic Programmes and Student intake

Programme	Student Intake
DOEACC 'O' Level Diploma	30
DOEACC 'A' Level Diploma	20

Major facilities and equipment available

SL	Particulars	Hardware (Make/Model)	Qty
1	Video Conferencing System	Polycom 8000 Series	1
2	VoIP Telephony Server with 1200 Extension capacity	Avaya S8500 with Avaya Media Gateways G650 (2Nos), G450(2Nos), G700(5Nos), G430(2Nos)	1
3	Core Switch with 64 10G Ports	Cisco C6807-XL	1
4	Distribution Switch with 32 10G Ports	Cisco WS-C3850-24XS	16
5	Access Switches	Cisco WS-C2960X-24TD-L	80
		Extreme X350 48T	56
		Extreme X350 24T	19
		Allied Telesis AT-x510L-28GT	11
		Allied Telesis AT-x510L-52GT	3
		HP 2520G	9
06	Firewall	Huawei Eudemon 200E-X7	1
07	Router (NKN)	Cisco ASR 1000	1

Servers

SL	Server Particulars	Hardware (Make/Model)	Operating System and Application Platform
1	Secondary Storage Server	HP StoreEasy 1650	Windows Storage Server 2012
2	Email cum DNS Server	Dell PowerEdge R730xd	CentOS 6.4/ Sendmail, Bind
3	Proxy/NAT/Firewall Server	Dell PowerEdge R730xd	CentOS 6.4/ Squid Proxy 4.0
4	Email Storage Server	Dell NX 3230	Windows Storage Server 2012 R2
5	Proxy Storage Server	Dell NX 3230	Windows Storage Server 2012 R2
6	Application Server	Dell PowerEdge 540	Windows 2019 Server/ xampp
7	Database Server	Dell PowerEdge R740xd	Windows 2019 Server/ MySQL
8	Oracle 10g Database	IBM/X3560	Windows 2008 R2 Server/ Oracle 10g DB
9	Application Server	IBM/X3560	Windows 2008 R2 Server/ MySQL-XAMPP
10	Video Streaming Server with Storage	IBM/X3650 + IBM/DS3524	Windows 2008 R2 Server/ Adobe Media Server 5
11	Web Server	IBM/X3560	RHEL 6/Apache

Computer Terminals & Peripherals Available

Unit No	Unit Name/Location	Terminals & Peripherals
Unit-0	Central Computer Centre (Academic Building -2)	Terminals = 60 (Core i5 / Windows 7 Pro./Windows 10 Pro. Desktops) Scanner = 2 Projector = 1
Unit-1	Computer Centre-Cluster-1 (SoE Complex)	Terminals = 100 (Core i5 / Windows 10 Pro. Desktops) Laser Printer = 1 Scanner = 1 Projector = 1

Software Subscriptions

Sl. No.	Packages	Renewal Period
1	Microsoft Campus Agreement	Yearly
2	Kaspersky Total Space Security	Yearly

Other important activities of the centre

- Setting up and Use of G-Suite for Education account of Tezpur University to cater the need of an LMS (mainly Google classroom, Google meet) for online teaching-learning activities from academic session Autumn 2020. More than 5000 user accounts have been created already.
- To cope with the pandemic and growing need to work from home, Computer Centre has started rolling out WiFi services to quarters of teaching staff and other officials.
- Computer Centre has also stepped into world of cloud computing with ongoing installation of infrastructure
- A total of 25 smart classrooms have been established in the University across 25 different departments under 4 schools.
- A recording studio cum virtual classroom is also being built to aid Tezpur University in Audio/Video lectures recording and editing activities, and conducting online classes.

