

# TEZPUR UNIVERSITY

(A CENTRAL UNIVERSITY)

TEZPUR – 784028, ASSAM, INDIA

[www.tezu.ernet.in](http://www.tezu.ernet.in)



## PERSPECTIVE PLAN 2012-2017

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Prepared by:

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## INTRODUCTION

(This document is prepared to guide the XII plan proposal of the Tezpur University which is expected to be submitted to the UGC some time in 2011-2012. Though attempt has been made to take care for future growth of the University as per the objects of the University as detailed in the First Schedule of the Act, changing scenario in societal need has been kept in mind during our discussions.)

Tezpur University was established in January 1994 by an Act of the Parliament (Act No. 45 of 1993) as a unitary type, residential University. The University is located at Napaam, about 15 km east of Tezpur town on the northern bank of the river Brahmaputra. The town of Tezpur, famous for its ancient history and rich cultural heritage, is linked by road, rail and limited flight service to the rest of the state and the country. The 262-acre lush green campus of Tezpur University offers an excellent ambience for teaching and research.

At present, the University offers 38 teaching and research programmes through its 17 academic departments under 4 schools of studies. In addition, there are several centres that are engaged in various academic activities and extension and training programmes. The University has been diligently working on expanding select branches of knowledge in order to generate suitable inputs critical for the utilization and engagement of the region's vast and unique resources. Tezpur University is engaged in the process of capacity building, both in terms of human resource development and development of state-of-the-art learning infrastructure from the very beginning. With this vision, the University is committed, on one hand, to keep abreast of the changes in the contemporary world, and to nurture the cultural and traditional diversity of the region on the other.

As per the provision of Tezpur University Act 1993, the University is fully residential. With this purpose, buildings are so that designed buildings that add to the natural beauty and the aesthetics of the landscaped environs of the campus. Committed to providing all its students with a fulfilling learning experience, the University also strives to ensure a comfortable stay for them. Students are accommodated in eight appropriately-equipped hostels while a good number of residential quarters have been built for accommodating faculty members and support staff. Other basic amenities like water treatment system, guesthouse, canteen, gymnasium, indoor and outdoor sports facilities and campus security are also available to cater to the various needs of the University community.

### **The objectives of the University**

- I To disseminate and advance knowledge by providing instructional and research facilities in such branches as in:
  - (i) existing and emerging areas of Science, Technology, Humanities and Social Sciences
  - (ii) employment oriented and inter-disciplinary courses

- (iii) areas of study which are of special and direct relevance to the region and meet the local and regional aspirations for development.
  - (iv) courses that promote national integration and studies of cultural heritage of the region and in particular, the diverse ethnic, linguistic and community cultures of the State of Assam.
- II to utilize distance education techniques and modern communication technologies like ICT to provide access to higher education for large segments of the population, and in particular, the disadvantaged groups such as those living in remote and rural areas.
- III to provide an innovative system of university level education, flexible in regard to methods and pace of learning, combination of courses, eligibility for enrolment, age of entry, conduct examination and operation of the programmes with a view to promote learning and encourage excellence in new fields of knowledge.
- IV to reach out for improvements of the social economic conditions and welfare of the people of that state, their intellectual, academic and cultural development through teaching, research and innovations.

### **Review of progress so far:**

Tezpur University has made notable progress in academic, administrative and other developmental activities. The strengths, facilities, perceived limitations and threats as well as opportunity provided by the University are listed below:

#### **Strengths**

- Advanced academic programmes in the Sciences, Engineering, Management, and in Humanities and Social Sciences subjects.
- Fully residential and fairly well-equipped campus for all the students and the majority of teachers facilitating close interactions among students, teachers and staff.
- Highly qualified and dedicated faculty members.
- Strong infrastructural support for high use of Internet and Communication Technology (ICT) in the regular teaching-learning, research and general administration of the University
- Enrollment of students from all over the country through transparent common entrance examinations and encouraging proportion of girl students and students from the reserved category of SC ST and OBC. (see A 2)
- Continuous Evaluation System in a transparent mode.
- Regular updating of curriculum.
- Implementation of inter-disciplinary credit transfer to provide wide and flexible subject choice to students.
- Strict adherence to the Academic Calendar with provisions for time bound announcement of results.
- Students' placement facility through a fully operational Training and Placement Cell.

- Scholarships and Free-ships to meritorious and deserving students.
- Active Equal Opportunity Cell and SC ST Cell to cater to the specific needs of students and groups from disadvantageous social backgrounds.
- Funding from various sources for different sponsored projects.
- Efforts in extending outreach activities to various sectors.

### **Facilities available**

- Well-equipped laboratories.
- State of the art Computer Centre.
- Campus networking with internet connectivity.
- Automated library services.
- Hostel accommodation for all students.
- Residential accommodation for faculty and staff members.
- Healthcare facilities and Medical Insurance facility to cover all students at nominal premium .
- Games, sports and gymnasium facilities.
- Fully equipped auditorium.
- Dedicated power supply.
- Centrally Water Treatment Plants.
- Canteens, Post Office, Bank branches (including evening branch) and ATM facility.
- Regular chartered buses for easy commutation.

### **Academic developments**

The University has made major changes in the existing academic set-up in order to meet the changing pattern of expectations in contemporary higher education. It has introduced several new centres and programmes under the different schools in the last five years. Amongst the new programmes, the commencement of the B. Tech. and Integrated Master's Programmes has led to the inclusion of undergraduate students in the University, a somewhat recent phenomenon witnessed in quite a few institutes of higher learning. The University has already started programmes like B. A. B. Ed. and B. Sc. B Ed. to meet the requirement of trained teachers for secondary and higher secondary level schools. A Department of Civil Engineering has also been started in the School of Engineering during the last plan period.

In an extremely significant achievement for the University in the XI Plan, 8 of its academic Departments have been sanctioned special assistance through UGC-SAP. In addition, a DBT NODAL Centre for promoting and consolidating medical research in the North East has been set up. In keeping with the mandate of the University as enshrined in the University Act and in order to meet the ever expanding demand for higher education from different quarters, a Centre for Open and Distance Learning has been set up, in a limited way, in the same plan period.

