



SELF STUDY REPORT

FOR

1st CYCLE OF ACCREDITATION

ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY

TETELIA ROAD, JALUKBARI

781013

www.astu.ac.in

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Submitted To

NATIONAL ASSESSMENT AND ACCREDITATION COUNCIL

BANGALORE

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1. EXECUTIVE SUMMARY

1.1 INTRODUCTION

With an aim for enhancing quality and standard in the uniform course curriculum leading to research in the field of technical education, Assam Science and Technology University was established in the State of Assam in 2011. The legislative department of the Govt. of Assam vide Notification No. LGL.21/2009/46 dated 25th April, 2011 has introduced Assam Act No. VI of 2011. It was also circulated vide Govt. of Assam Notification No. ATE.222/2008/48 dated Dispur 26th February 2010. As a result, Gauhati University, Dibrugarh University & Assam Science and Technology University unanimously accorded to nurture all engineering colleges and private engineering colleges under Assam Science and Technology University. Henceforth, the University has been affiliating all engineering colleges and a few pharmacy colleges (now it is about to migrate to Srimanta Sankaradeva University of Health Science vide Govt. of Assam Notification No. MER.307386/2 dated 06.06.2023 and a few management colleges under Assam Science and Technology University. His Excellency Governor of Assam is the Chancellor of Assam Science and Technology University.

The University approached to the University Grants Commission for inclusion of the University under Section 12(B) of UGC Act, 1956 but the University could not able to registered under Section 12(B) of the UGC Act, 1956 for lack of required faculty sanctioned from the State Government. Recently, University was also approached for 12(B) status of the UGC Act after recent ASTU Amendment Act 2023

Recent Amendment of Assam Science and Technology University (Amendment) Act, 2023

As per No. LGL.261/2022/21.- The Assam Science and Technology University (Amendment) Act, 2023 of the Assam Legislative Assembly which received assent of the Hon'ble Governor of Assam on 13th June, 2023 is published under Assam Act No. XXX of 2023

Vision

1. Give synchronized strategic and operational leadership to technical education of Assam through a unified structure.
2. Create state of the art infrastructure and train excellent academic personnel to be with the international peers.

Mission

1. Establish a platform to participate together by Government and Private organization under unified umbrella.
2. Create facilities for all to participate; Interaction with industries.
3. Interfacing between ASTU and Government Institutes.
4. Immediate formation of review committees for Syllabi from all experts from Assam, AEC, JEC, IITG & others (confidence building); Introduce in 2017-18 session.
5. Review new courses.
6. Participation in various univ. boards by Senior Faculties of Government Institution.

7. Establish QA programme to define roles and responsibilities of all stakeholders.
8. Ph.D guide for qualified faculties of these organizations.
9. Bring in freshness by augmenting infrastructure to be at par with recognized establishments; share them to optimize utilization.
10. Seminars, Workshops, Brain storming meetings among stakeholders.

1.2 Strength, Weakness, Opportunity and Challenges(SWOC)

Institutional Strength

- Government allotted land to the University measuring 10 Bigha plus 36B-4K-10L at Jalukbari, Guwahati, situated among Gauhati University, TISS Guwahati, AEC etc.
- Completed Academic Building
- In progress construction of Academic Block, Guest House cum Seminar Hall, Evaluation Centre and Medical/Emergency room funded by Govt. of Assam / TNEIF Scheme.
- Central Research Hub (CRH) funded by TEQIP scheme of Govt. of India.
- Waste Management Disposal Plan funded by Science and Technology Department, Govt. of Assam
- It has 7 Govt. Engineering Collages, College of Architecture and Planning 1 and other 24 affiliated colleges under Applied Science and Technology.
- Sanctioned Non-Teaching position from Govt. of Assam.
- Funding from the State Government for disbursement of salary.
- Available faculties from the affiliated colleges of ASTU
- Regular declaration of examination result
- Conduct of Convocation
- Consultancy service of the University in the form of conducted various examinations
- Amendment of ASTU Act 2023 empowering teaching and introduction of constituent college (AEC)
- A good number of private institutions (like architecture college, SITM etc.)
- Support and assistance from the State Government.

Publication in the impact factor journals.

Institutional Weakness

- No faculty position sanctioned and concurred from the Govt. of Assam.
- No Central Evaluation System of the student examination due to lack of faculty position
- No introduction of Under Graduate Program/Post Graduate Program in the University campus
- ASTU second campus yet to be developed for accommodating Playground, Gymnasium, Indoor Stadium, Health Centre, Cafeteria urgently for the benefit of student
- Could not registered under Section 12 (B) of the UGC Act 1956 for extracting funding/ scoring for the funding like PM USHA etc.
- Migration of pharmacy courses from ASTU to Srimanta Sankaradeva University of Health Science.
- Non availability of fund for development of the second campus (for complete academic infrastructure)
- Land filling is not done due to paucity of fund.
- There is no University auditorium for accommodating average 2500 students of ASTU for Convocation platform.

Institutional Opportunity

- NKN Connectivity is in process
- Geographical location of the University
- The Concept paper and Detailed Project Report (DPR) for infrastructure development is available for the land measuring 36B-4K-10L.
- Proposal for introduction of Novel courses in ASTU Campus is available.
- A few patenting work and a few good publications from the ASTU
- Introduction of Enterprise Resource Planning (ERP)/ SAMARTH facilitated by the Govt. of Assam
- Guest house accommodation from the University to the Parents, guardians, students of the University
- The University has its own domain www.astu.ac.in

Examination system has been digitalized

Institutional Challenge

- Lack of UGC Accreditation
- Non eligibility to participate in the NIRF ranking process
- Restriction of resource mobilization at present status of the University
- Internalization of Education at present status
- Non ability of introduction of second campus
- Open boundary walls in the second campus (behind Hotel Radisson blue). Therefore, there is a tendency of encroachments.

1.3 CRITERIA WISE SUMMARY

Curricular Aspects

Learning outcome-based curricula are designed for various UG/PG programmes offered by the university as per the guidelines and directives of the regulatory authorities like UGC, AICTE etc. The Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) are distinctly identified; COs have also been mapped with POs. Different statutory bodies like Board of Studies (BoS), Undergraduate (UG) Board, Postgraduate (PG) Board, University Research Committee (URC) and Academic Council (AC) are involved to design the curricula. The university conducts regular exercises on curriculum revision to incorporate contemporary requirements in the course syllabi. It is noteworthy to mention herewith that many features of National Education Policy 2020 have already been implemented in the courses and syllabi of interdisciplinary postgraduate programmes in engineering and technology, particularly in the course syllabi of M.Tech (Energy Engineering). Cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability have been integrated into the teaching-learning process as well as research and innovation activities of the University. Integration of these issues has become more profound with the introduction of National Education Policy – 2020 (NEP-2020) in different programmes of the University. To grow the entrepreneurial mindset and motivate the students to consider the Entrepreneurship as carrier, an Entrepreneurship Development Centre is established by the university in year of 2023 under the project “Establish, Develop and Manage Entrepreneurship Development Centre and Incubation Centres in North East Region’s Educational Institutions” – A project sponsored by North Eastern Council & implemented by Indian Institute of Entrepreneurship, Guwahati (An organization under Ministry of Skill Development and

Entrepreneurship -Govt. of India.

Total 91 (Ninety One) number of certificate/value added courses/Diploma Programme are offered by the university and online courses through different e-platform during the last five years where the students of the university are enrolled and successfully completed. All the programmes, offered by the university during the last five years have the components of field projects or research projects as well as internships. Semester wise feedback for curriculum and its transaction are regularly collected from students and teachers to analyse their views to improve the quality of education.

Teaching-learning and Evaluation

Teaching learning practices plays pivotal role in dissemination of knowledge and overall development of students. Assam Science and Technology University emphasizes on teaching learning practices. The year wise number of sanctioned seats during last five years for M Tech Energy Engineering is Eighteen (18). The average student enrolment percentage for last five years is 58.89%. The university adheres its commitment to diversity and inclusion by admitting eligible candidates for reserved seats. The average percentage of students, enrolled under reserve category for the last five years is around 30%. The number of full time teachers in the institution year wise during the last five years is 5. The average PG Students - Full time teacher ratio for last five years is 1:1. ASTU encourages and follows Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experience and teachers use ICT-enabled tools including online resources for effective teaching learning process. All the classrooms and conference hall are equipped with modern digital facilities like digital boards with internet facilities. The university had established a high-end research facility known as central research hub under external project grant to encourage the students to carry out high quality research works which facilitate experiential learning.

The institution adopts effective Mentor-Mentee Schemes to address academics and student-psychological issues. A faculty member is assigned as a mentor of two-three PG students/mentee.

The Average number of days from the date of last semester-end/ year- end examination till the last date of declaration of results during the last five years is 74. There is no complaints/grievances about evaluation year-wise during the last five years for ASTU. The examination division of Assam Science and Technology University has developed in-house ERP software which includes a total of thirty-nine (39) modules, which allows the examination section to fully automate the entire examination process smoothly.

The student learning outcomes are assessed through different techniques including but not limited to internal examination (class test), assignments, end-term examination, practical assessment, project work assessment, oral presentation, seminars, internship assessment. The variety of elements for continuous assessment and feedback mechanisms enable effective direct and indirect monitoring and measurement of outcomes. The Pass percentage of students for latest completed academic year is almost 100%.

Research, Innovations and Extension

Apart from affiliating university, Assam Science and Technology University (ASTU) is recently recognized by the Govt of Assam as a Teaching and Research University. For promotion of research, ASTU has established a central research hub which is equipped with many high end research facilities in the last five years. Plasma Science, Energy, Material Science, Tribology, solid waste disposal etc are the thrust research area of the

university. For promotion of research work the University has been taking many efforts in recent past. Streamlining of PhD programmes of the University at par with UGC regulations/guidelines, selection of research scholars, supervisors, providing course work in suitable subjects, recognition of research centres, etc. are few of tasks taken care of by the university through University Research Committee (URC) and Academic Council (AC). The university also has an Institutional Ethics Committee (IEC) for maintaining the ethics in research. ASTU has also received approval from AICTE to conduct Ph.D programmes under 'AICTE Doctoral Fellowship (ADF) Scheme' since the academic session 2020-21. A good number of National and International conferences as well as many FDP/workshops/training programmes/competitions are organized by the university and in association with other institutes in the last five years. Total eleven (11) number of students are enrolled in the PhD program and total thirteen (13) numbers of research projects are granted by different government agencies. The faculty members has received a research grant of Rs 106.73 lakhs (Total) in the last five years. To create an ecosystem for innovations, IPR, transfer of knowledge/technology etc, ASTU has established different cells like Patent Cell, Research and Development Cell, Consultative Research Committee (CRC) etc as well as MoU with different National and International Universities/Research Centre/Institutes. ASTU has recently established an Entrepreneurship Development Centre at the university campus as a host institute under a project, sponsored by North Eastern Council, Govt of India. Total four (4) number of teachers are recognized as PhD guides. Total 22 research papers and 5 patents are published during the last five years. Total 37 numbers of books and chapters in edited volumes are published during the last five years.

Infrastructure and Learning Resources

Assam Science and Technology University has adequate facilities for teaching learning activities. The department of the university has adequate class rooms for UG, PG and PhD programs and departmental seminar halls, conference hall with necessary ICT facilities including network connectivity, Wi-Fi coverage, LCD projectors, screens, etc. Internet LAN connectivity has been extended to every laboratories and classrooms under different AICTE schemes. University has also established smart class room in with audio and video facilities. For security reasons, CCTVs are made available in various places of the entire campus. The University central library is having collection of academic resources along with digital library with good number of desktop computers. All the PG and doctoral theses are available in the central library as hard and soft copies. The faculty members and students have access to high bandwidth wi-fi connectivity inside the University. The department has separate computing labs with sufficient number of desktops with licensed software to carry out lab specific simulations, open ended tasks, project works and research work. A wide spectrum of laboratories is operational in the departments and being effectively used for academic and research activities. Safety protocols are strictly enforced and provisions for immediate medical attention (first aid, ambulance and health centre) are available. All the laboratories are fully equipped with lab manuals, wi-fi access, security provisions and updates log books. The computers in the University are connected through LAN and all the switches are supported by a centralized UPS of 10 KVA. Internet facility is provided through the high performance 100 Mbps link of National Knowledge Network (NKN). The percentage of expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years is around 2%. The University authority also adopted a resolution for maintaining a 10% of the savings from the own source for sustainability fund (if fund is available). For continuous efforts for development of the laboratory, sports and sophisticated library system, University has prepared DPR (Detailed Project Report) for construction in the ASTU II campus.