The personnels of the centre

Director

Nityananda Sarma, Ph.D. (IIT Guwahati)

Professor, Department of Computer Science & Engineering

Specialization/Areas of Interest: Ad Hoc Networks, Mobile Computing

E-mail: nitya@tezu.ernet.in

Technical Staff

Computer Engineer

Dhiraj Kumar Sarma, BE(DU),MS (Tezpur)

Specialization/Areas of Interest: Computer Networks and Security

E-mail: dhiraj@tezu.ernet.in

Junior Programmer

Dipak Chandra Choudhury, MCA (Tezpur)

E-mail: dcc@tezu.ernet.in

Jamil Ahmed, MTech(CSE) (NIT, Meghalaya)

E-mail: jamil@tezu.ernet.in

Senior Technical Assistant

Abani Kumar Das, Diploma in Engg. (CSE)

E-mail: abani@tezu.ernetin

Nirnajan Kumar Deka, Diploma in Engg. (Electronics & Telecommunication)

E-mail: nirnajan@tezu.ernet.in

Technical Assistants

Manjul Baruah, Diploma in Engg (CSE)

E-mail: manjul@tezu.ernet.in

Prandeep Borah, DOEACC-A Level, MS(IT)

E-mail: prandeep@tezu.ernet.in

Raghvendra Choudhary, Diploma in Engg (CSE), CCNA

E-mail:raghav@tezu.ernet.in

Milan Jyoti Deka, BTech(GUINST)

E-mail: milan16@tezu.ernet.in

Other Support Staff

Multi Tasking Staff: 03

EPABX Technicians: 01 (Contractual)

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

High Performance Computing Facility

The facility in collaboration with C-DAC Pune consists of 12 TF HPC system having 50TB of storage capacity along with three numbers of C-DAC's indigenously built PARAM Shavak having compute power of around 3TF each for high performance computing in Big Data Analysis. It is expected to meet the high performance computing needs of researchers from all over Northeastern India.



Sophisticated Analytical Instrumentation Centre (SAIC)

Instrumental methods of analysis form an indispensable aspect of Research and Development. Tezpur University has several departments and centers working on areas which require sophisticated analytical equipment. Sophisticated Analytical Instrumentation Centre (SAIC) at Tezpur University has been set up to cater to these needs. The centre also extends these facilities to other educational institutions and industries within the northeastern region and beyond, as many of them do not have the resources to procure and maintain sophisticated analytical instruments. The Centre also provides demonstration of instruments and their utility in different fields of research to the UG/PG students at colleges.

The SAIC was established in 2010 with two equipments, namely, High-performance liquid chromatography (HPLC) and Gel permeation chromatography (GPC). Now thirty equipment including Transmission electron Microscope (TEM), Scanning Electron microscope (SEM), Single crystal XRD, Powder XRD, BET (Surface and Pore size) analyzer, Raman Spectrometer, Atomic absorption spectrometer (AAS), Nuclear magnetic resonance spectroscopy (NMR), Inductively Coupled plasma optical Emission Spectrophotometer (ICP-OES) are under the umbrella of SAIC. The centre also focuses to install many sophisticated equipments like XPS, HR-MS, Confocal Microscope etc. in future.

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

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 (PMMNM TT) scheme. The scheme was launched by Department of Higher Education, Ministry of Education(erstwhile MHRD), Govt. 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

Subhrangshu Sekhar Sarkar, Ph.D. (TU)
Accounting, Taxation, Social Development Issues

Deputy Director

Bipul Kr. Sarmah, Ph.D. (TU)

Theory of Partitions, Ramanujan Mathematics

Assistant Professors

Swapnarani Bora, Ph.D. (DU)
Folklore, Sociolinguistics, Assamese Studies

Ikbal Hussain Ahmed, M.Phil. (DU^) B.Ed(G.U.)
Philosophy , Applied Ethics, Philosophy of Education

Acronyms:

TU-Tezpur University, **DU**-Dibrugarh University, **DU^**- Delhi University, **GU** - Gauhati University

Major facility

- One ICT Lab.
- Lecture Recording and Resource generation
- Teachers trained: 6000

Major Achievements:

TLC, TU has conducted till now more than 90 programs and trained more than 6000 teachers and prospective teachers. Through these programs TLC has been providing assistance and support for promoting best practices in teaching learning environment among higher education communities.

Main Focus areas of the conducted activities are teaching learning pedagogy, generating resources in specific fields of pedagogy and professional development through various skills. During this period two books on pedagogy are published.

Number e-content (video) developed: **93**. These videos are freely available in the YouTube channel of TLC, Tezpur University for teachers and researchers.