Tezpur University has been able to generate funds worth almost 64000 lakhs as external research grants from UGC and other agencies during XI plan. The University also promotes industry-academy alliances and various prestigious industry-sponsored projects are in progress in the University. It is pertinent to mention here that a Centre for Petroleum Biotechnology (CPBT) funded by ONGC has also been set up in the same period. The University has obtained 2 patents during this period and 21 more have been applied for. In terms of faculty and student achievements in the last five years, several faculty members of the University have received prestigious national and international fellowships for various academic purposes including post-doctoral work, professional meetings of international bodies, visiting fellowships, *etc.* 61 books and book chapters and 1384 research papers (344 national and 1040 international) authored by our faculty members have been published during the XI Plan (table 4.1). It is to the credit of the University that while 2 patents have already been obtained during the XI Plan, 21 more have been applied for. A good number of alumni of the University are pursuing doctoral and postdoctoral research in premier institutes in the country and abroad. The research students of the University are visiting advanced laboratories abroad under “Sandwich” programmes and participating in national level summer and winter internships. The University also runs similar internships for students from various parts of the country. One student has also been conferred Young Scientist award by the Indian Science Congress Association. Amongst other academic activities aimed at promoting the rich cultural legacy of Assam and as a tribute to the great reformer Sri Sankardeva, Tezpur University has instituted the Sankardeva Endowment Lecture since 2009 and 2 lectures have been delivered till now by eminent scholars from different parts of the country.

Significantly, Tezpur University has become a preferred destination for reputed Institutes and numerous national and international conclaves. In a landmark development for the state of Assam, the fourth centre of the Indian Statistical Institute has started functioning from the Tezpur University campus. Several meetings of national agencies namely, UGC, MHRD, DST, DIT and CSIR were conducted during the last few years. The Annual General Body Meeting of the Indian National Science Academy (INSA), New Delhi, was organized on Tezpur University campus in December 2011.

### **Infrastructure development and enrichment of community life**

The University has taken up significant steps to improve its academic and campus life. Towards this end, several new constructions have either been undertaken or completed during the last five year plan. Completed constructions include 11 academic buildings, several units of various types of 3-storied residential buildings, 2 Warden’s quarters, Master Canteen and a Cafeteria, a Council Hall, a Sophisticated Instrumentation Centre, Health Centre, Chandraprabha Saikiani Centre for Women Studies, Guest House to which a newer wing was added later, a boundary wall around the newly acquired plot of land measuring 18 acres. In addition to these, construction of 3 Men’s Hostels and 3 Women’s Hostels with combined capacities of 1260 and 550 respectively is in progress. A Scholars’ Hostel of 36 units was also completed during the same period.

Infrastructure support in areas such as extension of water supply, electrification, and installation of streetlights has been initiated. Other notable developmental activities include steps to improve the Central Library, Laboratories, Internet Connectivity, teaching aids and vital campus amenities.

To ensure uninterrupted power supply, the University provides power back-up (DG) to the whole campus. Further, to facilitate round-the-clock use of sporting facilities flood-lights have been installed in the sporting arena. It is significant that the University has been chosen to host various regional and national sports and cultural events. The University successfully hosted the East Zone Inter University Youth Festival (UNIFEST) in 2011.

The University is committed to provide quality school education at affordable cost to the children of the University employees and to those in the neighbourhood. Takshashila, the already existing school of the university has been converted into a Kendriya Vidyalaya in 2011, while children upto the kindergarten level are taught at the previous school *i.e.* Takshashila. As a conscious step towards giving shopping and recreation facilities to the University community, a market complex has been developed which includes a co-operative store managed by the employees. There are three nationalized banks namely, the State Bank of India, The United Bank of India and the Punjab National Bank (evening branch) which are operating through their branches on the campus. There are three ATMs on the campus.

These academic and infrastructural developments have, on one hand, created a future roadmap for the University for the coming years and, on the other hand, placed the University in the national academic map. Now the University looks forward to excel in every chosen sphere with these significant developments.

## **II. DEVELOPMENT PLANS FOR THE PERIOD 2012 to 2017**

The perspective plan of the University have been formulated taking into account the thrust areas keeping in mind the aspirations and requirements of the region.

### **Thrust Areas and Priorities**

The overall thrust will be the expansion of the University by building up on the existing human and physical resources for their consolidation and better utilization. The University proposes to meet the prime objective of guaranteeing greater access by increasing the intake capacity of the existing programmes and setting up new academic programmes. This is to be realized by increasing the students' strength from the current 2391 to approximately 5000 by 2017 with an estimated growth of 500 students per year in various academic programmes of the University. Given that the proposed expansion has to be in synchronized with the objective of quality of education, the overall increase in the students' number has to be balanced by a proportionate increase in the number of qualified teaching staff. The student-teacher ratio is to be maintained at its optimal level of 15: 1. To

consolidate and strengthen the existing departments, upgradation of their infrastructure and initiation of new programmes and specializations are proposed prioritized on follows.

#### **a. New Departments/Centres**

The focus areas in the next five years would also be expansion in new and emerging areas of knowledge which have a strong relevance to the region. The University proposes to start new departments, and centres in diverse areas. Taking account of the dearth of quality institutions of higher education in the fields of **Agriculture, Architecture, Pharmaceutical and Chemical Engineering** in this region, the School of Engineering is proposing to start new departments in these subjects. Further, an advanced research unit of Mechatronics and Robotics is proposed under the Department of Mechanical Engineering.

The School of Sciences proposes to start two new departments and two new centres. To focus on mechanistic studies of diseases endemic to the North East region and possible approach to therapeutics, a department of **Biomedical Sciences** is proposed. A department of **Earth and Atmospheric Sciences** is also proposed in view of its significance to the region. To give holistic approach to green and sustainable chemistry with focus on pollution reduction, a Centre for **Green Science and Technology** is proposed. A Centre for **Nano Science & Technology** is proposed in line with the ongoing research and teaching activity in the University.