Student Support and Progression

Assam Science and Technology University is constantly providing the necessary assistance to the students of in-house program and affiliated colleges to acquire

meaningful experiences for learning and quality education for holistic development

and progression of the students. The university has conducted gate coaching for B. Tech final year of the students affiliated under ASTU in the year of 2018-19 and 2019-20. Around 200 students from different affiliated colleges are joined in the programme in the year of 2018-19. Employability Training and Test was conducted for the students of affiliated colleges for the academic Year 2020-21. Apart from that, a good number of conferences, workshop, training, expert lectures are conducted to motivate the students for higher studies and provide an exposure with different eminent scholars. Capacity development and skills enhancement activities like expert Lecture On Skill development & Mock Interview, CAREER PERSPECTIVE FOR ENGINEERING STUDENTS POST COVID-19, Training for online campus recruitment, Nourishing the Entrepreneurial leadership in young Engineers etc are organised by the university in the last five years. The university has constituted a Students Grievance Redressal Committee (SGRC) to provide opportunities for redressal of certain grievances of students, enrolled in the in-house program as well as in constituent and affiliated colleges of the University. Around 21% percentage of graduated students have progressed to higher education year-wise during last five years. Even there is no active student council at Assam Science and Technology University during last five years, the university always engage the students in different academic activities through various committees/bodies related to administrative, cocurricular and extra-curricular activities such as Anti-ragging squad.

Governance, Leadership and Management

The main objective of the Assam Science and Technology University (ASTU) is to provide education and research in the field of science & technology and other professional courses in Assam. The university is responsible for academic regulation of all undergraduate and post-graduate programs in engineering, and pharmaceutical sciences and a few professional courses in science and management sectors. ASTU has been undertaking high quality teaching and research in frontier areas of science & technology continuously upgrading the syllabi and creating environment for international standard research and emphasizing in bridging the ancient wisdom of the region with modern technology.

The workforce / Students are consistently given the impression that they are a part of a family. The management fosters a friendly workplace environment. Annual Confidential Report were collected for assessment of Performance of all Government sanctioned posts. The following *Welfare measures for teaching and non-teaching staff are available at university:*

- NPS (Contribution)/ Gratuity / Leave encasement benefit, Maternity Leave in case of female employees, Opportunity for higher studies to the staff, provide Cell-Phones, Intercom, Desktop computer with high-speed internet connectivity, CLs, CCL, Medical Leave and compensatory Leave, Introduction of Medical Insurance Scheme to the employees of ASTU.

For carrier development of faculty and students, the university has encourage to organize different FDP, conferences, workshop, expert lecture etc.

University has a very clear strategy regarding introduction of the courses on self-financing mode as well as creation of fund by internal resource mobilization. Being a new University and only one state Govt. technical

University of Assam, the University is trying to mobilize resources by introducing external recruitment examination of various agencies of the Govt. of Assam. The University also conducted various admission tests as assigned by the Govt. of Assam from time to time and thereby the University is capable to generate a quantum of money for meeting the recurring expenditure for running the academic activities of the University. Apart from that the university has encouraged the faculty members for submitting the project proposals to different government and private agency for financial assistance, patent filling, consultancy etc to generate the resource.

Institutional Values and Best Practices

Science and Technology is the main priority and thrust area of the Assam Science and Technology university. The university has initiated the Gender Audit and measures for the promotion of gender equity during the last five years. The University are being trying to frame audit initiatives for Zero Tolerance to Sexual Harassment and Gender Discrimination by recognizes that sexual harassment and gender discrimination as pervasive problems that negatively impact our community. Sexual harassment and gender discrimination undermine the safety, dignity, and equality of our students, staff, and faculty. A 15 KW hybrid Solar photovoltaic (SPV) power plant has been installed at the rooftop of the Academic Building of Assam Science and Technology University under AICTE GAINER. It aims to generate electricity with the utilization of bifacial monocrystalline solar modules with power rating of 580W (or above). Moreover, a 20 KW hybrid inverter is used. Utilization of these items would definitely enhance the flexibility, energy management and overall sustainability of the plant. For disposal of non-biodegradable waste like plastic waste, a plasma pyrolysis plant with capacity 10 kg/hr is developed for safe disposal of municipal solid waste. All the buildings of ASTU have the ramps facilities to provide a smooth environment for Divyangjan. The University is proactively taking efforts in providing an inclusive environment. The initiatives are to promote better education, economic upliftment of the needy, and set communal harmony. University has always been at the forefront of sensitizing students to the cultural, regional, linguistic, communal, and socio-economic diversities of the state and the nation. The university has conducted sports/ cultural events among the affiliated colleges students. For sensitization of students and employees of the Institution to the constitutional obligations, the university continuously conducts the different events like Independence Day, Republic Day, SAMVIDHAN DIVAS' (CONSTITUTION DAY), CELEBRATION OF HAAR GHAR TIRANGA, AZADI KA AMRIT MAHOTSAV, CELEBRATION OF WOMEN'S DAY, CELEBRATION OF SWACHHATA DAY, ANTI RAGING CAMPAIGN etc. **The best practice of the university is (1) Promotion of Research and innovation with interdisciplinary/multidisciplinary thrust areas, (2) Academic reforms.**

2. PROFILE

2.1 BASIC INFORMATION

Name and Address of the University	
Name	ASSAM SCIENCE AND TECHNOLOGY UNIVERSITY
Address	Tetelia Road, Jalukbari
City	Guwahati
State	Assam
Pin	781013
Website	www.astu.ac.in

Contacts for Communication					
Designation	Name	Telephone with STD Code	Mobile	Fax	Email
Vice Chancellor	Narendra S Chaudhari	0361-2732002	9435092233	-	iqac@astu.ac.in
IQAC / CIQA coordinator	Debajyoti Goswami	-	9706043185	-	fao@astu.ac.in

Nature of University	
Nature of University	State University

Type of University	
Type of University	Affiliating

Establishment Details	
Establishment Date of the University	01-01-2010
Status Prior to Establishment, If applicable	

Recognition Details		
Date of Recognition as a University by UGC or Any Other National Agency :		
Under Section	Date	View Document
2f of UGC	11-05-2016	View Document
12B of UGC		

University with Potential for Excellence	
Is the University Recognised as a University with Potential for Excellence (UPE) by the UGC?	No

Location, Area and Activity of Campus							
Campus Type	Address	Location*	Campus Area in Acres	Built up Area in sq.mts.	Programmes Offered	Date of Establishment	Date of Recognition by UGC/MHRD
Main campus	Tetelia Road, Jalukbari	Urban	3.3	9000	M.Tech Energy Engineering		
Institutes	Tetelia Road, Jalukbari, Guwahati-781013	Urban	1.6	5500	M.Tech Energy Engineering	04-01-2010	26-02-2010

2.2 ACADEMIC INFORMATION

Affiliated Institutions to the University

Type of Colleges	Permanent	Temporary	Total
Arts/Humanities/Social Sciences	0	1	1
Agriculture and Allied Disciplines	0	2	2
Business Administration/Commerce/Management/Finance	0	1	1
Hotel Management/Hospitality/Tourism/Travel	0	1	1
Engineering/Technology/Architecture/Design	0	11	11
Vocational Education	0	1	1
Science	0	5	5
Professional	0	10	10

Furnish the Details of Colleges of University

Type Of Colleges	Numbers
Constituent Colleges	1
Affiliated Colleges	32
Colleges Under 2(f)	0
Colleges Under 2(f) and 12B	0
NAAC Accredited Colleges	0
Colleges with Potential for Excellence(UGC)	0
Autonomous Colleges	0
Colleges with Postgraduate Departments	0
Colleges with Research Departments	0
University Recognized Research Institutes/Centers	0

Is the University Offering any Programmes Recognised by any Statutory Regulatory Authority (SRA)		: Yes
SRA program	Document	
AICTE	116722_15338_1_1714728423.pdf	

Details Of Teaching & Non-Teaching Staff Of University

Teaching Faculty												
	Professor				Associate Professor				Assistant Professor			
	Male	Female	Others	Total	Male	Female	Others	Total	Male	Female	Others	Total
Sanctioned	1				0				4			
Recruited	1	0	0	1	0	0	0	0	4	0	0	4
Yet to Recruit	0				0				0			
On Contract	0	0	0	0	0	0	0	0	4	0	0	4

Non-Teaching Staff				
	Male	Female	Others	Total
Sanctioned				30
Recruited	24	6	0	30
Yet to Recruit				0
On Contract	9	6	0	15

Technical Staff				
	Male	Female	Others	Total
Sanctioned				0
Recruited	0	0	0	0
Yet to Recruit				0
On Contract	0	0	0	0

Qualification Details of the Teaching Staff

Permanent Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	1	0	0	0	0	0	0	0	0	1
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Temporary Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	4	0	0	4
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Part Time Teachers										
Highest Qualification	Professor			Associate Professor			Assistant Professor			
	Male	Female	Others	Male	Female	Others	Male	Female	Others	Total
D.sc/D.Litt/LLD/DM/MCH	0	0	0	0	0	0	0	0	0	0
Ph.D.	0	0	0	0	0	0	0	0	0	0
M.Phil.	0	0	0	0	0	0	0	0	0	0
PG	0	0	0	0	0	0	0	0	0	0
UG	0	0	0	0	0	0	0	0	0	0

Distinguished Academicians Appointed As

	Male	Female	Others	Total
Emeritus Professor	0	0	0	0
Adjunct Professor	0	0	0	0
Visiting Professor	0	0	0	0

Chairs Instituted by the University

Sl.No	Name of the Department	Name of the Chair	Name of the Sponsor Organisation/Agency
1	Energy Engineering	NIL	Not Applicable.

Provide the Following Details of Students Enrolled in the University During the Current Academic Year

Programme		From the State Where University is Located	From Other States of India	NRI Students	Foreign Students	Total
PG	Male	3	0	0	0	3
	Female	3	0	0	0	3
	Others	0	0	0	0	0
Doctoral (Ph.D)	Male	0	0	0	0	0
	Female	0	0	0	0	0
	Others	0	0	0	0	0

Does the University offer any Integrated Programmes?	No
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Details of UGC Human Resource Development Centre, If applicable

Year of Establishment	Nil
Number of UGC Orientation Programmes	0
Number of UGC Refresher Course	0
Number of University's own Programmes	0
Total Number of Programmes Conducted (last five years)	0

2.3 EVALUATIVE REPORT OF THE DEPARTMENTS

Department Name	Upload Report
Energy Engineering	View Document

Institutional preparedness for NEP

1. Multidisciplinary/interdisciplinary:	Assam Science and Technology University had implemented the NEP 2020 for all the 3 years UG programsto carry out multidisciplinary and holistic education and research from the academic session 2023-24. Apart from major and minor courses, different ability enhancement courses, value aided
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	<p>courses, vocational courses, skill enhancement courses, multi-disciplinary/interdisciplinary courses, Indian knowledge system etc are introduced in the revised syllabus for all the courses. The implementation for NEP 2020 for technical courses will be introduced from next session. The courses curriculum are already developed as per NEP 2020 by the university. A central research hub with multidisciplinary research facility was established by the university. To carry out multidisciplinary research, ASTU has signed a good number of MoU with different international and national academic/research institutes as well as with different industry.</p>
2. Academic bank of credits (ABC):	<p>Assam Science and Technology University has already registered with digi locker. and Academic bank of Credit. More than 9000 students are already have created ABC ID. The university has initiated uploading of marksheet credit data in digi locker ABC as per the directive of UGC.</p>
3. Skill development:	<p>As per NEP 2020, the university has already included different skill based courses in the syllabus of UG programmes. The university has conducted different skill based programs/training/internship in the last five years to strengthen the soft skills of students. The university started few vocational and skill based courses at the affiliated colleges of ASTU. The university started few vocational UG and PG courses on Food Processing and Quality Management at the affiliated colleges. Few skill based certification and diploma courses are run by the university under different affiliated institutes like National Institute of Electronics & Information Technology, Guwahati, National Power Training Institute (NPTI), Guwahati, Seva Bharati Purbanchal (Seva Bharati Institute of Fire, Safety and Disaster Management) etc. Apart from that the university has organized different skill based programs and training for the students to sensitize them. The university has recently established an Entrepreneurship Development Centre with financial assistance of North Eastern Council, Shillong to strengthen the vocational and skills based education to promote entrepreneurship.</p>
4. Appropriate integration of Indian Knowledge system (teaching in Indian Language, culture, using online course):	<p>As per NEP 2020, Assam Science and Technology University has initiated to promote the IKS with inclusion in the UG/PG curriculum in phase manner.</p>

	To understand the IKS by our students, a Hindi reference section has established at central library of the university with financial assistance of NEC (North Eastern Council).
5. Focus on Outcome based education (OBE):	Curriculum of programmes are revised in line of Outcome Based Education (OBE). Objectives and Course outcomes are mentioned in the syllabus which is available in the University website. To develop innovative curricula for Outcome based education as well as more aligned with industry requirements, the BoS/academic council is constituted with subject experts from different nationally reputed academic institutes and industry. For involvement of students for community engagement and service, community based mini projects are included in the PG syllabus as compulsory projects.
6. Distance education/online education:	The university promotes online education through MOOCs and other approved platforms like SWAYAM, NPTEL etc. The university academic council also approved to opt 40% of total courses through MOOCs. A detail about the MOOCs and Digital learning are available at university web page (Ref: https://astu.ac.in/?page_id=5912).