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

Technology Enabling Centre

DST-TEC is a DST funded centre established at Tezpur University in the Year 2019 with the objective to create an Ecosystem for Technology Development in the Universities and academic institutions in Assam and nearby NE states, and to provide a platform to network researchers with other institutes, National laboratories, and Industry.

DBT Funded-Bioinformatics Infrastructure Facility (BIF)

Bestablished at the Department of Molecular Biology and Biotechnology (MBBT), Tezpur University, in the year 2007 under the Biotechnology Information System Network (BTISnet) scheme of the Department of Biotechnology, Govt of India to promote innovation in biology with the aid of Bioinformatics. Since its inception, BIF is imparting training in the field of bioinformatics to M.Sc. Molecular Biology and Biotechnology students, which is a mandate of the Department of Biotechnology, Govt. of India. To augment this, BIF has also started an e-Learning Management System (e-LMS) and a quarterly e-newsletter entitled "Tezubioin". BIF has been relentlessly making efforts to enhance the bioinformatics skills of students by providing state of the art computing facilities with the world's premier Bioinformatics software packages.

DBT Nodal Cell

Cell was set up in Tezpur University in 2009 with the main objective of creating a healthy research environment in Northeastern region, by bringing together physicians & scientists on a common platform to develop multidisciplinary research programs on diseases and ailments common to the region.

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

Internal Quality Assurance Cell (IQAC)

The Tezpur University Internal Quality Assurance Cell (TU IQAC) is engaged in a series of activities required to foster the spirit of quality among the members of the university community. The goals of the IQAC as envisioned in the UGC Guidelines are, to develop a quality system for conscious, consistent and catalytic programmed action to improve the academic and administrative performance of the University & to promote measures for institutional functioning towards quality enhancement through internalization of quality culture and institutionalization of best practices. The IQAC also prepares the template of applications for promotion of faculty members under CAS as per norms specified by the UGC. Further, as per the mandatory requirement of National Assessment and Accreditation Council (NAAC), IQAC prepares the Annual Quality Assurance Report (AQAR) on the basis of the inputs received from all the Departments/ Centres/Cells/ Offices of the University.

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

ONGC-Center For Petroleum Biotechnology

Established at the Department of Molecular Biology and Biotechnology (MBBT) in the year 1999 with financial support from the Oil and Natural Gas Co-operation by signing an MOU. Finally, on 30th April 2010, shaped into a permanent centre with the to conduct research in the field of petroleum biotechnology and develop skilled human resource.

Research And Development Cell

The office of the Dean, R&D facilitates the implementation and smooth creation of extramural research projects funded by the various Government and non-Government funding Agencies like UGC, MHRD, DST, DBT, MeitY, AICTE, DAE, DRDO, DRL, ISRO, ICMR, ICAR, ICHR, DHR, NEC, ICSSR, IUAC, CSIR, INSA, UNICEF, Ministry of Food Processing Industries, MNRE, ONGC, NRL and others. In addition to management of extramural research projects, UGC-BSR start up grants, sanction to individual PI, this office also manages the Departmental and institutional research project such as UGC-SAP and DST-FIST. Dean R&D also conducts the Tezpur University Ethical Committee, Tezpur University Animal Ethical Committee and Tezpur University Biosafety Committee.

The office also facilitates consultancy projects of faculty as per TU guidelines. In addition, the office also deals with various fellowship matters such as UGC-NET JRF, NFOBC, NFST, NFSC, ICSSR, RGNFST, MANF, DS Kothari, SVSGC, CSIR-JRF/SRF, DST-INSPIRE, DBT-JRF etc. The projects implemented through the Research and Development have augmented the research skills of the project staff and have created trained manpower to cater to the need of the society.