The School of Humanities and Social Sciences is to be significantly expanded by adding the new departments of **Economics, Social Work and Linguistics and Language Technology**. These new Departments in the school will offer Masters' and Ph.D. degree in the respective subjects. To augment its knowledge on the Northeast, especially its languages and traditional knowledge systems, the Centre for **Assamese Studies** has been proposed to initiate substantial research in the areas of language, literature and culture in their varied dimensions. Core focus areas like comparative research, translation from and into Assamese and linguistic study of Assamese and its neighbouring languages have been identified as initial thrust areas for research. Further to protect and promote the rich cultural legacy and art forms of the North East, the University is proposing a Centre for **Performing Arts**. A Centre for **Asian Studies** is proposed which will specially focus on the states of the Northeast India and its social, economic and cultural linkages in the neighboring countries. The Centre will be initially a part of the Department of Sociology.

From the School of Management Sciences, a Department of **Hospitality Management** is proposed with new courses leading to Bachelor's, Masters', and integrated Masters' degree in the much valued area of hospitality and tourism. Given the tremendous potential of the hospitality sector in the North East, this new department is expected to add significantly to Tezpur University's academic expansion.

The University has also taken steps to extend quality education through the proposed Centre for **Open and Distance Learning**. The innovative courses being offered by this Centre are expected

to cater to the employment needs as well as qualification enhancement of the youth of the region. People with diverse needs, viz. those who are from remote areas, employed personnel, and people who cannot pursue formal education stand to benefit from this Centre. In addition, programmes under the Centre would contribute to internal resource mobilization as recommended by the UGC.

## **b. Infrastructure development**

In the coming years, Tezpur University is bound to expand in terms of its academic departments and human resources. The University will, therefore, aim at creating and augmenting infrastructures such as academic departments and residential buildings, furnishing, electricity, water and maintenance. Construction of new buildings for proposed departments and centers and expansion of some existing academic buildings will be undertaken based on priority. In addition, six new hostels are proposed which will house approximately 1500 boys and 1100 girl students. In order to accommodate employees of different categories, the University also proposes to construct 19 new blocks of three-storied buildings with 234 residential units for faculty members and technical staff. Further, a centralized Sewerage and Storm Water Drainage System is proposed for a sustainable solution to the needs of an expanding University community (details in sections 2.1 and 2.2).

## **2. Maintenance of Quality and Excellence**

While keeping the expansion of University in mind, there is also the corresponding requirement to maintain standards of quality and excellence in the delivery of higher education. The University has to make provision for sufficient investment in creation of academic support system and in making additions proportionate to the projected growth. Innovative teaching and learning system is central to maintenance of quality of academic life in a University. Though Tezpur University has striven to create state-of-the art infrastructure, future expansion would require addition and upgradation of the same. Towards this end, the University is proposing a budget of 135 crores for procuring and maintaining its teaching and research related equipments; 35 crores for expansion and upgradation of library facilities; and 27 crores for expansion and better utilization of ICT facilities. These will have cumulative effect in enriching the quality of academic life in the University.

With the aim of development of its faculties as its mandate to maintain quality and excellence, the University proposes to conduct conferences/seminars/workshops/symposia and provide publication grant to the faculty members. There will also be provision for financial assistance to meet the travel expenses of faculty members at least twice a year for national level conference/seminars/workshops *etc.* and once in three years for international conferences/seminars. In order to maintain standards of excellence, provisions for internal and external checks have been incorporated in the University system. The University has initiated several measures to evolve a continuous feedback system from within the university as well as from external agencies. The University has been compulsorily following the Student Feedback

mechanism as a measure of internal check on teaching, learning and evaluation system. The Internal Academic Audit Committee and the Internal Quality Assurance Cell of the University will also be upgraded in the coming years to put in place a more efficient system of quality check and maintenance.

### **3. Equity and Social Inclusion**

The University is committed to meet its social commitment of ensuring equity and inclusion in all facets of its academic and administrative life. Creation of good infrastructure, especially the hostel facilities for students, is essential for attracting and retaining students from weaker sections and especially female students from remote areas. The University strictly follows and implements the policy of reservation for all the reserved categories of students, faculty and staff members in accordance with the policy of the Government of India. The University's vision of equity is reflected in its infrastructural development plans. While creating any physical facility, the University would keep in mind not only the needs of the disadvantaged sections of the society, particularly, differently-abled group, but also the norms of the 'green buildings' concept.

During the XII Plan period, the University would expand its inclusive development activities engaging the existing Equal Opportunity Cell and SC/ST Cell. For the purpose, new Centres such as Centre for Inclusive Development and Centre for Women's Studies will be established to take care of the weaker sections of the society and woman related issues respectively. Through these Centres, the outreach programmes of the University will be taken further which will include programmes on capacity building, gender issues, human rights, sensitization, rehabilitation, etc. A Day Care Centre will also be set up for convenience of the female employees of the University.

### A 3 : Teaching staff and students enrolment for the year 2011-12 in University Department

#### 1. Teaching Staff as on 31<sup>st</sup> March, 2012

S.No	Designation	Sanctioned Strength	Existing Strength	Out of existing strength, number of teachers belonging to			
				SC	ST	OBC/BC	PWD
1	2	3	4	5	6	7	8
1	Professor	48	38	1	0	-	0
2	Associate Professor	67	49	5	0	-	1
3	Assistant Professor	125	107	14	7	24	2
4	Part-Time/Adhoc/Temp. / Contract Teachers	NA	-	-	-	-	-
<b>Total (Teaching Staff)</b>		<b>240</b>	<b>194</b>	<b>20</b>	<b>7</b>	<b>24</b>	<b>3</b>

#### 2. Total Students Enrolment in University Departments during the academic Year 2011-12 (as on 30<sup>th</sup> Sept., 2011)

Level	Students Enrolment as on 30 <sup>th</sup> September, 2011							
	Total Students Enrolment		Out of total students belonging to					
			SC		ST		OBC/BC	
	Total	Women	Total	Women	Total	Women	Total	Women
Graduate	639	91	99	15	46	10	162	14
Post-Graduate	1314	648	161	68	96	47	329	160
M.Phil	0	0	0	0	0	0	0	0
Ph.D.	364	172	34	11	24	14	110	52
Diploma	18	11	0	0	1	0	4	4
Certificate	15	0	0	0	0	0	0	0
<b>Total</b>	<b>2350</b>	<b>922</b>	<b>294</b>	<b>94</b>	<b>167</b>	<b>71</b>	<b>605</b>	<b>230</b>