Institutional Initiatives for Electoral Literacy

1. Whether Electoral Literacy Club (ELC) has been set up in the College?	ELC are being introduced
2. Whether students' co-ordinator and co-ordinating faculty members are appointed by the College and whether the ELCs are functional? Whether the ELCs are representative in character?	N/A
3. What innovative programmes and initiatives undertaken by the ELCs? These may include voluntary contribution by the students in electoral processes-participation in voter registration of students and communities where they come from, assisting district election administration in conduct of poll, voter awareness campaigns, promotion of ethical voting, enhancing participation of the under privileged sections of society especially transgender, commercial sex workers, disabled persons, senior citizens, etc.	N/A

4. Any socially relevant projects/initiatives taken by College in electoral related issues especially research projects, surveys, awareness drives, creating content, publications highlighting their contribution to advancing democratic values and participation in electoral processes, etc.	N/A
5. Extent of students above 18 years who are yet to be enrolled as voters in the electoral roll and efforts by ELCs as well as efforts by the College to institutionalize mechanisms to register eligible students as voters.	N/A

Extended Profile

1 Students

1.1

Number of students on rolls year wise during last five years

2022-23	2021-22	2020-21	2019-20	2018-19
22	35	18	8	8
File Description		Document		
Institutional Data in prescribed format		View Document		

1.2

Number of final year outgoing students year wise during last five years

2022-23	2021-22	2020-21	2019-20	2018-19
13	12	1	8	0
File Description		Document		
Institutional data in prescribed format		View Document		

2 Teachers

2.1

Number of full time teachers in the institution year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
5	5	5	5	5
File Description		Document		
Institutional data in prescribed format		View Document		

2.2

Total number of full time teachers worked/working in the institution (without repeat count) during last five years:

Response: 5

File Description	Document
Institutional data in prescribed format	View Document

3 Institution

3.1

Total expenditure excluding salary year wise during the last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
463.25	401.47	430.24	333.38	340.90

4. Quality Indicator Framework(QIF)

Criterion 1 - Curricular Aspects

1.1 Curriculum Design and Development

1.1.1

Curricula developed and implemented have relevance to the local, regional, national, and global developmental needs, which is reflected in the Programme outcomes (POs), and Course Outcomes(COs) of the Programmes offered by the University

Response:

The university has developed and implemented the learning outcome-based curricula for the programmes offered by it through its in-campus department, the constituent colleges and affiliated colleges/institutes which have the **relevance to the local, regional, national, and global developmental needs**.

The Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) are distinctly identified; COs have also been mapped with POs. The guidelines and directives of the regulatory authorities such as AICTE, UGC, etc are taken into special consideration during the time of developing and revising the learning outcome based curriculum for each of the programme.

The entire exercise of revising and updating learning outcome based curriculum (with syllabi and course structure) are carried out following the review and approval by different statutory bodies such as Board of Studies (BoS), Undergraduate (UG) Board, Postgraduate (PG) Board, University Research Committee (URC) and Academic Council (AC). The approved and updated curriculums are shared in the university website so that the stakeholders can go through it, whenever necessary.

The curriculums are designed with a central objective of holistic development of the learners. In order to achieve this objective, wide variety of elective courses viz. programme specific electives, open elective courses and audit courses are included in the curriculum. Important components and topics such as the research gap analysis, innovation, start-up and entrepreneurial prospects, project management, industry readiness, energy environment interactions, ecosystem sustainability, renewable energy technologies, waste to energy technology, constitutional rights, research methodology, intellectual property rights, human values, professional ethics, etc are included in different courses; especially focusing towards overall professional developments of the students.

Extensive research projects, industrial visits and studies with communities (or enterprises) are incorporated in the curriculum with an aim to familiarize the students with relevant engineering and socio-economic problems, community based practices, community requirements and real-world working environment in industry/start-ups.

The interdisciplinary nature of the postgraduate programmes in engineering and technology, particularly the course syllabi of M.Tech (Energy Engineering) programme facilitates energy and environmental issues which are much relevant to local, regional, national and global developmental needs. Many features of National Education Policy 2020 has already been implemented in the courses and syllabi of the programmes. Courses on renewable energy technologies, waste to energy conversion, energy system

modeling and simulation, energy scenario, energy economics, energy planning, power plant engineering, petroleum production and refining, fuels and combustion technology etc are being offered by the university; which imparts knowledge (to the learners) pertaining to sustainable developments in the local, regional, national and global perspectives.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

1.1.2

The Programmes offered by the institution focus on employability/ entrepreneurship/ skill development and their course syllabi are adequately revised to incorporate contemporary requirements

Response:

The university has developed and implemented the learning outcome-based curricula for the programmes offered by it through its in-campus department, the constituent colleges and affiliated colleges/institutes.

The Programme Outcomes (POs), Programme Specific Outcomes (PSOs) and Course Outcomes (COs) are distinctly identified; COs have also been mapped with POs. The guidelines and directives of the regulatory authorities such as AICTE, UGC, etc are taken into special consideration during the time of developing and revising the learning outcome based curriculum for each of the programme.

A number of programme specific electives and open elective courses are being offered in the curriculum with an aim towards holistic development of students. Relevant courses focusing on current trends in different disciplines, research gap analysis, innovation, start-up and entrepreneurial prospects, project management, industry readiness, energy environment interactions, ecosystem sustainability, renewable energy technologies, waste to energy technology, constitutional rights, research methodology, intellectual property rights, human values, professional ethics, etc are implemented for overall professional developments of the students.

Extensive research projects, industrial visits and studies with communities are incorporated in the curriculum with the objectives to familiarize the students with relevant engineering and socio-economic problems, community based practices, community requirements, and real-world working environment in industry/start-ups.

The university conducts regular exercises on curriculum revision to incorporate contemporary requirements in the course syllabi. It is noteworthy to mention herewith that many features of National Education Policy 2020 have already been implemented in the courses and syllabi of interdisciplinary postgraduate programmes in engineering and technology, particularly in the course syllabi of M.Tech (Energy Engineering). The theory courses on renewable energy technologies, waste to energy conversion, energy system modeling and simulation, energy scenario, energy economics, energy

planning, power plant engineering, petroleum production and refining, fuels and combustion technology etc along with one year dissertation projects, industrial visits, studies with communities or enterprises and laboratory courses can give ample opportunities to the students for carrying out entrepreneurship activities, innovation and start-ups, skill development activities, and also facilitate employment in academia and industrial sectors.

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

1.2 Academic Flexibility

1.2.1 Percentage of new courses introduced out of the total number of courses across all programmes offered during the last five years Response: 0	
1.2.1.1 Number of new courses introduced during the last five years:	
1.2.1.2 Consolidated number of courses offered by the institution across all Programmes (without repeat count) during the last five years : Response: 60	
File Description	Document
Subsequent Academic Council meeting extracts endorsing the decision of BOS	View Document
Minutes of Board of Studies meeting clearly specifying the syllabus approval of new courses	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

1.3 Curriculum Enrichment

1.3.1 Institution integrates cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability and other value framework enshrined in Sustainable Development

Goals and National Education Policy – 2020 into the Curriculum

Response:

Cross-cutting issues relevant to Professional Ethics, Gender, Human Values, Environment and Sustainability have been integrated into the teaching-learning process as well as research and innovation activities of the University. ASTU as a teaching and research university of the State focuses on endorsing these issues through academic curricula of different disciplines. It is evident from the wide range of courses offered by the University. Integration of these issues has become more profound with the introduction of National Education Policy – 2020 (NEP-2020) in different programmes of the University.

Professional ethics

The topics of Research ethics have been included in the M.Tech programmes as per the guidelines of AICTE's Model Curriculum. The M.Tech students need to undergo a compulsory 2 (two) Credit course on 'Research Methodology and IPR' in which the topics of 'Research Ethics' are included. The doctoral students of the University also mandatorily need to enroll in a 2 (two) credit Coursework on 'Research Ethics' as per the UGC recommendation. The revised PhD Regulation of ASTU which was adopted in 2023 also emphasizes on research ethics as per the directions and guidelines suggested by the UGC and AICTE from time to time. Students have to follow the various principles of research ethics as per guidelines issued by various competent authorities of the University. ASTU has already constituted an Institutional Ethics Committee (IEC) as a part of maintaining and managing professional ethics in research and academic activities of the university.

Gender and Human values

The university has been conducting various programmes on Gender sensitization issues since the days of its establishment. The University has a specific mechanism to address various gender related issues and grievances. An Internal Complaint Committee has already been constituted in this regard.

Courses such as Value Education, Constitution of India, Pedagogy Studies, Stress Management by Yoga and Personality Development through Life Enlightenment Skills are already been introduced in PG programmes which reflects the commitment of the University for upholding the Human Values. These are in accordance with UN's Sustainable Development Goals and NEP 2020.

Environment and Sustainability

In line with UN Sustainable Development Goals, such as SDG 7: Affordable and Clean Energy, SDG 8: Decent Work and Economic Growth and SDG 12: Responsible Consumption and Production; the course structure and curriculum of PG Programme on Energy Engineering has been designed. The energy and environment related issues, in teaching and research activities of the University, are addressed with waste to energy technology, renewable energy technology, waste management, environmental sustainability, circular and sustainable economy, etc. Broad objectives of 'Environment and Sustainability' is emphasized in the syllabi of the M.Tech Courses such as Solar and Bio Energy Technologies, Alternate Energy Technologies, Energy Scenario and Energy Policy, Energy and Society, Waste to Energy, Environmental Science and Engineering, Energy, Ecology and Environment, Energy, Environment and Climate Change, Power Plant Engineering, Energy Conservation and Waste Heat Recovery, Energy Generation from Waste, Energy Audit and Management, etc. Moreover 'Studies with Community', one

(1) year Major Project, field visits and practical works are part of the curriculum; these subjects provide the students with enormous opportunity to understand the relevant topics of energy, environment and sustainability as well as search for feasible solutions of various emerging issues (on environment and sustainability).

File Description	Document
Upload Additional information	View Document
Provide Link for Additional information	View Document

1.3.2

Number of certificate/value added courses/Diploma Programme offered by the institutions and online courses of MOOCs, SWAYAM/e Pathshala/ NPTEL and other recognized platforms (without repeat count) where the students of the institution have enrolled and successfully completed during the last five years

Response: 0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

1.3.3

Percentage of programmes that have components of field projects / research projects / internships during the last five years.

Response: 100

1.3.3.1 Total Number of programmes that have components of field projects / research projects / internships (without repeat count) during the last five years

Response: 2

1.3.3.2 Total Number of programmes offered (without repeat count) during the last five years

Response: 2

File Description	Document
Program and course contents having element of field projects / research projects / internships as approved by BOS	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

1.4 Feedback System

1.4.1

Structured feedback for curriculum and its transaction is regularly obtained from stakeholders like Students, Teachers, Employers, Alumni, Academic peers etc., and Feedback processes of the institution may be classified as follows:

Response: C. Feedback collected and analysed

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Feedback analysis report submitted to appropriate committee/bodies	View Document
At least 4 filled-in feedback form from different stake holders like Students, Teachers, Employers, Alumni etc.	View Document
Action taken report on the feedback analysis and its report to appropriate committee/bodies	View Document

Criterion 2 - Teaching-learning and Evaluation

2.1 Student Enrollment and Profile

2.1.1

Enrolment percentage

Response: 58.89

2.1.1.1 Number of sanctioned seats year wise during last five years

2022-23	2021-22	2020-21	2019-20	2018-19
18	18	18	18	18

2.1.1.2 Number of seats filled year wise during last five years (Only first year admissions to be considered)

2022-23	2021-22	2020-21	2019-20	2018-19
9	18	18	0	8

File Description

Document

Institutional data in the prescribed format (data template)

[View Document](#)

Document relating to sanction of intake as approved by competent authority

[View Document](#)

Provide Links for any other relevant document to support the claim (if any)

[View Document](#)

2.1.2

Percentage of seats filled against reserved categories (SC, ST, OBC etc.) as per applicable reservation policy for the first year admission during the last five years

Response: 63.89

2.1.2.1 Number of actual students admitted against the reserved categories in the first year of the programme year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
5	8	8	0	2

2.1.2.2 Total number of seats earmarked for reserved category as per GOI or State Government rule year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
9	9	9	9	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

2.2 Catering to Student Diversity

2.2.1

The institution assesses the learning levels of the students and organises special Programmes to cater to differential learning needs of the student

Response:

ASTU has implemented Post Graduate curricula as per AICTE regulation. The University assesses the learning levels of students and organizes different types of special programmes to cater differential learning needs of students based on their learning levels. Initially, the learning levels of the newly admitted students are identified through different process like face to face interaction, group discussion, presentation and performance during classroom session. During class interaction, various questions are asked to identify slow and advance learner students. This could include students who are struggling with certain concepts, those who have advanced beyond the standard curriculum or those who simply learn best through alternative methods. These approaches recognize that students have varying abilities and aim to tailor teaching methods and content to accommodate these differences. Special focuses/support are provided to the slow learner students to improve their academic and personality development by conducting extra/Remedial/tutorial classes for such students. Regular progress about the performance of such students are monitored by the teacher. By implementing these strategies, the university creates a supportive and inclusive learning environment where slow learners to feel valued, supportive and empowered to succeed.