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

Training And Placement Cell

Graduate in Demand

Organizations like Oil India, NRL, BCPL, Power Grid Corporation of India Ltd, Indradhanush Gas Grid Limited (IGGL), NEDFI, Amazon, Tata Consultancy Services, ITC Infotech, Infosys, Alstom, Wipro, Accenture, Capgemini, Cognizant Technologies, Tech Variable, Spectrum Eduservices, Bharti Airtel Ltd, Hindustan Unilever, Tata Consumer Products, Reliance Consumer Brands, Reliance Retail, Colgate Palmolive Ltd, Velocity, Siemens Technology and Services, Landmark Group, MRF Limited, Perfetti Van Melle India, UDAAN, Adfactors PR, Cactus Communications, Software AG, KEC International, FlexDay Solutions, Nav Prayukti Pvt Ltd., Imeg, Aurigene Discovery Technologies, Accolite Digital, Synopsys, Netenrich Technologies, Antares Tech, WazirX, Tech Variable, Allegion, Brainayan, C-DAC, Dr. Reddy's Laboratories, Havells, IDBI Bank, BYJU'S, Aurigene Pharmaceutical Services, ITC, Intel, Asian Paints, Berger Paints, Pantaloons, SBI Life, AMUL, DHL, HDFC Bank, Dalmia Cement, L&T ECC, L&T Technology Services, Betsol, Zaloni Technologies, PRADAN, ICICI Bank, Marico, Mahindra Finance, Axis Bank, Bandhan Bank, Vivekananda Kendra Vidyalayas, Loadshare, UTI AMC Ltd, Gandhi Fellowship-Piramal Foundation, Svatantra Microfin Pvt. Ltd., Federal Bank, Apollo Tyres, GlaxoSmithKline, Crompton Greave Electrical Pvt Ltd, Azim Premji Foundation, Ramoji Film City, Sesta, ASOMI Finance, Montex Glass Fibre Industries, HDFC AMC, UNICEF, Teach for India, ETV, Vodafone Idea Limited, Edelweiss Wealth Management, MSL India, PaperTrue, and many more conducted recruitment process for our University students.

140 UG & 225 PG students have been placed in various organizations for the academic year 2021-22. Placement for the 2023-23 batch is already going on.

Organised Sessions

- Sessions on Personality development, Resume building, Presentation Skills, Mock GD and Interviews.
- Corporate Orientation programmes like Corporate expectation about fresher, Corporate culture & etiquette, New career options available in Market etc.
- Webinars on creating impressive Professional profiles in digital platforms and Career Awareness programmes by alumni working in various firms.

- Organised various career counselling programmes through guest lectures, awareness programmes, seminars etc
- Technical Trainings on Data Science, IOT, Python, CATIA , STAADPRO, SAP2000, MATLAB, AutoCAD, 'C', JAVA, ETabs and Verilog etc.
- Scientific officers from BARC Mumbai delivered awareness session on OICP and opportunities in the Department of Atomic Energy.
- Awareness programme on various fellowships like Fulbright Fellowships for Indian Nationals, Graduate fellowships in the United States conducted by USIEF and DAAD fellowship for Study & research in Germany by German Academic Exchange Services etc.
- Workshops on how to crack UPSC/APSC/SSB/Bank POs etc.

Working with Employers

The Placement Cell works closely with students and recruiters to ensure that the students get connected with the right Organisations. The cell creates and builds trust among the organization which we are working with, and they become regular recruiters of our University. To make this tie-up more effective we use to send our students for internship in those organisations, promote industry visits and help them to fill their experienced human resource requirements through our alumni.

Alumni Network

The alumni network of our University is one of the sources of internship and final placement opportunities for the students. Some of the alumni brings their respective organisations for campus placement, share off campus opportunities for the students and also guide them to get lucrative jobs and develop an illustrious career. The Alumni Association and the Alumni Cell use to organize alumni career guidance programme to groom our present batch students.

For more information, one can visit the centre website http://www.tezu.ernet.in/TP_ENGG (for engineering) and <http://www.tezu.ernet.in/tp> (for non-engineering)

TU Intellectual Property Rights Cell (TUIPR)

Tezpur University Intellectual Property Rights Cell (TUIPR Cell) was established in 2009 with a vision to develop human resource in the management of Intellectual Property Rights as an integral part of the innovation process and the innovation value chain in the University. Large number of patents, copyright and industrial design applications have been filed and granted for the innovations from Tezpur University. The Cell has organised several IPR awareness and faculty development programmes in the University Campus and across the entire Northeastern region. The Cell is gradually building IPR consciousness in the region among different strata in the society. In 2020, the Department of Promotion of Industry and Internal Trade (DPIIT) under the Ministry of Commerce and Industries, Govt. of India has awarded the prestigious IPR Chair to Tezpur University.