#### 4. Academic achievements during last five years:

##### 4.1 Books/Publications:

Year	Books/chapters published	Papers published in Journals		No. & names of Prestigious Awards received by the faculty
		National	International	
2007-08	21	65	78	1-Young Scientist Research Award, DAE
2008-09	11	81	116	--
2009-10	10	83	395	1-Max Planck fellowship (2009-2012) (Dr. P. Deb)
2010-11	11	47	206	Chemical Research Society of India (CRSI) 'Bronze Medal' for the year 2010 (Prof. N. S. Islam)
2011-12	8	68	245	--

**4.2 National /International Conferences/Seminars organized by the University during last five years:**

Year	National	International
2007-08	14	2
2008-09	12	--
2009-10	16	1
2010-11	16	3
2011-12	25	1

**4.3 Research projects awarded by the UGC and other funding agencies during last five years:**

Year	No. of Projects awarded by the UGC	No. of Projects awarded by other agencies	Funds approved (in lakhs)
2007-08	4	13	231.88
2008-09	1	26	439.56
2009-10	6	18	4912.41
2010-11	7	23	898.99
2011-12	8	22	1085.1

**4.4 Patents awarded during last five years:**

Patent Obtained : 2  
 Patent Filed : 21

**5.1 New Department(s)/Centers (s) started during last five years:**

Sl.No.	Name of the Department/Centre	UGC aided/other organization aided / self-financing
1.	Department of Hindi	UGC aided
2.	Department of Civil Engineering	UGC aided
3	Chandra Prabha Saikiani Centre for Women's Studies.	UGC aided
4.	Centre for Assamese Studies	Tezpur University Corpus Fund
5.	ONGC Centre for Petroleum Biotechnology	ONGC Limited
6.	IPR Cell and IPR Chair	MHRD
7.	Equal Opportunity and Career Counseling	UGC aided

5.2 New programmes started during last five years:

Sl.No.	Name of the programme	UGC aided/other organization aided / self-financing
1.	Integrated M. Sc. in Mathematics	UGC aided
2.	Integrated M. Sc. in Bio Science and Bioinformatics	UGC aided
3.	Integrated M. Sc. in Physics	UGC aided
4.	Integrated M. Sc. in Chemistry	UGC aided
5.	Integrated B. Sc. B. Ed (Physics Major)	UGC aided
6.	Integrated B.Sc.B.Ed (Mathematics Major)	UGC aided
7.	Integrated B.Sc.B.Ed (Chemistry Major)	UGC aided
8.	Integrated MA in English	UGC aided
9.	Integrated B.A.B.Ed. (English Major)	UGC aided
10.	B. Tech in Civil Engineering	UGC aided
11.	B. Tech in Food Engineering and Technology	UGC aided
12.	PG Diploma in Mobile and Multi Media Communication.	UGC aided
13.	PG Diploma in Translation (Hindi-English)	UGC aided
14.	Integrated M. Tech. in Food Processing Technology	UGC aided
15.	M. Tech. in Polymer Science and Technology	UGC aided

## Plan for next five years:

Major considerations:

- i) Objective of the University as defined in the act.
- ii) Access and Expansion to enhance the GER
- iii) Equity and Inclusion for national growth.
- iv) Quality and Excellence

To realize the above consideration, basic requirements will be in

- i) Implementation of the vision document through a perspective plan with time line.
- ii) Making the University Administration more effective
- iii) Providing for Faculty Improvement Programmes
- iv) Enhancing Facilities for Students
- v) Augmenting research facilities
- vi) Harnessing local resources for national development
- vii) Breaking the barrier of the University to serve the people.

### **2.1 Buildings requirement:**

Name of the Department		Name of the Building /approx area	Remarks (If any)
FOOD ENGINEERING AND TECHNOLOGY	a)	Extension of existing buildings (Area Req: 390 Sq M)	Boiler house/shed and Mini Rice Mill Shed
MECHANICAL ENGINEERING	a)	Extension of existing buildings (Area Req: 1344 Sq M)	To Include 1.Centre for Mechatronics and Robotics 2.Workshop
ENERGY	a)	New buildings proposed (Area Req:4223.7 Sq M)	A new building is required for the Department of Energy in the School of Engineering
MOLECULAR BIOLOGY AND BIOTECHNOLOGY	a)	New buildings proposed Animal House (Area Req:2000.9 Sq M)	For experimentation and breeding of experimental animals
	b)	Extension of existing buildings (Area Req:1500 Sq M)	Independent research laboratories for faculties, Bioinformatics facility, teaching and research laboratories, faculty offices, store and basic facilities like washing, autoclaving

MATHEMATICAL SCIENCES/ PHYSICS	a)	New buildings proposed (Area Req:4223.7 Sq M)	New Building proposed
SCHOOL OF HUMANITIES AND SOCIAL SCIENCES	a)	New buildings required	A New cluster of 8 buildings is proposed for the School of HSS. It will house the Departments of Cultural Studies, English and Foreign Languages, Hindi, Sociology and proposed departments of Linguistics and Language Technology, Economics, Social work and Centre for Assamese Studies.
HOSPITALITY MANAGEMENT	a)	New buildings proposed (Area Req: 1344 Sq M)	New Department proposed
ACADEMIC BUILDING I	a)	Buildings proposed for renovation	It will accommodate Centre for Women's Studies, Centre for Open and Distance Learning, Centre for Disaster Management
ACADEMIC BUILDING II	a)	Buildings proposed for renovation	It will accommodate Computer Centre, Office of NCC, NSS etc.
EXTENSION OF ENERGY BUILDING FOR MATHEMATICAL SCIENCES/ PHYSICS	a)	Extension of existing buildings (Area Req: 1550 Sq M)	Presently occupied by Energy Department and will be occupied by either Physics or Mathematical Sciences Department.
KENDRIYA VIDYALAYA (SCHOOL)	a)	New buildings proposed (Area Req: 4288 sq M)	Construction of RCC 3-Storeyed School Building
KENDRIYA VIDYALAYA (RESIDENTIAL BUILDING)	a)	New buildings proposed (Area Req: 1709.13 sq M)	Construction of RCC 3 storied building for Kendriya Vidyalaya teachers at Tezpur University.
RESIDENTIAL QUARTER FOR	a)	New buildings proposed (Details of the buildings may be provided)	Construction of RCC 3-Storeyed Type-B Residential Building ( 1 block- 18 Units) <b>1 block is required</b>