Catering to the learning needs of advance learner students who may require additional support to further improve their skills. To improve the quality and skill of the students, the university has organized and encourage the students to participate in expert lectures on promising topics by eminent speakers, workshops, training session, conferences, competition etc. The advance learner students are also advised

to access the online educational platform to improve their knowledge. The advance learner students are allowed to take part in different R&D activities of the university during their post graduate program to improve their skill and technical knowledge for innovation.

2.2.2

Student - Full time teacher ratio (Data for the latest completed academic year)

Response: 4.4

2.3 Teaching- Learning Process

2.3.1

Student centric methods, such as experiential learning, participative learning and problem solving methodologies are used for enhancing learning experience and teachers use ICT- enabled tools including online resources for effective teaching and learning process

Response:

ASTU encourages and follows Student centric methods, such as experiential learning, participative learning and problem-solving methodologies are used for enhancing learning experience and teachers use ICT-enabled tools including online resources for effective teaching learning process. This is achieved by the following ways: -

- Offering hands on practical courses corresponding to theory courses.
- Compulsory Industrial visit and community based mini project.
- Industry Lectures and Interactions with industries.
- University has an Entrepreneurship development centre and incubation centre
- Regular assignments on problem solving, presentations and group discussions.
- Encourage students to participate in events at regional and National levels.
- Offers wi-fi connectivity for accessing online learning resources like Swayam, NPTEL, etc.
- All classes are equipped with modern facilities like digital boards with internet facilities.
- Conference hall is equipped with multimedia facilities using ICT tools. Invited talks, workshops and seminars are conducted in conference hall using ICT facilities.
- ASTU has a high-end research facility established under TEQIP-III project that encourage students to take up quality project which facilitate experiential learning.

2.3.2**The institution adopts effective Mentor-Mentee Schemes to address academics and student-psychological issues****Response:**

The institution adopts effective Mentor-Mentee Schemes to address academics and student-psychological issues. A faculty member is assigned as a mentor of two-three PG students/mentee. The role of the mentor is

- To meet the students twice in a month either online or offline.
- Make them aware about the existing system of the institute related to academic, professional development
- Guide on personal matter as well.
- Monitor the academic activities of the students on regular basis and help them
- Clear their doubts and queries if any
- Reporting to parents in case of any irregularities, negative behavioural changes, etc.
- Mentee are also required to update their mentors regarding their academic activities and any issue related to their personal matters.

File Description	Document
Upload any additional information	View Document

2.4 Teacher Profile and Quality**2.4.1****Average percentage of full time teachers appointed against the number of sanctioned posts year wise during the last five years**

Response: 100

2.4.1.1 Total Number of Sanctioned year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
5	5	5	5	5

File Description	Document
Sanction letters indicating number of posts sanctioned by the competent authority (including Management sanctioned posts).	View Document
Institutional data in the prescribed format (data template merged with 2.4.3 and 2.4.4)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.4.2

Percentage of full time teachers with Ph.D./D.M/M.Ch./D.N.B/ Superspeciality/L.L.D/D.S.C/D.Litt. during the last five years

Response: 100

2.4.2.1 Number of full time teachers with Ph.D./D.M/M.Ch./D.N.B/ Superspeciality/L.L.D/D.S.C/D.Litt Superspecialist during the last five years

Response: 5

File Description	Document
List of faculty having Ph.D./D.M/M.Ch./D.N. Superspeciality/ along with particulars of the degree awarding university, subject and the year of award per academic year.	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.4.3

Average teaching experience of full time teachers (Data to be provided only for the latest completed academic year, in number of years)

Response: 7.6

2.4.3.1 Total teaching experience of full-time teachers as of latest completed academic year

Response: 38

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.5 Evaluation Process and Reforms

2.5.1

Average number of days from the date of last semester-end/ year- end examination till the last date of declaration of results during the last five years

Response: 74

2.5.1.1 Number of days from the date of last semester-end/ year- end examination till the last date of declaration of results year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
126	112	0	0	132

File Description	Document
Institutional data in the prescribed format (data template)	View Document

2.5.2

Percentage of student complaints/grievances about evaluation against total number of students appeared in the examinations during the last five years

Response: 0

2.5.2.1 Number of complaints/grievances about evaluation year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

2.5.2.2 Number of students appeared in the examination conducted by the institution year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
12	13	3	5	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

2.5.3

Status of automation of Examination division along with approved Examination Manual/ordinance

Response: A. 100% automation of entire division & implementation of Examination Management System (EMS)

File Description	Document
The screenshot should reflect the HEI name and the name of the module.	View Document
The report on the present status of automation of examination division including screenshots of various modules of the software.	View Document
Institutional data in the prescribed format (data template)	View Document
Copies of the purchase order and bills/AMC of the software.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

2.6 Student Performance and Learning Outcomes

2.6.1

The institution has stated learning outcomes (Program and Course outcomes)/graduate attributes which are integrated into the assessment process and widely publicized through the website and other documents and the attainment of the same are evaluated by the institution

Response:

- The courses at Assam Science and Technology University focus on development of aptitude, skills, ability and capacity in the students to achieve excellence in employment, leadership,

research, development of critical thinking, ethics, responsible citizenship, engineering, language and communication skills. The learning outcomes are clearly defined using blooms taxonomy for all academic programmes and courses of the university. They are instrumental in achieving the mission and objective of the university. The constituent and affiliated colleges have drafted the graduate attributes as per the guidelines of respective council. The advanced computing, internet and Wi-Fi facilities are deployed and e-learning facilities are made available to enhance the student learning activities.

- Programme specific outcomes are designed to address various aspects involving creation of employable human resources, developing ability of the students to identify, formulate and solve multidisciplinary problems with cultural, societal, environmental and sustainable development-based considerations, industrial problems, developing professional and entrepreneurship skills, excel ethically in each profession and engage in independent and life-long learning.
- Student learning outcomes are assessed through different techniques including but not limited to internal examination (class test), assignments, end-term examination, practical assessment, project work assessment, oral presentation, seminars, internship assessment. The variety of elements for continuous assessment and feedback mechanisms enable effective direct and indirect monitoring and measurement of outcomes and appropriately identify and address gaps.
- The learning outcomes are also reviewed regularly by examiners and experts in the Departmental meetings as well as the Board of Studies, and IQAC. The syllabus is prepared based on course outcomes that include objectives, content, textbooks, practicals, and references, lecture outlines, evaluation patterns etc.

File Description	Document
Upload COs for all courses (exemplars from Glossary)	View Document

2.6.2

Pass percentage of students (excluding backlog students) (Data to be provided only for the latest completed academic year)

Response: 92.31

2.6.2.1 Total number of final year students who passed the examination conducted by Institution.

Response: 12

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Annual report of COE highlighting the pass percentage of students	View Document

2.7 Student Satisfaction Survey

2.7.1

Online student satisfaction survey regarding teaching learning process

Response: 3.73

File Description	Document
Upload any additional information	View Document

Criterion 3 - Research, Innovations and Extension

3.1 Promotion of Research and Facilities

3.1.1

The institution's Research facilities are frequently updated and there are well defined policy for promotion of research which is uploaded on the institutional website and implemented

Response:

(A) Updating of Research Facilities:

ASTU – which is recognized by the Govt of Assam as a Teaching and Research University has taken lot of initiatives to augment its research infrastructure. The major thrust areas for researches are as follows:

- a) Energy Technology: Renewable Energy technologies, Biomass Conversion Technologies, Biofuel and Bioenergy, Waste to Energy, Energy Conversion and management, Waste management, Bioresource Technology, Environmental Sustainability
- b) Plasma Science: Coating Technology, Plasma Agriculture and Medicine, Plasma Pyrolysis, MSW Disposal Technology, Radiation Technologies
- c) Material Science & Engineering: Development of High Strength Steel , Al-Mg-Si Alloy Systems, Ti Alloys, Development of novel vibration damping materials
- d) Tribology: Tribological characterization of biomaterials and lubricants, Characterization of Journal Bearings, Metal Characterization, Friction & Wear, Coating Technologies, Investigation of failure.

Within a short period of time, the faculties and students of the university are successful in publication of research works in different reputed international journals and as patents. The university has established also Central Research Hub in 2019 with the following laboratories:

- Multi-disciplinary Experimental & Testing Accessible Laboratory (METAL)
- Energy Research Laboratory (EEL)
- Material Science Research Laboratory (MSRL)
- Tribology Laboratory (TL)
- Computational Research Laboratory
- Internal Combustion Engine Research Laboratory
- Plasma Pyrolysis Laboratory

Major Facilities Available: Thermogravimetric Analyzer (TGA), Differential Scanning Calorimetry

(DSC), Pyrolysis Unit (lab scale), Bomb Calorimeter, Rheometer, Flush Point and Fire Point Apparatus, Cloud Point and Pour Point Apparatus, Flue gas analyzer, Single Phase power Analyzer, Hot air oven, Muffle Furnace, Soxhlet Extraction Unit, Solar Cooker, Muffle Furnace, Soxhlet Extraction Unit, Solar Cooker, Biomass Cooking Stoves, Hybrid Solar PV Plant, Flat Plate Collector, Evacuated Tube Collector, Pyranometer, Sunshine Duration Recorder, Weather metering system, Water/Soil analysis kit, Electrical Shaker with Auger, Flame photometer, Centrifuge, Atomic absorption spectrometer, pH meter, iPVD reactor, EGD reactor, TTO derived plasma reactor, Micro Hardness tester, Muffle Furnace, Optimal Microscope, metallurgical sample reparation unit, Four Ball Tester, Journal Bearing Tester, Pin/Ball on disc tribometer, ANSYS CFD, ANSYS STRUCTURAL, PV SYST, System Advisor Model (SAM), MATLAB, VCR-CRDI Single cylinder IC Engine System, Flue Gas Analyzer, Data Interpretation System, Plasma Pyrolysis system

(B) Promotion of research

Ø For promotion of research work the University has been taking many efforts in recent past. Streamlining of PhD programmes of the University at par with UGC regulations/guidelines, selection of research scholars, supervisors, providing course work in suitable subjects, recognition of research centres, etc. are few of tasks taken care of by the university through University Research Committee (URC) and Academic Council (AC). The university also has a Institutional Ethics Committee (IEC) for maintaining the ethics in research

Ø The PhD regulations of the University has also been updated as per the University Grants Commission (Minimum Standards and Procedures for Award of Ph.D. Degree) Regulations, 2022, which can be seen at: https://astu.ac.in/?page_id=33096

Ø It is noteworthy to mention herewith that ASTU has also received approval from AICTE to conduct Ph.D programmes in Energy Engineering, Chemical Engineering, Mechanical Engineering and Computer Engineering disciplines under 'AICTE Doctoral Fellowship (ADF) Scheme' since the academic session 2020-21. ASTU is among the 41 (forty-one) technical institutions of the country and the only university in Assam besides Tezpur University which is selected by AICTE to conduct the doctoral programme under ADF scheme.

File Description	Document
Upload COs for all courses (exemplars from Glossary)	View Document
Provide links as Additional Information	View Document

3.1.2

The institution provides seed money to its teachers for research (average per year)

Response: 1.63

3.1.2.1 Amount of seed money provided by institution to its teachers for research year wise during last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	8.17	0

File Description	Document
Sanction letters of seed money to the teachers is mandatory	View Document
Institutional data in the prescribed format (data template)	View Document

3.1.3

Percentage of teachers receiving national / international fellowship / financial support by various agencies for advanced studies / research during the last five years.