The DPIIT IPR Chair instituted at Tezpur University integrates Intellectual Property Rights (IPR) with the education process to enhance the quality of thinking, propagate a culture of regard and respect for IPR and ensure speedy and accurate identification and protection of innovations arising out of the research work carried out in the university. Also, it has focus on bridging the gaps between the industry and the academia for technology sharing and mutual research. The cell has been constantly providing technical supports to the grassroot workers associated with different GI products in the region. Facilitation of GI authorized user status to large number Muga silk farmers of Assam is one of the major achievements of the cell. As the cell gains experience, it is also acting as a think tank on policy matters related to IPR in India with special emphasis on issues relevant to the North-East Region.

It is a matter of pride that young researchers from our university have received the Gandhian Young Technological Innovation (GYTI) Awards for fourth time. In the year, 2021, this prestigious award has been conferred for the innovative work on Battery less Electrochemical Sensor for Quantification, Removal of Naringin and Determination of Maturity of Citrus Fruits. Similarly in 2019 “Integrated and automated

set up for preparation and vending of panipuri" was awarded with this prestigious award. In 2018 "Novel Soil Conditioners" was awarded. In 2017 "Smartphone based system for detection and measurement of chemical and biological species in liquids" was awarded. In recognition to significant contribution in innovation and technology development, IPR Chair Professor, IPR Cell, Tezpur University has been adjudged for the prestigious Visitor's Award conferred by the President of India for Technology Development for the year 2020 for developing two-dimensional heterostructure based biodegradable film for food packaging.

The IPR Cell also conducts a numerous skill development, faculty development, IP awareness programmes. As part of the Silver Jubilee Celebration of Tezpur University and decadal existence of the IPR Cell, a special IPR workshop was conducted for school children in Tezpur University campus on 1st October, 2018. The cell organizes patent search and drafting workshop annually in the campus for the benefit of students and researchers. Recently, during 21st March, 2023, the Cell organized an advanced training programme for senior police officials of Assam Police in Police Training Centre, Dergaon

During the years, the cell has kept the thrust on low number of "Authorised Users" for GIs of Assam. It has conducted many brainstorming and industry-academia conclaves to provide solutions to technological demands through deliberations to various sectors. With the continuous support from the University, the Cell has provided technical support and facilitated registration process of more than 400 registered GI users from the state.

IP Profile of Tezpur University Intellectual Property Rights Cell

Particular	Status	Total
Patents	Applied	48
	Published	43
	Granted	22
Copyrights	Granted	3
Design	Applied	2
	Granted	2

The IPR Cell currently offers two open elective courses for UG and PhD students. The courses offer fundamentals of IPRs at undergraduate level and familiarizing research students with the nuances of IPR to help them integrate the IPR process in their research activities.

For more information, one can visit the cell website http://www.tezu.ernet.in/tuipr_cell

Annexure 1: Prescribe Formats of Important Documents

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/ AD-MISSION TO CENTRAL EDUCATIONAL INSTITUTIONS (CEIs), UNDER THE GOVERNMENT OF INDIA

This is to certify that Shri/Smt./Kumari.....son/
daughter of Shri/Smtof village/town..... District/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. Resolution No. 12012 / 68 / 98BCC dated 27 / 10 / 99.
- vii. 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.
- viii. 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.
- ix. 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.
- x. Resolution No. 12015 / 9 / 2000BCC dated 06 / 09 / 2001.
- xi. Resolution No. 12012 / 1 / 2001BCC dated 19 / 06 / 2003.
- xii. Resolution No. 12012 / 4 / 2002BCC dated 13 / 01 / 2004. 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./.....and/or his family ordinarily reside(s) in
theDistrict/Division of state. This
is also to certify that he/ she does not belong to the persons/section (Creamy Layer) mentioned in Column 3 of the Schedules of the Government
of India. Department of Personnel & Training O.M.No.36012/22/93 Estt.(SCT) dated 08/09/93 which is modified vide OMNo.36033/3/2004 Estt.(Res.)
dated 09/03/2004.

Dated:.....