TEACHERS AND STAFF			Construction of RCC 3-Storeyed Type-C Residential Building ( 1 block- 18 Units) <b>1 block is required</b>
HOSTELS	a)	New buildings proposed (Details of the buildings may be provided)	Construction of <b>ONE</b> hostel: 482 capacity: Single bedded Room RCC 3-Storeyed Boys' Hostel Building No-6 at Tezpur University. Construction of <b>ONE</b> hostel: 300 capacity: Single bedded Room RCC 3-Storeyed Girls' Hostel Building No-6 at Tezpur University.
SECURITY BARRACK	a)	New buildings proposed ( <b>Area Req: 1016.32Sq M</b> )	Essential for accommodating security personnel of the University
BRAHMAPUTRA MEN'S HOSTEL	a)	Buildings proposed for renovation	Hostel was constructed in the year 1998-99. Electrical wiring system, ceiling fans, switches, luminaries etc. need replacement.
BORDOICHILA WOMEN'S HOSTEL	a)	Buildings proposed for renovation	Hostel was constructed in the year 1998-99. Electrical wiring system, ceiling fans, switches, luminaries etc need replacement.

## 2.2 Campus Development requirements:

S.No.	Activity Proposed (Details may be provided)
1.	Sewerage and Storm Water Drainage System
2.	Construction of Swimming Pool

## 5.3 New teaching departments/programmes to be established:

SCHOOL OF ENGINEERING				
Sl. No.	Department	Name of the programme(s) proposed	Suggested Intake	Remarks

1	CIVIL ENGINEERING	M. Tech. in Structural Engineering	10	There is a great demand for PG programme (Structural and Geotechnical-Environmental – Hydro-engineering) from the students of the region. This Department has started B. Tech. in Civil Engineering in 2009 and Ph. D. from 2011, but at present has no PG programme.
		M. Tech. in Geo-Environmental Engineering	10	
2	COMPUTER SCIENCE AND ENGINEERING	M. Tech. in Computer Science and Engineering	20	To give more emphasis on the core subjects of Computer Science.
3	ELECTRONICS AND COMMUNICATION ENGINEERING	M. Tech. in Signal Processing	15	To give more emphasis on recent development of application of signal processing in communications. To train man power in PG level for the above field
		M. Tech. in Communication Engineering	15	
		M. Tech. in Instrumentation	10	
4	ENERGY	B. Tech. in Energy Studies	20	To cater to the additional need of trained professionals for the growth in the Energy sector as per the projection of NAPCC as well as petroleum industries.
5	FOOD ENGINEERING AND TECHNOLOGY	PG Diploma in Food Technology	10	Due to huge local demand in North East based food industries.
6	MECHANICAL ENGINEERING	M. Tech. in Fluid and Thermal Engineering	10	Since the Department had started B. Tech. in Mechanical Engineering from 2006 and Ph.D. from 2011, there is a great demand for M. Tech. programme from the students of the region. It is expected that the introduction of M. Tech. programme will enhance the research involvement and output to a great extent for industrial and social benefit.
		M. Tech. in Mechanical Design	10	
		M. Tech. Applied Mechanics	10	
	MECHATRONICS AND ROBOTICS	M. Tech./Ph. D.	10/5	Proposed Centre under the Department of Mechanical Engineering (It is an interdisciplinary effort)

7	ARCHITECTURAL ENGINEERING	B. Arch./M. Arch./ Ph. D.	10/5	<b>New Department proposed</b> For promoting technically sound architectural culture in the region, architectural engineering needs to be pursued in all its technicalities.
8	CHEMICAL ENGINEERING	M. Tech. in Petroleum Technology /Ph. D.	10/5	<b>New Department proposed</b> Oil Industry in NE India requires a good number of people with technical expertise to handle different aspects of oil production. However, only one institute in NE India is offering PG courses in the above subject. So to cater to the need of growing demands of qualified man-power regionally and nationally, this Department is being proposed.
9	PHARMACEUTICAL ENGINEERING	M. Tech. /Ph. D.	10/5	<b>New Department proposed</b> Drug development and implementation is a thriving area which promises solutions to many endemic diseases. Teaching and research in this area would be beneficial for the overall health scenario of the region
10	AGRICULTURAL ENGINEERING	M. Tech. /Ph. D.	10/5	<b>New Department proposed</b> North East is an agricultural based economy and to lift the current agricultural practices those supported by modern day science and technology, grinding in the field of Agricultural engineering is a must.
<b>SCHOOL OF SCIENCES</b>				
1	MATHEMATICAL SCIENCES	M. Sc. In Statistics	15	To cater to the demand for trained manpower in statistics with high level of computing skills

2	MOLECULAR BIOLOGY AND BIOTECHNOLOGY	M. Sc. In Applied Microbiology	10	To meet the demand for trained manpower in food industry, health and pharmaceutical sector.
		M. Sc. In Immunology	10	
		M. Sc. In Conservation Biology	10	Aim of this course is to generate specialized manpower to exploit biodiversity of the North-East region and learn judicious exploitation of conservation
3	PHYSICS	M. Sc./M. Tech. in Applied Electromagnetism	10	The course broadly covers material applications (including nano materials), simulation, microwave applications, atmospheric sciences, remote sensing, plasma, sensors, fibre optics and lasers. The course will be developed and tailor made by taking inputs from ISRO, DRDO, BEL and other R&D organizations to develop a trained human resources to be recruited directly
		Specialization in Plasma Physics for M. Sc. Students	8	The specialization was already approved, but could not be proposed due to shortage of faculty
4	EARTH AND ATMOSPHERIC SCIENCE	M. Sc./Ph. D.	10/5	<b>New Department proposed</b> Earth and Atmospheric Sciences encapsulate both the universal and the regional variations. It is also emerged as vital discipline for regional planning. The proposed department shall capture these vital essences
5	BIOMEDICAL SCIENCES	M. Sc./Ph. D.	10/5	<b>New Department proposed</b> (It is an interdisciplinary effort) Coordinated activities in the field of biology and medical sciences is a much sort after area as it provide vital window to many of the endemic diseases of the region. This Department is proposed to harvest the benefits of this coordination