Response: 0

3.1.3.1 Number of teachers who received national/ international fellowship/financial support from various agencies, for advanced studies / research; year-wise during the last five years

File Description	Document
Institutional data in the prescribed format (data template)	View Document

3.1.4

Percentage of JRFs, SRFs among the enrolled PhD scholars in the institution during the last five years

Response: 81.82

3.1.4.1 The Number of JRFs, SRFs among the enrolled PhD scholars in the institution during the last five years

Response: 9

3.1.4.2 Number of PhD Scholars enrolled during last five years

Response: 11

File Description	Document
List of JRFs, SRFs, Post Doctoral Fellows, Research Associates and other research fellows along with the details of the funding agency is to be provided.	View Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.2 Resource Mobilization for Research

3.2.1

Total Grants research funding received by the institution and its faculties through Government and non-government sources such as industry, corporate houses, international bodies for research project, endowment research chairs during the last five years (INR in Lakhs)

Response: 106.73

File Description	Document
Institutional data in the prescribed format (data template)	View Document

3.2.2

Number of research projects per teacher funded by government, non-government, industry, corporate houses, international bodies during the last five years

Response: 2.6

3.2.2.1 Number of research projects funded by government and non-government agencies during the last five years

Response: 13

File Description	Document
List of project titles with details of Principal Investigator, amount sanctioned and sanctioning agency etc.	View Document
Institutional data in the prescribed format (data template merged with 3.2.1)	View Document
E-copies of the grant award letters for research projects sponsored by government agencies.	View Document

3.3 Innovation Ecosystem

3.3.1

Institution has created an ecosystem for innovations, Indian Knowledge System (IKS), including awareness about IPR, establishment of IPR cell, Incubation centre and other initiatives for the creation and transfer of knowledge/technology and the outcomes of the same are evident

Response:

ASTU has set up a roadmap for creating an ecosystem for innovations including Incubation centre and other initiatives for creation and transfer of knowledge. The main vision for creating the innovation ecosystem would be to fostering creativity, collaboration, and problem-solving among students, faculty, and external stakeholders. Some key aspects of the same are as follows:

1. Space for collaboration: It would provide a physical space equipped with resources and facilities where individuals from diverse backgrounds can come together to brainstorm ideas, work on projects, and exchange knowledge.
2. Support for entrepreneurship: Offering support and resources for students and faculty interested in entrepreneurship, including mentorship, access to funding, and guidance on launching startups shall be a key component. Entrepreneurship development and innovation centers play a vital role in nurturing a culture of innovation and entrepreneurship within educational institutions, preparing students to tackle complex challenges and thrive in an ever-changing world
3. Technology and prototyping: The innovation center shall be equipped with advanced technology such as 3D printers, prototyping tools, and software for design and development, enabling students to bring their ideas to life and test prototypes.
4. Interdisciplinary collaboration: By bringing together students and faculty from different disciplines, the innovation center would facilitate collaboration in different interdisciplinary domains of science and technology. Such initiatives will definitely provide the space for the cross-pollination of ideas and the exploration of new perspectives.
5. Community engagement: The University focuses on strengthening its network with broader community through research and innovation activities. Engaging with the broader community, including

industry partners, startups, government agencies, and non-profit organizations, fostering connections and opportunities for collaboration and knowledge exchange.

6. Experiential learning: Through hands-on projects, workshops, hackathons, and other events hosted by the innovation center, students would gain practical experience and develop critical skills such as problem-solving, teamwork, and communication.

To create an eco-system to consider Entrepreneurship as an alternative career by the young students of higher educational institution, ASTU has recently established, Develop an Entrepreneurship Development Centre and Incubation Centre at the university campus. ASTU has already been selected as a host institute to establish an Entrepreneurship Development Centre (EDC) and Incubation Centre (IC) at the university campus within a project entitled “Establish, Develop and Manage Entrepreneurship Development Centre (EDC) and Incubation Centre (IC) in the Educational Institute of North Eastern Region” sponsored by North Eastern Council. The main objectives behind the establishment of this EDC and IC are: Provide Training to the stakeholders of the university to grow the entrepreneurial mindset with proper innovation among the students, explore the scope of entrepreneurship in North-Eastern Region of India and creating awareness among the students on different Government initiatives and supports for entrepreneurship. The project implementation would be supervised by Indian Institute of Entrepreneurship, Guwahati. Various activities like Different Entrepreneurship Awareness Camps, Entrepreneurship Development Programmes, Hands on training programmes, Faculty Development Programmes, workshops etc. will be conducted under the proposed Entrepreneurship Development Centre. An Annual State Level awards competition will be organized for outstanding start-ups & innovations to recognize and motivate innovators and good entrepreneurs.

File Description	Document
Upload any additional information	View Document

3.3.2

Total number of awards received for *research/innovations* by institution/teachers/research scholars/students during the last five years

Response: 1

File Description	Document
Institutional data in the prescribed format (data template)	View Document

3.4 Research Publications and Awards

3.4.1

The institution ensures implementation of its stated Code of Ethics for research

The institution has a stated Code of Ethics for research and the implementation of which is ensured through the following:

- 1. Inclusion of research ethics in the research methodology course work**
- 2. Presence of institutional Ethics committees (Animal, chemical, bio-ethics etc.,)**
- 3. Plagiarism check through software**
- 4. Research Advisory Committee**

Response: A. All of the above

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Copy of the syllabus of the research methodology course work to indicate if research ethics is included	View Document
Constitution of research advisory committee and its proceedings as approved by the appropriate body.	View Document

3.4.2

Total number of Patents awarded during the last five years

Response: 6

File Description	Document
Patents granted / published in the name of the faculty with the institutional affiliation to the university working during the assessment period only to be given.	View Document
Institutional data in the prescribed format (data template)	View Document
e-copies of letter of patent grant	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.4.3

Number of Ph.Ds awarded per recognized guide during the last five years

Response: 3.25

3.4.3.1 How many Ph.D s were awarded during last 5 years

Response: 13

3.4.3.2 *Number of teachers recognized as guides during the last five years*

Response: 4

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.4.4

Number of research papers published per teacher in the Journals as notified on UGC CARE list during the last five years

Response: 4.8

3.4.4.1 **Number of research papers published in the Journals as notified on UGC CARE list during the last five years**

Response: 24

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Institutional data in the prescribed format (data template)	View Document
Link to the institutional website where the first page/full paper (with author and affiliation details) is published	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document
Link re-directing to journal source-cite website in case of digital journals	View Document

3.4.5

Number of books and chapters in edited volumes published per teacher during the last five years

Response: 7.4

3.4.5.1 Total Number of books and chapters in edited volumes published during the last five years

Response: 37

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.4.6*E-content is developed by teachers :*

- 1. For e-PG-Pathshala*
- 2. For CEC (Under Graduate)*
- 3. For SWAYAM*
- 4. For other MOOCs platform*
- 5. Any other Government initiative*
- 6. For institutional LMS*

Response: D. Any 2 of the above

File Description	Document
Institutional data in the prescribed format (data template)	View Document

3.4.7**Bibliometrics of the publications during the last five years based on average Citation index in Scopus/ Web of Science**

Response: 0

3.4.8**Bibliometrics of the publications during the last five years based on Scopus/ Web of Science – h-index of the Institution**

Response: 0

3.5 Consultancy**3.5.1****Revenue generated from consultancy and corporate training during the last five years**

Response: 65.76**3.5.1.1 Total amount generated from consultancy and corporate training year-wise during the last five years (INR in lakhs).**

2022-23	2021-22	2020-21	2019-20	2018-19
12.69	17.25	14.94	20.18	0.70

File Description	Document
Letter from the beneficiary of the consultancy along with details of the consultancy fee.	View Document
Institutional data in the prescribed format (data template)	View Document
CA certified copy of statement of accounts as attested by head of the institution.	View Document
Audited statements of accounts indicating the revenue generated through and corporate training/consultancy.	View Document

3.6 Extension Activities**3.6.1**

Outcomes of extension activities in the neighborhood community in terms of impact and sensitizing the students to social issues and holistic development, and awards received if any during the last five years (Showcase at least four case studies to the peer team)

Response:**1. CATCH THEM YOUNG FOR ENGINEERING:**

Catch Them Young For Engineering is a novel initiative undertaken by Assam Science and Technology University (ASTU) under TEQIP-III, MHRD, Government of India, to popularize engineering and technical education among the budding minds of the states. ASTU believes that if young children are exposed to the vast world of engineering and technology, it will help them not only to build a successful career but also contribute towards making India a developed nation.

Engineers are the backbone on which a nation is built. They contribute immensely towards the growth of economy and infrastructure. Engineers also find innovative solutions to complex problems saving time and money in the process. They also have huge potential for generating self-employment opportunities through start-ups and MSMEs that provide a huge boost to the economy as well as employment opportunities to skilled workers.

More than 125 schools across 12 districts of Assam have participated in this program. Various competitions such as ROBOKHEL (make and play robots), make rockets and launch, on spot challenges, Make 3D (art meets technology) as well as science exhibitions and scientific talks are organized so attract the students. The catch them young for engineering initiative has been very popular and extremely successful in its mission of nurturing the young minds and shaping them to be the engineers of tomorrow.

2. NATIONAL SCIENCE DAY-2019:

The Assam Science and Technology University, Guwahati, organized a day long programme on 28th February, 2019 to celebrate National Science day-2019 at Tetelia High School, Tetelia, Guwahati. The programme was especially meant for school children to inculcate scientific temperament among them. Over 500 children from the nearby schools participated in the programme themed as “Science for the People and People for Science”.

3. NATIONAL TECHNOLOGY DAY – 2019:

The Assam Science and Technology University (ASTU), has organized a day-long programme for school children to celebrate this year’s National Technology Day on Saturday, May 11, 2019 at GU Model High School English Section, Jalukbari, Guwahati in association with Sparkbee (a group of young engineers), Kendriya Vidyalaya Khanapara Alumni Association and GU Model High School English Section. Students and teachers of 21 schools in and around Guwahati and its suburbs were invited to participate in the programme through invitation letters, a programme announcement poster and an event details poster with rules of participation in various competitions.

4. Extra Physics class for higher secondary students

As per the request of Jalukbari Higher Secondary School, the Assam Science and Technology University (ASTU) has helped the class 12 students by doing some extra classes for Physics subject. Dr. Bharat Kakati (Faculty) and Dr. Tapan Rajbongshi (Post Doct Fellow) from ASTU has taken classes for physics subject.

File Description	Document
Upload any additional information	View Document

3.6.2

Number of extension and outreach programs conducted by the institution through organized forums like NSS/NCC with involvement of community year wise during the last five years

Response: 18

3.6.2.1 Number of extension and outreach programs conducted by the institution through organized forums including NSS/NCC with involvement of community year wise during the last five years.

2022-23	2021-22	2020-21	2019-20	2018-19
5	10	3	0	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Geo-tagged Photographs and any other supporting document of relevance should have proper captions and dates.	View Document
Detailed list and report for each extension and outreach program to be made available, with specific mention of number of students participated and the details of the collaborating agency	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

3.7 Collaboration

3.7.1

Number of functional MoUs/linkages with institutions/ industries in India and abroad for internship, on-the-job training, project work, student / faculty exchange and collaborative research during the last five years

Response: 20

File Description	Document
Summary of the functional MoUs/linkage/collaboration indicating start date, end date, nature of collaboration etc.	View Document
List of year wise activities and exchange should be provided	View Document
Institutional data in the prescribed format (data template)	View Document

Criterion 4 - Infrastructure and Learning Resources

4.1 Physical Facilities

4.1.1

The institution has adequate infrastructure facilities for

a. teaching - learning. viz., classrooms, laboratories,

b. ICT enabled facilities such as smart classes, LMS etc.

c. Facilities for cultural and sports activities , yoga centre, games (indoor and outdoor) gymnasium, auditorium etc.

Describe the adequacy of facilities within a maximum of 500 words

Response:

Assam Science and Technology University has adequate facilities in its campus for teaching learning activities. The department has required number of class rooms for UG, PG and PhD programs. Department of Energy Engineering has necessary ICT facilities including network connectivity, Wi-Fi coverage, LCD projectors, screens, etc. Internet LAN connectivity has been extended to every laboratories and classrooms under different AICTE schemes. University has also established smart class room in with audio and video facilities and it facilitates online materials, videos, subscribed research articles, presentations and demonstrations for the students' understanding. For security reasons CCTVs are made available in various places of the entire campus. The University has seminar halls; departmental seminar halls, conference hall etc. are available across the campus. The University central library is having collection of academic resources along with digital library with good number of desktop computers. The department also has required academic learning resources. All the doctoral theses are available in the central library as hard and soft copies. The faculty members and students have access to high bandwidth wi-fi connectivity inside the University. The department has separate computing labs with sufficient number of desktops with licensed software to carry out lab specific simulations, open ended tasks, project works and research work. A wide spectrum of laboratories is operational in the departments and being effectively used for academic and research activities. Safety protocols are strictly enforced and provisions for immediate medical attention (first aid, ambulance and health centre) are available. All the laboratories are fully equipped as per the curriculum and provided with lab manuals, wi-fi access, security provisions and updates log books. University has supported by the TEQIP funds of various phases to establish the research laboratories in various departments including, a Central Research Hub (CRH) facility. A 18 KW Solar photovoltaic (SPV) power plant at the rooftop of the newly constructed Academic Building (Department of Energy Engineering) of Assam Science and Technology University under AICTE GAINER. It aims to generate electricity with the utilization of bifacial monocrystalline solar modules with power rating of 580W (or above) Utilization of these items would definitely enhance the flexibility, energy management and overall sustainability of the plant. The proposed roof has sufficient surface area for installation of the required number of panels (~226.60 sq.m). This has resolved the energy shortage problem in the campus, reduce the dependency on conventional electric supply and contribute towards saving of monthly electricity bill of the university. The project would further reduce the dependency on diesel generator (DG) sets & UPS for power supply;

which are used when grid connected electricity supply is not available. Besides, M.Tech (Energy Engineering) students will get practical experience of working with Solar PV power plant. The classrooms, research laboratories, lecture halls, computer centre and selected devices in the department shall be connected to the proposed Solar PV based power generated systems. Moreover a water purification unit is also installed under AICTE GAINER. These initiatives have further enriched the teaching-learning process in the technical institution.