District Magistrate/Deputy Commissioner/Competent

NOTE :

Authority Seal

- 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/1st Class Stipendiary Magistrate/Sub Divisional Magistrate/Taluka Magistrate/Executive Magistrate/Extra Assistant Commissioner (not below the rank of 1st Class Stipendiary Magistrate)
 - ii. Chief Presidency Magistrate/Additional Chief Presidency Magistrate/Presidency Magistrate.
 - iii. Revenue Officer not below the rank of Tehsil darand
 - iv. Sub Divisional Officer of the area where the candidate and/or his family resides.

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 fromas 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 De-partment) 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 for EWS certificate)

Government of.....

(Name & Address of the authority issuing the certificate)

INCOME & ASSET CERTIFICATE TO BE PRODUCED BY ECONOMICALLY WEAKER SECTIONS

Certificate No.

Date:

VALID FOR THE YEAR

This is to certify that Shri/Smt./Kumari.....son / daughter / wife ofpermanent resident ofVillage/StreetPost Office..... Districtin the State/Union Territory.....Pin Code.....whose photograph is attested below belongs to Economically Weaker Sections, since the gross annual income* of his/her "family"** is below Rs. 8 lakh (Rupees Eight Lakh only) for the financially year.

His/Her family does not own or possess any of the following assets***:

- i. 5 acres of agricultural land and above;
- ii. Residential flat of 1000sq. ft. and above;
- iii. Residential plot of 100 sq. yards and above in notified municipalities;
- iv. Residential plot of 200 sq. yards and above in areas other than the notified municipalities.

Shri/Smt./Kumari.....belongs to the
caste which is not recognized as a Scheduled Caste, Scheduled Tribe and Other Backward Classes (Central List)

Recent Passport size attested
photograph of the applicant

Signature with Seal of Office

Name_

Designation

*Note 1: Income covered all sources i.e. salary, agriculture, business, profession, etc.

**Note 2: The term "Family" for this purpose include the person, who seeks benefit of reservation, his/her parents and siblings below the age of 18 years as also his/her spouse and children below the age of 18 years

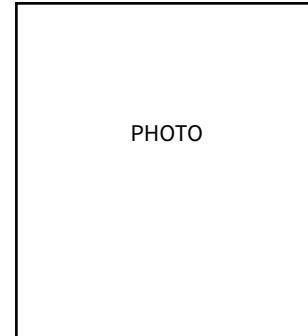
***Note 3: The property held by a "Family" in different locations or different places/cities have been clubbed while applying the land or property holding test to determine EWS status.

**Prescribed Format of PRC/As per Government Format
GOVT. OF ASSAM
OFFICE OF THE DEPUTY COMMISSIONER**

Seal of the issuing office

Date.

Ref Petition No.



PERMANENT RESIDENCE CERTIFICATE

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

Seal

Deputy Commissioner

Annexure 2: Important Contacts for any Query related to Admission

**For any query related to the admission to an Academic Programme in 2022, the concerned Department/Centre
may be contacted on the following contact number/E-mail ID:**

Department/Office	Mobile Number** (HoD)	E-mail ID
Applied Sciences	8876531540	rhaloi@tezu.ernet.in
Business Administration	9435080776	hod_ba@tezu.ernet.in
Centre for Assamese Studies	8486776391	hod_assamese@tezu.ernet.in
Centre for Inclusive Development	9954449475	rkdoley@tezu.ernet.in
Center for Distance and Online Education	9954449475	cdoe@tezu.ernet.in
Chandraprabha Saikiani Centre for Women Studies	9476677622	hodwsc@tezu.ernet.in
Chemical Sciences	9435380377	hod_chem@tezu.ernet.in
Civil Engineering	9864060200	hod_civil@tezu.ernet.in
Commerce	9434030244	hod_com@tezu.ernet.in
Computer Science and Engineering	9435084063	hod_cse@tezu.ernet.in
Cultural Studies	9435381337	hod_cul@tezu.ernet.in
Design	8135823686	hod_design@tezu.ernet.in
Education	70762-96461	hod_edu@tezu.ernet.in
Electrical Engineering	9864182681	hod_ee@tezu.ernet.in
Electronics and Communication Engineering	8876342920	hod_ece@tezu.ernet.in
Energy	9435508563	hod_ene@tezu.ernet.in