6	CENTRE FOR NANO SCIENCE AND TECHNOLOGY	M. Sc./M. Tech./Ph. D.	10/5	<p><b>New Centres proposed</b> (It is an interdisciplinary effort)</p> <p>A pool of expertise has developed amongst the faculty of Tezpur University cutting across disciplines in these emerging fields. These two Centres are being proposed as a means of achieving coordinated and focused activities in the fields</p>
7	CENTRE FOR GREEN SCIENCE AND TECHNOLOGY	M. Sc./M. Tech./Ph. D.	10/5	
<b>SCHOOL OF HUMANITIES AND SOCIAL SCIENCES</b>				
1	ENGLISH AND FOREIGN LANGUAGES	BA in Chinese	15	High demand for course in Chinese language in this region especially from defense personnel.
		Diploma in English language teaching	10	High demand for trained instructors for English language teaching
		Diploma in French	30	To train translation personnel to work with literary and non-literary texts, especially from Assamese to English and other foreign language and vice versa. The program, in the beginning, will include foreign language translation including German Spanish and Thai
		Diploma in Spanish	30	
		Diploma in German	30	
		Diploma in Thai	15	
PG Diploma in Translation	30			
2	HINDI	M. A. in Hindi	25	To initiate regular Master's courses in addition to existing Certificate and Diploma programme
3	LINGUISTICS AND LANGUAGE TECHNOLOGY	M. A. /Ph. D.	20/5	<p><b>New Department proposed</b></p> <p>The program will meet the demand for teaching positions in this field in colleges and universities and help in building up a corpus of major and lesser known Indian languages.</p>
4	ECONOMICS	M. A./M. Sc./Ph. D.	20/5	<p><b>New Department proposed</b></p> <p>To create knowledge base and</p>

				human resources with an understanding of contemporary economic issues. It will further strengthen the existing Social Science teaching and research programmes of the University
5	SOCIAL WORK	M. A./Ph. D.	10/5	<b>New Department proposed</b> To create trained professionals to meet the demands of the growing development sector of this region
<b>SCHOOL OF MANAGEMENT SCIENCES</b>				
1	BUSINESS ADMINISTRATION	Integrated Ph. D.	10	To cater to the need of dearth of competent faculty in the area of management. Such candidates will be imparted training to become faculty and researcher in the area of management
		Master of Business Management (Technology)	30	Such courses are proposed to take advantage of the wide presence of technical departments as well as Department of Mass Communication and Journalism in the University. The candidates will be trained in management aspects as well as technical aspects to serve specific industries. These course are aimed to be industry oriented and candidates are assumed to serve such needs in a more efficient way as they will be trained in both management and technical aspects of the related industry
		Master of Business Management (Media Management)	30	
2	HOSPITALITY MANAGEMENT	Three-year Bachelor's programme	20	<b>New Department proposed</b> The prospect of tourism and hospitality industry in the region is growing. There is need for trained manpower in such areas. The proposed department will try to train candidates to serve such needs of the hospitality industry
		Two-year Master's programme	20	
		Integrated Master's Programme	20	
<b>CENTRES</b>				
1	DISASTER MANAGEMENT	PG Diploma in Disaster Management	30	The entire NE region of India, in particular Assam, is highly

				vulnerable to different natural and manmade hazards but not a single University of this region is offering any regular PG course on Disaster Management to cater to the needs of trained personnel in government and other organizations
2	WOMEN'S STUDIES CENTRE	Credit course on "Society, Development, Human Rights and Gender".	--	(Interdisciplinary effort) These short term courses will give an idea of gender in all its manifestations. Gender will also be understood in a way as conceptualized in historical cultural and social contexts
		Diploma course "Gender and Development"	10	
3	CENTRE FOR ASSAMESE STUDIES (NEW CENTRE PROPOSED)	Ph. D.	5 (including the Bhupen Hazarika Fellow)	Ph. D. programmes will facilitate intensive research into various aspects of Assamese language. Literature and culture.
		Certificate Programme in Functional Assamese	20	The proposed programme would facilitate learning of Assamese and assimilating in the environment and culture of the region at large.
		PG Diploma in Translation Studies	20	Translation Studies is an emerging discipline especially given the thrust of Government of India on translation through the National Translation Mission and due to the high demand of translation in the IT sector. This course will help the budding translators to cater to their need of theoretical knowledge as well as translation practices.
		Inter-disciplinary Course on History of Assamese language/ literature	40	Assamese language has attained today's status through various morpho-phonetic and syntactical changes over time. This language has also rich history of literature from Hem Swaraswati, Madhab Kandali, Sankardev, Lakshminath Bezbaroa to the present. This

				course is expected to cover various dimensions of Assamese literature and linguistic evolution in a condensed and lucid way.
		PG Diploma in Comparative Literature	20	Of late, the study of Comparative literature has received tremendous academic attention from researchers. It tries to trace the genesis and transformation of literary genres and texts across time and space. This course will train students working in any field to have critical thinking and awareness of different literature of India and the world while focusing on literature in North east India.
		Inter-disciplinary Course in Assamese and Other Indian Languages	30	North east India is seen as the living laboratory of languages by the linguist fraternity. There are various converging and diverging features which are found in Assamese language vis-à-vis other tribal languages of Northeast India. This course will delve into the various common linguistic features in entirety with special reference to some sociolinguistic features.
		PG Diploma on Studies in Vaishnavism in Assam	20	In keeping with the major objective of undertaking extensive research work on Vaishnavism in Assam in the proposed Centre for Sankaradeva Studies as well at the Centre for Assamese Studies, this PG course is expected to prepare students for research in this direction.
	SANKARADEVA STUDIES  (under CENTRE FOR ASSAMESE STUDIES)	Diploma Programme on Traditional Culture of Assam (Paintings, Crafts, Performance and Music )	15	The proposed program would facilitate learning Assamese traditional culture and help in dissemination and preservation of the same.
		Ph. D. in Text Critical Study	5	There are abundance of ancient manuscripts in Assamese , many of them are published in book