File Description	Document
Upload any additional information	View Document

4.1.2

Percentage of expenditure excluding salary, for infrastructure development and augmentation year wise during the last five years

Response: 73.58

4.1.2.1 Expenditure for infrastructure development and augmentation, excluding salary year wise during last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
242	225	481	322	179

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for infrastructure augmentation should be clearly highlighted)	View Document

4.2 Library as a Learning Resource

4.2.1

Library is automated with digital facilities using Integrated Library Management System (ILMS), adequate subscriptions to e-resources and journals are made. The library is optimally used by the faculty and students

Response:

The Central Library of Assam Science and Technology University (ASTU) has been fully automated using the Koha software system, enhancing the efficiency and management of library services. Koha, a comprehensive library management tool, has streamlined key processes such as cataloguing, circulation, and user record management. This automation has improved service delivery, making it easier for students, faculty, and researchers to access library resources. With the Online Public Access Catalog (OPAC), users can conveniently search for books, journals, and other materials at any time, ensuring accurate and up-to-date information is available.

Additionally, ASTU's Central Library is a member of the Developing Library Network (DELNET), which facilitates resource sharing among libraries across India. Through DELNET, the university gains access to a wide range of academic resources, including books, journals, e-resources, and databases from other member libraries. This membership significantly broadens the research materials available to ASTU's academic community, promoting interdisciplinary learning and research opportunities. The collaboration with DELNET enables the library to better meet the evolving information needs of its users, enhancing the overall academic and research environment.

Faculty and staff members of ASTU regularly visit the Central Library, benefiting from its rich collection of resources and a supportive academic environment. Whether for teaching, research, or administrative purposes, the library serves as a key resource for the university community. Faculty members use the library extensively for research, while staff members find its resources useful in supporting their professional duties. The library's commitment to maintaining a comprehensive and updated collection of books, journals, and digital resources makes it an essential part of the university's academic and administrative life.

In conclusion, the Central Library of ASTU, with its Koha-based automation and DELNET membership, plays a crucial role in supporting the university's academic, research, and administrative activities. Its modern approach to resource management and access to an extensive range of scholarly materials underscores its importance as a vital part of the university's educational and research infrastructure.

File Description	Document
Upload any additional information	View Document

4.2.2**Percentage of expenditure for purchase of books/ e-books and subscription to journals/e-journals year wise during the last five years****Response:** 0.18

4.2.2.1 Annual expenditure for purchase of books and journals year-wise during the last five years (INR in Lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
0.55	2.06	0.27	0.23	0.45

File Description	Document
Institutional data in the prescribed format	View Document
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for purchase of books/ e-books and subscription to journals/e-journals should be clearly highlighted)	View Document

4.3 IT Infrastructure

4.3.1

Institution frequently updates its IT facilities and provides sufficient bandwidth for internet connection

Describe IT facilities including Wi-Fi with date and nature of updation, available internet bandwidth within a maximum of 500 words

Response:

1. All the teachers and the employees are provided with PC with the proper internet connection.
2. The classrooms have Internet access points.
3. All the computers in the University are connected through LAN and all the switches are supported by a centralized UPS of 10 KVA.
4. Internet facility is provided through the high performance 100 Mbps link of National Knowledge Network (NKN).
5. WiFi services are provided at the Evaluation block.
6. University is using its own ERP system for Student life cycle and administrative activities. (Renewal PO to be submitted).
7. The University have three audio/visual conference hall /seminar hall facilities.
8. Various online meetings are being conducted through the subscription of Microsoft Teams.

File Description	Document
Upload any additional information	View Document

4.3.2

Student - Computer ratio (Data for the latest completed academic year)**Response:** 1.38**4.3.2.1 Number of computers available for students usage during the latest completed academic year:****Response:** 16

File Description	Document
Stock register/extracts highlighting the computers issued to respective departments for student's usage	View Document
Purchased Bills/Copies	View Document

4.3.3**Institution has the following Facilities for e-content development and other resource development**

- 1.Audio visual center, mixing equipment, editing facilities and Media Studio**
- 2.Lecture Capturing System(LCS)**
- 3.Central Instrumentation Centre**
- 4.Animal House**
- 5.Museum**
- 6.Business Lab**
- 7.Research/statistical database**
- 8.Moot court**
- 9.Theatre**
- 10.Art Gallery**
- 11.Any other facility to support research**

Response: C. Any 5 of the above

File Description	Document
Videos and geo-tagged photographs of each of the facilities available in the HEI. Details of the structures of each of the facilities available in the HEI.	View Document
Purchase Bill / stock register, entry for lecture capturing system, mixing equipment, software for editing	View Document
Institutional data in the prescribed format (data template)	View Document
Copy of the subscription letter for database is essential for Option Research/Statistical Databases	View Document

4.4 Maintenance of Campus Infrastructure

4.4.1

Percentage expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component, during the last five years

Response: 2

4.4.1.1 Expenditure incurred on maintenance of physical facilities and academic support facilities excluding salary component year - wise during the last five years (INR in lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
5.7	7.35	5.25	7.65	13.44

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Audited income and expenditure statement of the institution to be signed by CA and counter signed by the competent authority (relevant expenditure claimed for maintenance of infrastructure should be clearly highlighted)	View Document

4.4.2

There are established systems and procedures for maintaining and utilizing physical and academic

support facilities – laboratory, library, sports complex, computers, classrooms etc.

Describe policy details of systems and procedures for maintaining and utilizing physical, academic and support facilities within a maximum of 500 words

Response:

The University has central research facilities for promotion of student academic support system. In order to self sustainability of the central research hub (comprises of Multi disciplinary Experimental & Testing Accessible Laboratory (METAL), Energy Research Laboratory (EEL), Material Science Research Laboratory (MSRL), Tribology Laboratory (TL), University extended these facilities to the various institutes of the state in order to generate fund. The rate of the various experiments has been uploaded in the University website and the fund is deposited into a dedicated bank account for accountability. The University authority also adopted a resolution for maintaining a 10% of the savings from the own source for sustainability fund (if fund is available). For continuous efforts for development of the laboratory, sports and sophisticated library system, University has prepared DPR (Detailed Project Report) for construction in the ASTU II campus. The proposal has submitted to the NEC (North Eastern Council) through the department of Transformation and Development of the Govt. of Assam vide this office letter no ASTU/VC/Admin/Vol-II/2023/34/1691.dated 11/07/2024. In the year 2022-23 the proposal was forwarded to the NEC vide E File No. 233791/2 dated 1st August 2023.

To handle any technical fault of the environment of Library, Laboratory, Computer and Classroom the University has negotiated with the outsourced firms by entering an agreement for AMC/CMC. For the students, teachers and employees, University has facilitated by NKN (National Knowledge Network) for high speed internet connectivity.

For the knowledge of IKS (Indian Knowledge System), the University has established Hindi reference section in the main library from NEC funding.

For interfacing of the various departments of Assam Science and Technology University has introduces ERP - a digital platform connecting University and its affiliated colleges and it has delivered good results for declaration of results in time.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

Criterion 5 - Student Support and Progression

5.1 Student Support

5.1.1

Percentage of students benefited by scholarships and freeships provided by the institution, government and non-government bodies, industries, individuals, philanthropists during the last five years

Response: 16.48

5.1.1.1 Number of students benefited by scholarships and freeships provided by the institution, Government and (NGOs)non-government bodies, industries, individuals, philanthropists year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
4	2	9	0	0

File Description

Document

Institutional data in the prescribed format (data template)

[View Document](#)

5.1.2

Efforts taken by the institution to provide career counselling including e-counselling and guidance for competitive examinations during the last five years

Response:

Some of the efforts taken by the University to provide guidance for competitive examinations and career counseling are mentioned below:

GATE COACHING (2018-2019):

The Gate coaching was planned to conduct to help and motivate the B.Tech. (Final year) students to appear and qualify the Gate Exam. It was discussed with all the principals of the affiliated colleges and planned to start the Gate coaching of core subjects and for a total of 200 students. List of nominated students were submitted by each colleges. Accordingly, the coaching was conducted for classroom teaching, online classes and hard copy of study materials were provided to the candidates. those who attend the class room sessions.The contract was given to Thinkcell Learning Solutions Pvt. Ltd. (GATEFORUM). Relevant documents were annexed. (Annexure-I).

GATE and Employability (2019-20):

Gate material and Handbook for Employability skill training covering quantitative aptitude, logical reasoning, verbal aptitude, GD&PI and resume writing etc. were provided to the students of affiliated colleges for the academic year 2019-20. The main objectives of procurement of the GATE and Employability study materials in 2019 was to distribute to the final year engineering students to prepare for the GATE and other competitive examinations and to keep a good number of study materials at central library of ASTU for upcoming batches. As per the plan, university has purchased a package of 675 no. of the study materials and distributed accordingly. The contract was given to GATECOACH and Ethnus Consultancy Services Pvt. Ltd. Relevant documents were annexed. (Annexure-II).

Employability Training and Test (2020-21):

Employability Training and Test was conducted for the students of affiliated colleges for the academic Year 2020-21. The contract was given to Aspiring Minds Assessment Pvt. Ltd. Relevant documents were annexed. (Annexure-III).

Other Initiatives:

Some other awareness activities conducted by the University in the field of Career Path development/ Career Counseling are as follows: (Annexure-IV)

Sl. No.	Name of Workshops/Seminars	Venue
I	Webinar on "Career Perspectives for Engineering Students post COVID-19 "	GIMT-G (Webinar)
II	Webinar on "Training for Online Campus Recruitment"	GIMT-G (Webinar)
III	"CAMPUS TO CORPORATE" - An online workshop aimed at enhancing soft skills, especially for facing interviews and achieving continued success in career	-ASTU (Webinar)

File Description	Document
Upload any additional information	View Document

5.1.3

Following capacity development and skills enhancement activities are organised for improving students' capability

- 1. Soft skills**
- 2. Language and communication skills**
- 3. Life skills (Yoga, physical fitness, health and hygiene, self-employment and entrepreneurial skills)**
- 4. Awareness of trends in technology**

Response: A. All of the above

File Description	Document
Report with photographs on soft skills enhancement programs	View Document
Report with photographs on Life skills (Yoga, physical fitness, health and hygiene) enhancement programs	View Document
Report with photographs on Language & communication skills enhancement programs	View Document
Report with photographs on ICT/computing skills enhancement programs	View Document
Institutional data in the prescribed format (data template)	View Document

5.1.4

The institution adopts the following for redressal of student grievances including sexual harassment and ragging cases

- 1.Implementation of guidelines of statutory/regulatory bodies**
- 2.Organisation wide awareness and undertakings on policies with zero tolerance**
- 3.Mechanisms for submission of online/offline students' grievances**
- 4.Timely redressal of the grievances through appropriate committees**

Response: B. Any 3 of the above

File Description	Document
Institutional data in the prescribed format (data template)	View Document

5.2 Student Progression

5.2.1

Percentage of placement of outgoing students during the last five years

Response: 0

5.2.1.1 Number of outgoing students placed year wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

5.2.2

Percentage of graduated students who have progressed to higher education year-wise during last five years

Response: 20.59

5.2.2.1 Number of outgoing students progressing to higher education

2022-23	2021-22	2020-21	2019-20	2018-19
01	05	01	0	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

5.2.3

Percentage of students qualifying in state/ national/ international level examinations out of the graduated students during the last five years

(eg: NET/SLET/ Civil Services/State government examinations etc.)

Response: 2.94

5.2.3.1 Number of students qualifying in state/National/International level Examination during last five years (eg. SLET, NET, UPSC etc)

Response: 01

File Description	Document
Institutional data in the prescribed format (data template)	View Document

5.3 Student Participation and Activities

5.3.1

Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/national/international events (award for a team event should be counted as one) during the last five years

Response: 0

5.3.1.1 Number of awards/medals won by students for outstanding performance in sports/cultural activities at inter-university/state/ national/international level (award for a team event should be counted as one) year-wise during the last five years

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

File Description**Document**

Institutional data in the prescribed format (data template)

[View Document](#)

5.3.2

Presence of an active Student Council & representation of students on academic & administrative bodies/committees of the institution.