English	9436895412	srabani@tezu.ernet.in
Foreign Languages	9435082113	hod_fl@tezu.ernet.in
Linguistics and Language Technology	03712 235220	gkb@tezu.ernet.in
Environmental Science	9854035039	hod_env@tezu.ernet.in
Food Engineering and Technology	97063 68117	hod_fet@tezu.ernet.in
Hindi	94353-84799	hod_hin@tezu.ernet.in
Law	9957777781	hod_law@tezu.ernet.in
Mass Communication and Journalism	9435749345	hod_mcj@tezu.ernet.in
Mathematical Sciences	9435180666	hod_ms@tezu.ernet.in
Mechanical Engineering	9435471300	hod_mech@tezu.ernet.in
Molecular Biology and Biotechnology	9435507394	hod_mbtt@tezu.ernet.in
Physics	9706980913	hod_phy@tezu.ernet.in
Social Work	9435144482	hod_sw@tezu.ernet.in
Sociology	9435711002	rdeka@tezu.ernet.in
Teaching and Learning Centre	9435080384	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.

Annexure 3: Frequently Asked Questions

1. Which marksheet should I upload for seeking admission in Integrated programmes?

Ans: Upload your class X and class XII/ equivalent examinations marks/marks sheet in .pdf format.

2. What is the marksheet to be uploaded if I am applying for postgraduate (PG) programmes?

Ans: Upload your marksheets of class X and XII/ equivalent examinations and semester wise and/or year wise and/or consolidated marksheets as separate files (in pdf. format) for qualifying examinations. Sufficient number of options (fields) have been provided in the web-portal for uploading of your documents.

3. Despite uploading the documents, the software is not accepting the file.

Ans: Please check the file size of the attachment and follow the instructions.

4. What documents should I upload if I am applying for lateral entry to B. Tech.?

Ans: You are required to upload the marksheets of the qualifying examination besides the marksheets of class X and XII/equivalent examinations.

5. What should I do if my University does not have a formula to convert CGPA to percentage? In this case, what should I upload?

Ans: Conversion of CGPA to percentage must be done by the applicant, as per the qualifying board/University formula. If the formula is not provided by the University/ board, the converted CGPA in percentage must be certified by the principal/competent authority of your Institute. The certified document must be uploaded in the TU portal.

6. How do I know my eligibility criteria for a program?

Ans: You may carefully read the prospectus TUEE 2023 and confirm the same, while filling in the online ACF form.

7. What should I do if Tezpur University is not taking students through TUEE for the Department of MBBT?

Ans: Admission to the M.Sc. programme in the Department of MBBT is done through “Graduate Aptitude Test-Biotechnology” (GAT-B) conducted by Regional Centre for Biotechnology (RCB), Faridabad. You must upload the valid GAT-B score card during the online application. In addition, permanent residence certificate (PRC) should also be uploaded, if you want to apply for the 10 seats reserved for the permanent residents of any of the Northeastern states.

8. What should I do if I have made a mistake, while uploading my marksheets and/or other documents?

Ans: You may contact asktuee@tezu.ernet.in with a copy to tuee2023@gmail.com

9. What shall I do when there is a payment failure/unsuccessful payment?

Ans: In case of payment failure and/or deduction of money from bank account, kindly send an email to tuee2023@tezu.ernet.in and a copy to asktuee@tezu.ernet.in with a screenshot.

10. Can I upload my caste or EWS certificate later as I do not have the updated version now?

Ans: Yes, you are required to submit the latest certificate prior to the specified deadline.

11. How do I know if have been shortlisted in any program applied for?

Ans: This information will be uploaded in the Tezpur University website. If your name does not appear in the list of candidates, you may have not met the evaluation cut-off marks. You will also receive SMS/e-mail if you are shortlisted.

12. What is the duration of process of application till final selection of candidates for any program?

Ans: Selection and admission process will be updated on regular basis in the Tezpur University website.

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Tezpur University

(A Central University)

NAAC ACCREDITED WITH 'A+' GRADE

Prospectus

AUTUMN 2023

For any enquiry

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