				form but a lot is to be done in case of preparation of a dependable text which can be done only by applying the theories of text critical study, hence to produce qualified man power there is necessity of a programme on Text Critical Study
		Ph. D. in Comparative Religious Thought	7	The programme has been envisaged for facilitating better understanding of religious thoughts from a comparative perspective.
		Ph. D. in Comparative Cultures	5	The North Eastern region in general and Assam in particular is a melting pot of cultures having distinct traditions at the levels of religion, social customs, dress, music, dance and crafts. The programme is aimed at creating a sense of mutual understanding of all the cultures of the region at the academic level and also to undertake training and research on these variegated traditions.
	COMPARATIVE RESEARCH AND INDIGENOUS STUDIES (Under CENTRE FOR ASSAMESE STUDIES)	PG Diploma in Indigenous Studies	10	Studies on various ethnic groups in a cross cultural comparative framework and to explore emerging interface between folklore and popular and mass culture
4	PERFORMING ARTS	PG Diploma in Sattriya Dance	15	These programmes are aimed at creating an inspirational environment of performance academics as well as a pool of competent performers and artists in traditional dance and music which are under duress due to onslaughts from modern electronic media. Assam has a rich heritage of dance and music traditions including the Sattriya
		Diploma in Ethnic Dances and Music	10	

				and ethnic dances, music and several dramatic, semi-dramatic and visual art traditions.
5	OPEN AND DISTANCE LEARNING	PG Diploma in Marketing Management	--	--
		PG Diploma in Film Studies	--	--
		PG Diploma in English Language Teaching	--	--
		Diploma in Disaster Management	--	--
		PG Diploma in e-Governance and e-Security	--	--
		Diploma in Community Health	--	--
		PG Diploma in Food Technology	--	--
		PG Diploma in Electronics	--	--
6	INCLUSIVE DEVELOPMENT	Certificate Programme in Communication Skills	50	This aims at improving the skills required for employability of the students.
		Certificate Programme in Skill Development for Unemployed Youth	25	This will be a part of the University's extension service programme. The unemployed rural youths will benefit from this programme.
		Will conduct coaching for NET/SLET/GATE/CIVIL SERVICES and Pre-Examination Training	--	--
		Will conduct Refresher/Orientation Course	--	--
7	ENDANGERED LANGUAGES (Under Linguistics and Language Technology)	Ph. D.	3	The proposed centre is a centre of research activities
8	ASIAN STUDIES (Under Sociology)	Ph. D.	3	The proposed centre is a centre of research activities

9.	Centre for Skill Development	Certificate/Diploma/Advanced Diploma/B.Voc./Community Courses	200	This will be a centre for offering skill development courses under community programmes/Vocational Training etc. for creating skilled workforce from amongst the local youths.
10.	Centre for Innovation	To conduct training/mentoring programmes.	10	To conduct Innovative activities with guidance mentoring. To encourage students and grass root innovations.

### 2.10 New Research Activities to be initiated:

Department	Sl. No.	Activities		Justification
<b>SCHOOL OF ENGINEERING</b>				
CIVIL ENGINEERING	1	Screening of ground vibration		Protecting sophisticated instrument from undue noise, reducing structural damage of foundations
	2	Pseudo-dynamic testing of full scale structures		Better insight into earthquake protection of masonry and RCC structures
COMPUTER SCIENCE AND ENGINEERING	1	Machine Intelligence and Automation unit		To have infrastructure and human resource dedicated to carry out research on several topics of machine intelligence of high relevance in present times, and deliver intensive short term courses to professionals and executives. To boost research in thrust areas by sharing experience with researchers in other institutes engaged in similar work.
ELECTRONICS AND COMMUNICATION ENGINEERING	1	Fabrication of Integrated optics devices for Quantum computing		This is required for development of Quantum computer
	2	Fabrication and characterization of MEMS devices		This is required for development of High speed sensor/ Instruments
	3	Fabrication of RF Integrated circuits for communication circuits		This is required for development of RF devices for WiMAX applications

ENERGY	1	Decentralized power generation through solar-biomass hybrid		Development of suitable technology through solar-hybrid interface Need-based application for decentralized power for self-sufficiency
	2	Tea processing engineering for quality enhancement.		Emphasis will be given on quality enhancement with energy conservation and renewable energy intervention
FOOD ENGINEERING AND TECHNOLOGY	1	Processing set-up for Fruits and vegetables (with complete canning line).		The NE region is rich in fruits and vegetables production. To reduce primary losses a state-of-art pilot processing set-up is required to facilitate on hand training for the persons from this NE region. This plant may also be used for contact hiring for small entrepreneur.
	2	Mini modern rice mill pilot plant		Rice production is highest in the NE region. A limited recourse is available for developing skill manpower for rice milling. This pilot plant will help in developing skilled manpower by providing on-hand training for rice milling.
	3	Sensory evaluation lab		Sensory evaluation of a formulated product is quite necessary to know about its qualitative acceptance.
MECHANICAL ENGINEERING	1	Study of injection system, fuel atomization and spray characteristics using bio-diesel		Thrust research and development activities in renewable bio-fuel for engine
	2	Condition monitoring of rotating machines		Rotating machines are integral part of today's power generating industries
	3	Testing of mechanical properties of engineering materials		Material testing
	4	Mass Transfer Laboratory (Inter-disciplinary)		The knowledge of transport phenomena i.e., how energy and mass can be transported through materials, can be applied to plants, mammalian systems, biological processing, bio-environmental systems etc. An inter-disciplinary approach may be followed. To begin