Describe the Student Council activity and students' role in academic & administrative bodies within a maximum of 500 words

Response:

The process of formation of Student council at Assam Science and Technology University is still to be started since there was only one department (Department of Energy Engineering). The students of the department were engaged in various committees/bodies related to administrative, cocurricular and extra-curricular activities such as Anti-ragging squad, The student Grievance Redressal committee, Internal complaint committee (ICC), etc. The roles of the students in these bodies are according to the instructions of the chairperson or the university authority.

Meanwhile, the university has framed the structure of the student council since six new courses in addition to M.Tech in Energy Engineering have been started from academic session 2024-25. The role of the student council is defined as a union body to put forward necessary suggestions and recommendations to be taken up and executed for the welfare of the students. The formation of student council will be as per the recommendation of *Lyngdoh Committee*. The student council and other such bodies will be elected for one year, takes care of all the issues of the students and brings them forward to the university authorities as and when required. They will take initiative in different areas for the institutional and all-round development of the students by organising several co-curricular and

extracurricular activities like cultural, sports, and academic-related events in association with the Director of School of Engineering and the University administration, where students can become involved outside their formal programme of study.

File Description	Document
Upload any additional information	View Document

5.3.3

The institution conducts / organizes following activities:

1. Sports competitions/events
2. Cultural competitions/events
3. Technical fest/Academic fest
4. Any other events through Active clubs and forums

Response: D. Any one of the above

File Description	Document
Report of the Sports competitions/events along with photographs appropriately dated and captioned year- wise.	View Document
Institutional data in the prescribed format (data template)	View Document

5.4 Alumni Engagement

5.4.1

Alumni contribution during the last five years to the University through registered Alumni Association

Response: 0

5.4.1.1 Total Amount of alumni contribution during the last five years (INR in lakhs) to the institution year wise through registered Alumni association:

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

5.4.2

Alumni contributes and engages significantly to the development of institution through academic and other support system

Describe the alumni contributions and engagements within a maximum of 500 words

Response:

Not Applicable

Criterion 6 - Governance, Leadership and Management

6.1 Institutional Vision and Leadership

6.1.1

The institutional governance and leadership are in accordance with the vision and mission of the Institution and it is visible in various institutional practices such as NEP implementation, sustained institutional growth, decentralization, participation in the institutional governance and in their short term and long term Institutional Perspective Plan.

Response:

The main objective of the Assam Science and Technology University (ASTU) is to provide education and research in the field of science & technology and other professional courses in Assam. The university is responsible for academic regulation of all undergraduate and post-graduate programs in engineering, and pharmaceutical sciences and a few professional courses in science and management sectors. ASTU has been undertaking high quality teaching and research in frontier areas of science & technology continuously upgrading the syllabi and creating environment for international standard research and emphasizing in bridging the ancient wisdom of the region with modern technology.

Assam Science and Technology University (ASTU) is functioning as per the university Act 2009 (Ref: https://astu.ac.in/?page_id=99) which was amended recently in the year 2023.

Assam Science and Technology University (ASTU) has collectively worked out to understand and explore the possibilities for a systematic implementation of NEP-2020 for the benefit of our stakeholders, and to our society. The faculty members and university authority have worked together under the guidance of Hon'ble Vice Chancellor to prepare the first phase comprehensive action plan for implementation of NEP 2020 in Higher Education Institutions. To carry out Multidisciplinary and Holistic Education and Research in phase manner, the university has prepared and circulated the road map considering the Multiple Entry/Exit provision. The NEP 2020 road map is available in the university web page.

For better implementation and Sensitization of NEP 2020, the University has recently organized a UGC Malaviya Mission Teacher Training Programme (MMTTP) on 'NEP Orientation and Sensitization' (Online) during May 01 – 10, 2024, jointly with National Institute of Educational Planning and Administration (NIEPA), New Delhi.

As a short term plan, the university has planned to start few UG and PG courses in some industry oriented thrust area. Accordingly, the university has already started inhouse UG program on Computer Science and Engineering with a specialization in Artificial Intelligence and Machine Learning, Artificial Intelligence, Data Science, Cyber security, VLSI etc from the year 2024. The university has also planned to recruit more Ph D students to carry out research in the field of Science and Technology. The long term plan of the university is to establish as a research intensive university. To establish as a research intensive university as per NEP 2020, the university has already submitted proposal to different central and state government agency to provide financial assistance for establishment of more international standard high end research infrastructure. Apart from that university has planned to contact with Internationally and Nationally reputed organisation for collaboration.

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

6.2 Strategy Development and Deployment

6.2.1

The institutional perspective plan is effectively deployed and functioning of the institutional bodies are effective and efficient as visible from policies, administrative setup, appointment, service rules, and procedures, etc

Response:

For the effective institutional prospective plan the University has intruduced some statutes/regulations/ordinances as approved by the his Excellency the Governor of Assam which as been made gazette notification of the Govt of Assam. The University has introduced a few statues like first statues of the University where roles and responsibilty of the University officials has been defined. The University also introduced statues for the convocation, various Academic Regulations, examination rules as approved by the University statutory bodies as defined in the ASTU Act. For the financial accountability the financial audit has been made compulsory by the Accountant General of Assam and chartered accountant auditor appointed by the Executive Council. The notes of accounts has been prepared for the significance ofaccounting policies of ASTU. The Accounts rule is also developed for good practice. For Governance of Employees welfare "General Service condition and welfare Act of Employee" in which there are provisions of various welfare schemes for the employees benifit as well as the control mechanism of the employees of the University. Both teaching and non teaching employees are covered with medical health insurance scheme as UNiversity has not medical unit in the campus of ASTU.

The University has a strategic plan regarding introduction of incampus B.Tech and M.Tech courses in the University campus after latest amendment of the Act in the year 2023. The University has already admitted students in the courses in major trust area of Engineering and Technology like Artificial Intelligence, Machine Learning, Data Science, etc. under the department of Computer Science and Engineering from the academic admission batch 2024-25. The University is also looking to explore the possibilities of enhancing entrepreneual mind set of University students. For this purpose the University has already established "Entrepreneurship Development Centre".

The concept of Green campus has also not been ignored to train the students under the greenary environment.

A few DO's and DONOT's have been introduced as guidline in the sophisticated exprimental lab like Waste Management Disposal Plant, Plasma Lab etc.

Last but not the least that "The institutional development plan" (IDP) are being developed and in this

regards a roadmap has been prepared.

File Description	Document
Upload any additional information	View Document
Strategic Plan and deployment documents on the website	View Document
Provide the link for additional information	View Document

6.2.2

Institution implements e-governance in its operations. e-governance is implemented covering the following areas of operations:

- 1.Administration including complaint management**
- 2.Finance and Accounts**
- 3.Student Admission and Support**
- 4.Examinations**

Response: A. All of the above

File Description	Document
Screen shots of user interfaces of each module reflecting the name of the HEI	View Document
Institutional expenditure statements for the budget heads of e-governance implementation ERP Document	View Document
Institutional data in the prescribed format (data template)	View Document
Annual e-governance report approved by the Governing Council/ Board of Management/ Syndicate Policy document on e-governance	View Document

6.3 Faculty Empowerment Strategies

6.3.1

The institution has performance appraisal system, effective welfare measures for teaching and non-teaching staff and avenues for career development/progression

Response:

The workforce / Students are consistently given the impression that they are a part of a family here, a home away from home. The management fosters a friendly workplace environment and supports the development of the personnel.

- ***Performance appraisal system:***

- Well-Structured Annual Confidential Report (ACR) format has been developed to assessment of Performance of all Government sanctioned posts.
- Personal discussion is taken place with the ACR of the employees by the university authority.
- Agreements are executed for the Contractual employee in the lease and license mode (Not more than 11 months agreement) and renewal is made on the approval of the Appropriate authority subject to resolution of statutory body.

- ***Welfare measures for teaching and non-teaching staff:***

- NPS (Contribution)/ Gratuity / Leave encasement benefit are given contribution by Management to all the eligible staff members of the University
- Maternity Leave in case of female employees.
- Opportunity for higher studies to the staff is allowed with the approval of the authority of the University.
- Canteen facility for students and staff.
- Cell-Phones, Intercom, Desktop computer with high-speed internet connectivity is allowed for better interface among the staff of the university.
- CLs, CCL, Medical Leave and compensatory Leave are available as per their eligibility.
- Introduction of Medical Insurance Scheme to the employees of ASTU.

- ***Avenues of Career development progression:***

- Organising and attending FDP
- Organizing and attending MDPs
- Focus on all-round development of faculty members in light of Outcome Based Education.
- Publications of Research papers at the university cost
- Facility of Library in the campus. University has also established a Hindi Library reference section funding from NEC.
- Policy of remuneration declaration for Consultancy project mode for their service beyond office hours including Sunday and holiday.
- Induction programme for the students

File Description	Document
Upload any additional information	View Document

6.3.2

Percentage of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies during the last five years**Response: 0****6.3.2.1 Number of teachers provided with financial support to attend conferences/workshops and towards membership fee of professional bodies year wise during the last five years**

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

File Description**Document**

Institutional data in the prescribed format (data template)

[View Document](#)**6.3.3****Percentage of teachers undergoing online/ face-to-face Faculty Development Programmes (FDPs)/ Management Development Programmes (MDPs) during the last five years****Response: 24****6.3.3.1 Total number of teachers who have undergone online/ face-to-face Faculty Development Programmes (FDP)/ Management Development Programs (MDP) during the last five years**

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	1	2	3

File Description**Document**

Refresher course/Faculty Orientation or other programmes as per UGC/AICTE stipulated periods, as participated by teachers year-wise.

[View Document](#)

Institutional data in the prescribed format (data template)

[View Document](#)

E-copy of the certificates of the program attended by teachers.

[View Document](#)

Annual reports highlighting the programmes undertaken by the teachers

[View Document](#)

6.4 Financial Management and Resource Mobilization

6.4.1

Institutional strategies for mobilisation of funds other than salary and fees and the optimal utilisation of resources

Describe the resource mobilisation policy and procedures of the Institution within a maximum of 500 words

Response:

The New Education Policy 2020 has mandated for self sustainability of the Institution. By less dependance on the government grant in aid. Therefore University has a very clear strategy regarding introduction of the courses on self financing mode as well as creation of fund by internal resource mobilization. Being a new University and only one state Govt. technical University of Assam, the University is trying to mobilize resources by introducing external recruitment examination of various agencies of the Govt. of Assam. The University also conducted various admission tests as assigned by the Govt. of Assam from time to time and thereby the University is capable to generate a quantum of money for meeting the recurring expenditure for running the academic activities of the University.

To reduce the paucity of fund for running research activities in the Central Research Hub, the University has opened a dedicated bank account for accountability. For the growth of such fund, the University has passed a resolution in the statutory authority as per the Act of the University to transfer 10% of the surplus meet during a financial year. To attract the various students of the institutes of the region for invitation to make the experiments in the central research hub University has uploaded the information with the rate chart in the University website.

For accountability and transparency Govt. fund and internal resource mobilisation fund are accounted in the separate bank account whereby the University can foresee the capability of generating internal resource through conduct of University examination. The project accounts are maintained separately and all are audited by the appropriate authority from time to time and reporting is made to the University authority as per University Act

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

6.4.2

Funds / Grants received from government bodies/non government and philanthropists during the last five years for development and maintenance of infrastructure (not covered under Criteria III and V)

Response: 0

6.4.2.1 Total Grants received from government and non-government bodies and philanthropists for development and maintenance of infrastructure (not covered under Criteria III and V) year-wise during the last five years (INR in Lakhs)

2022-23	2021-22	2020-21	2019-20	2018-19
0	0	0	0	0

File Description	Document
Institutional data in the prescribed format (data template)	View Document

6.4.3

Institution regularly conducts internal and external financial audits regularly

Enumerate the various internal and external financial audits carried out during the last five years with the mechanism for settling audit objections within a maximum of 500 words

Response:

Enumerate the various internal and external financial audits carried out during the last five years with the mechanism for settling audit objections within a maximum of 500 words

In pursuance to Para 30 of the Assam Science and Technology University (Amendment) Act, 2011 vide Notification dated: 25th April, 2011, the statement of accounts of every completed financial year shall be placed for consideration of the Court together with the Audit Report in the next year. For this purposes, the account shall be audited by a firm of chartered accountants subject to overall audit scrutiny by the Accountant General, Assam.