				with, the facilities will be used along with one proposed open credit course on “Transport Phenomena in Biological and Bioenvironmental Systems”
<b>SCHOOL OF SCIENCES</b>				
CHEMICAL SCIENCE	1	Drug design and its practical applications		New drugs will be designed for practical applications with emphasis on Anticancer and Antituberculosis.
ENVIRONMENTAL SCIENCE	1	Carbon Sequestration by terrestrial ecosystem and carbon dynamics study at agro ecosystem		Large terrestrial ecosystem and agro ecosystem will be used as sink of CO <sub>2</sub> - a potent green house gas
	2	Study on adaptation of biotypes to climate change		Identification of plants biotypes suitable for climate change situation will help the farming community
	3	Flood and erosion research		Research required for flood mitigation and river banking works
	4	Urban microclimatic research		Fast urbanization and its impacts have to be understood and planned
	5	Environmental carcinogens (both in indoor and ambient environment)		The NE region is experiencing high incidence of cancer. Therefore, it is imperative to design and implement systematic research on the environmental carcinogens.
MATHEMATICAL SCIENCES	1	Studies in Biostatistics		Advanced research activities in Biostatistics
MOLECULAR BIOLOGY AND BIOTECHNOLOGY	1	Centre for Molecular Medicine		The research will focus on disease of regional importance to understand the pathogenesis and to contribute to diagnostics and therapeutics. Special emphasis will be given to evolution of new strains and emerging infectious diseases
	2	Microbial Genomics and Evolution		Genome sequence of microbes to study the microbial biodiversity and evolution in NE region
	3	Mapping of artesunate resistance in Assam		Resistance to artesunate has been reported from Cambodia border as well as from Myanmar. Considering the proximity of these regions to Northeast India and that artesunate is the first line of treatment in this region in wake of widespread resistance to chloroquine, documentation of resistance to artesunate is imperative.

	4	Studying polymorphism in immune response genes in populations of North East and their association with the representative infectious and non-infectious diseases		NE region of India are populated with various tribal groups of different genetic backgrounds. Their genetics remains poorly investigated. It is urgently needed to relate the polymorphism with the emerging disease considering the diverse population groups in NE region
EARTH AND ATMOSPHERIC SCIENCE	1	Hydrogeochemical characterization of Fluoride and Arsenic rich ground water of North East India and ground water modeling		Fluoride and Arsenic are a common geogenic contaminant of drinking water of NE India. These elements are highly toxic to human health. The major objectives are: 1. To characterize the hydro-geochemistry of the study area. 2. To evaluate the extent of Fluoride and Arsenic concentration for different types of ground water and assess the main geochemical factors controlling Fluoride and Arsenic enrichment.
	2	Rain water chemistry		Understanding the atmospheric process with respect to the NE region of India. The quality of rain water in a time series can again help planners to prepare strategies of using rain water in the future
<b>SCHOOL OF HUMANITIES AND SOCIAL SCIENCES</b>				
SOCIOLOGY (Asian Studies Centre)	1	Historical and contemporary dynamics of: a. National and International migration to North East India b. Migration within North East India c. Migration from North East India		The North east region being a continental crossroads for centuries, migration studies with a trans-regional relevance has special significance in the region. Need for research with interdisciplinary focus which has trans-regional relevance.
	2	Gendering governance: An assessment of local self government in		Need for gender auditing of institutions of local self government in North East India

		North East India		
	3	Environment, development and displacement in North East India with trans-regional Perspective		Need for interdisciplinary research with a socio-ecological perspective.
CULTURAL STUDIES	1	Museum cum Archive of the Department of Cultural Studies		Collection, Preservation and Display: of tangible heritage resources Recording and Archiving: of intangible traditional knowledge Outreach Programmes: for community sensitization and empowerment.
LINGUISTICS AND LANGUAGE TECHNOLOGY (Including Centre for Endangered Languages)	1	Compiling dictionaries and writing grammar books of the endangered languages; preparing teaching materials for these languages; publishing these works and digital archiving.		The endangered languages could be preserved through these activities.
<b>EXISTING AND PROPOSED CENTRES</b>				
INCLUSIVE DEVELOPMENT (Merging EO Cell, SCT Cell, Training and Placement Cell)	1	To conduct a study on improvement of students in certain crucial areas, such as, communication skills, interview facing techniques, public speaking skills, corporate communication and business writing skills, etc.		The results will be percolated to the students for their improvement in the concerned areas. Especial focused capsule programmes will be designed and conducted at intervals for the purpose (at least twice a year).
	2	To carry out research activities on the tribal languages and culture of the NE India.		The untapped aspects of the indigenous tribal languages and cultures of the North-east India will be brought to light for wider exposure and further research thereon.
	3	Extension of university-		Social responsibility of the University towards the local community

		community interface		
CENTRE FOR PERFORMING ARTS		Interplay of Western and indigenous concepts in the evolution of contemporary Assamese music		Amongst the western music tradition, Rock, Blues, Metal and also evangelical music has had deep impact on the indigenous folk traditions and performative genres of North Eastern Region including Nagaland, Meghalaya, Mizoram and some tribes in Assam and Manipur. Western music has influenced the evolution of popular music forms in the region and merits serious research.
<b>TOTAL</b>				

### 2.11 New Extension Activities and Outreach Programmes to be initiated:

Activity	Justification
Going to various schools of Assam to give popular talks and presentations. Outreach activity will concentrate on subject areas of science and arts (such as Mathematics and English) and general concepts such as earth and environment, universe, health and hygiene, water and food.	(a) One generator for power backup. (b) One Laptop, one projector, 2KV UPS, pointer, screen etc for projection. (c) Two video and one still camera for capturing event. (d) Provision for buying books, maps, globes etc. which will be distributed. (e) Enough provision for consumables etc.
To conduct discussions with interested communities on problems faced by them and suggest as far as possible remedial measures.	
To invite various groups to the University and let them know how we can help them.	
To identify and set up medical camps.	
Total	

### 2.12 Development of ICT facilities:

Activity	Justification
(1) Video Conferencing –at least 03 facilities	It is felt that a multifunctional computing facility is highly necessary for the entire University at large. It is also a demand for technology-based teaching learning activities. This high-tech Central Computing Facility may be used for conducting basic programming Lab classes. A High Performance Computing lab for specialized High Performance based computing requirements of Science & Technology departments. Furthermore,
(2) Cryogenic and Furnishings	
(3) Equipment for Central Computer Centre:- <ul style="list-style-type: none"> <li>• 5 Nos. High Performance Servers</li> <li>• 200 PCs</li> </ul>	

<ul style="list-style-type: none"> <li>• 5 Hi-end Printers</li> <li>• 5 MMPs</li> <li>• Networking</li> <li>• Storage cum Backup Server</li> <li>• CCTV to important locations</li> <li>• Security Devices</li> <li>• UPS systems</li> </ul>	<p>it may also be used to hold events like – Online Campus Recruitment Exam, CAT, TOEFL Exam, Seminars/Workshops, Training programs, Video Conferencing based Lectures/Meetings etc. very smoothly.</p>