A brief overview of audit conducted the Accountant General is outlined below:

REPORTING OF FINANCIAL STATEMENT AND AUDIT OF ACCOUNTS

2011-2012	Prepared and Audited by Accountant General (Audit) Assam	All Paras of the Audit para has been dropped and Inspection report CLOSED
2012-2013	Prepared and Audited by Accountant General (Audit) Assam	
2013-2014	Prepared and Audited by Accountant General (Audit) Assam	

2014-2015	Prepared and Audited by Accountant General (Audit) Assam	
2015-2016	Prepared and Audited by Accountant General (Audit) Assam	All Paras of the Audit para has been dropped excepting 1) One Para related to the Curtin
2016-2017	Prepared and Audited by Accountant General (Audit) Assam	University.
2017-2018	Prepared and Audited by Accountant General (Audit) Assam	10 Paras has been dropped out of 25 Paras. For dropping of the remaining Para reply has been
2018-2019	Prepared and Audited by Accountant General (Audit) Assam	furnished vide this office Letter No. ASTU/AUDIT/42/2014/Vol- VI/8914 dated: 27/03/2023
2019-2020	Prepared and Audited by Accountant General (Audit) Assam	
2020-2021	Prepared and Audited by Statutory Auditor	Invited for the Audit Vide This office letter No. ASTU/AUDIT/42
2021-2022	Prepared and Audited by Statutory Auditor	/2014/Vol-IV/161 Dated 12/01/2024
2022-2023	Prepared and Audited by Statutory Auditor	Will be placed in the next University Court meeting

6.5 Internal Quality Assurance System

6.5.1

Internal Quality Assurance Cell (IQAC)/ Internal Quality Assurance System (IQAS) has contributed significantly for institutionalizing the quality assurance strategies and processes, by constantly reviewing the teaching-learning process, structures & methodologies of operations and learning outcomes, at periodic intervals

Internal Quality Assurance Cell (IQAC) has contributed significantly for institutionalizing the quality assurance strategies and processes visible in terms of –

- **Incremental improvements made for the preceding five years with regard to quality (in case of first cycle)**
- **Incremental improvements made for the preceding five years with regard to quality and post accreditation quality initiatives (second and subsequent cycles)**

Describe two practices institutionalized as a result of IQAC initiatives within a maximum of 500 words

Response:

Assam Science and Technology University (ASTU) attempts to chisel out the total quality person through a persistent focus on imparting quality education, through its innovative, comprehensive and flexible education policy. The Internal Quality Assurance Cell (IQAC) carries out activities that encompass all aspects of the Institute's functioning.

The main activities of the IQAC are

- To improve quality of teaching, research, extension and administrative activities
- To play the active role in the preparation of performance indicators of faculty.
- Organizing periodical meetings for faculty and students on quality parameters.
- Providing inputs for best practices in administration for efficient resource utilization and better services to students and staff.
- To obtain feedback of students on teaching and course programme.
- To motivate the Teachers, Principals, Directors, Co-ordinators regularly to augment teaching quality.
- To stimulate research environment for promotion of quality publications with high impact factor and 'H' Index..
- To collaborate all stakeholders of Assam Science and Technology University.
- To arrange periodic assessment through various feedbacks from stakeholders.
- To promote the activities of various wings of academic and Administration.
- To motivate the faculty members for submission of research project, institutional development project, collaboration with different organization.

IQAC, ASTU provide suggestion for upgrading the infrastructure and all support facilities to meet the standards of higher education and growing need of students and other university communities.

Some best practices institutionalized at the introduction of IQAC at ASTU are given below;

Implementation of Green practices in the campus:

The IQAC proposed to initiate various green practices to maintain eco-friendly college/University campus through the activities i.e. Tree Plantation, Paperless Work, Plastic Eradication, Clean and Beautiful Campus, No Vehicle Day, Save Power, Paper Bag Workshop, Awareness Programme on Renewable Energy and e- Waste Management through training in the Waste Management disposal Plant. The University has also established IC Engine Laboratory.

Use and enrichment of ICT infrastructure:

The use of ICT tools has become an integral part in teaching -learning process. IQAC always encouraged

Teachers / Students / Employees to utilize these tools in classroom teaching and laboratories. IQAC prepares the plan to include the use and enrichment of ICT infrastructure expecting from each department as well as in the offices. The IQAC has advised the administration to enrich ICT infrastructure by purchasing advanced ICT tools, broadband internet Wi-Fi facility. Periodically IQAC has trained teaching and non-teaching staff to use ICT by arranging different workshop i.e. Google Apps, Video conference, use of e-mail, handling ICT instrument etc. though display in Data Wall. The University has already installed data wall in the conference room. In teaching and learning, the feedback system is implemented to take the review of reliability and uses of ICT facilities.

Organized Entrepreneurship Awareness Program

The IQAC of Assam Science and Technology University has organised an Entrepreneurship Awareness Program recently in collaboration with IIE Guwahati to vibrant Entrepreneurial mindset among the students. Few snap shots of the event are given below:

File Description	Document
Upload any additional information	View Document
Provide the link for additional information	View Document

6.5.2

Institution has adopted the following for Quality assurance:

- 1. Academic and Administrative Audit (AAA) and follow up action taken**
- 2. Conferences, Seminars, Workshops on quality conducted**
- 3. Collaborative quality initiatives with other institution(s)**
- 4. Orientation programme on quality issues for teachers and students**
- 5. Participation in NIRF and other recognized ranking like Shanghai Ranking, QS Ranking Times Ranking etc**
- 6. Any other quality audit recognized by state, national or international agencies**

Response: B. Any 4 of the above

File Description	Document
List of Conferences / Seminars / Workshops on quality conducted along with brochures and geo-tagged photos with caption and date.	View Document
List of Collaborative quality initiatives with other institution(s) along with brochures and geo-tagged photos with caption and date.	View Document
Institutional data in the prescribed format (data template)	View Document

6.5.3

Incremental improvements made for the preceding five years with regard to quality (in case of first cycle NAAC A/A)

Post accreditation quality initiatives (second and subsequent cycles of NAAC A/A)

Response:

A number of post accreditation quality improvements have been made during the last five years in new 1st technical State government university of Assam:

Governance

- Sanction, Con occurrence and recruitment of Posts from Government of Assam for Registrar/ Controller of Examinations / Deputy Controller of Examinations / Finance (& Accounts) Officer / Academic Registrar and other 25 Nos non-Teaching Posts.
- Creation and Recruitment of a few Academic Posts under self-Financing Mode
- First Statute of ASTU
- Appointment of Statutory Auditor as per ASTU Act
- Introduction of Public Financial Management System (PFMS)
- Introduction of GeM (Government e Marketing) Platform
- Regular conduct of Audit by Controller Auditor General of Assam

National and State Mission:

- Swachh Bharat Mission
- Skill/innovation India Mission Environment like conduct of Hackathon etc
- Renewable Energy
- Digital India by way of online payment facility, Introduction ERP / Samarth
- Participation through Vikasit Bharat Unit of ASTU
 - **Establishment of EDP Centre**
 - **Academic Curriculum under NEP 2020**

Employable New Programmes

- **Skill Based Education under National Skill Qualification Framework:**
 - B.Voc and M.Voc. Programmes
 - PhD under different programme
 - B.Sc programme in Agriculture
 - Trimester M.B.A programme
- **Introduction of UG and PG Programmes:**

- **Execution of MoUs**

Introduction of Central Research Hub/ MATLAB/ 3D Printing Technology literacy workshop / Drone Technology literacy Workshops/ Setting up of IC Engine Lab

Campus Development/Green Initiative

- Preparation of Submission of DPR for ASTU Campus II
- Establishment of Waste Management Development Plant
- Setting up of IC Engine Lab

Conduct of FDP/MDP programme

Criterion 7 - Institutional Values and Best Practices

7.1 Institutional Values and Social Responsibilities

7.1.1

Institution has initiated the Gender Audit and measures for the promotion of gender equity during the last five years.

Describe the gender equity & sensitization in curricular and co-curricular activities, facilities for women on campus etc., within 500 words

Response:

The University are being trying to frame audit initiatives for Zero Tolerance to Sexual Harassment and Gender Discrimination by recognizes that sexual harassment and gender discrimination as pervasive problems that negatively impact our community. Sexual harassment and gender discrimination undermine the safety, dignity, and equality of our students, staff, and faculty. We are committed to create a safe and inclusive environment where everyone is treated with respect and dignity. Therefore, we have developed a policy of zero tolerance towards sexual harassment and gender discrimination in all its forms with the following policy as hereunder:

- **Gender Policy:**

- No discrimination on the basis of gender
- Equal opportunity for all genders
- Freedom of expression
- Unbiased and confidential grievance redressal cell
- Ensure the safety and security of all genders

- **The University find the Zero results so far in the campus with the following measures:**

- ***Legal Provisions:***

- The University on sexual harassment and gender discrimination is consistent with the following legal provisions:

1. The Vishaka Guidelines, issued by the Supreme Court of India in 1997;
2. The UGCs Saksham Measures for Ensuring the Safety of Women and Programmes for Gender Sensitization on Campuses;
3. The University Grants Commission (Prevention, prohibition and redressal of sexual harassment of women employees and students in higher educational institutions) Regulations, 2015.

- ***Formation of Internal Complaint Committee:***

To stop Sexual Harassment and for implementing the University policy on sexual harassment and gender discrimination university has formed “***Internal Complaint Committee***”. The committee handles with the issues of gender-based violence in the university and its affiliated colleges.

- ***Protection of Complaint:***

The Authority of the university is ensuring complainant to meet the grievances in a dedicated email to take action for such harassment.

- **Remedies:**

Sanctions for gender discrimination may include:

- Counselling
- Disciplinary action
- Termination of employment
- Expulsion from the college/ University

File Description	Document
Upload any additional information	View Document

7.1.2

The Institution has facilities for alternate sources of energy and energy conservation measures

1. Solar energy
2. Biogas plant
3. Wheeling to the Grid
4. Sensor-based energy conservation
5. Use of LED bulbs/ power efficient equipment
6. Wind mill or any other clean green energy

Response: B. Any 3 of the above

File Description	Document
Permission document for connecting to the grid from the Government/ Electricity authority.	View Document
Institutional data in the prescribed format (data template)	View Document
Geo-tagged photographs of the facilities.	View Document
Bills for the purchase of equipment's for the facilities created under this metric	View Document

7.1.3

Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 500 words)

- **Solid waste management**
- **Liquid waste management**
- **Biomedical waste management**
- **e-Waste management**
- **Waste recycling system**
- **Hazardous chemicals and radioactive waste management**

Response:

Assam Science and Technology University always try to maintain the campus in pristine condition in order to provide a conducive environment for academic and non-academic interests. All stakeholders follow good hygienic practices as well as a comprehensive waste management plan. The university has used different dustbins for collection of different types of waste, such as biodegradable, recyclable and non-degradable. Dustbins are provided in every classroom for collecting paper waste. Dustbins are cleared every day. Students are encouraged to submit mostly e-assignments to reduce the paper waste. Separate dustbins are kept in the canteen for collection of food waste. The food waste are daily collected by the Guwahati Municipal Corporation for dumping in the dumping site of the city.

For disposal of non-biodegradable waste like plastic waste, a plasma pyrolysis plant is developed and installed at META laboratory, Assam Science and Technology University, Guwahati for safe disposal of municipal solid waste as well as bio medical waste under a project entitled, “Development of an eco-friendly technology for safe disposal of Municipal Solid Waste” (Principal investigator of the project is Dr. Bharat Kakati, Assistant Professor, ASTU and Budget Head: 3425-60-200-2037-000-32-99-SOPD-G-V-GA and awarding agency: Dept of Science & Technology, Government of Assam). The plasma-assisted pyrolysis and plasma gasification has shown many advantages as compared to other disposal techniques. Compared to conventional pyrolysis, the plasma pyrolysis technique provides high temperature and high energy for reaction. The sample is heated up to a high temperature in an oxygen starved conditions. It is an appropriate method for polymer pyrolysis. It produces a gas with low tar content and high heating value, which can be applied well to gas turbines for power generation. The gas generated during plasma pyrolysis can also be used as a synthesis gas for hydrogen production. When carbonaceous solids are injected into plasma, they are heated up very rapidly and the volatile matter is released and cracked giving rise to CO, H₂, CH₄, C₂H₂ and other hydrocarbons. Thus, the carbonaceous solid can be converted into valuable gaseous fuels using plasma processes as reported previously in laboratory experiments by many authors.

To sensitize the students, researchers, staff member and faculty of ASTU and other institutes, a virtual workshop entitled, “National Workshop on Municipal Solid Waste and its impact” was organized by the university on 3 – 4 Sept, 2020 at ASTU conference hall. The workshop was organized under CRS of TEQIP III project entitled, “Soil contamination by heavy metals due to Municipal Solid Waste” (Principal investigator of the project is Dr. Bharat Kakati, Assistant Professor, ASTU) through online mode.

7.1.4**Water conservation facilities available in the Institution:**

- 1. Rain water harvesting**
- 2. Borewell /Open well recharge**
- 3. Construction of tanks and bunds**
- 4. Waste water recycling**
- 5. Maintenance of water bodies and distribution system in the campus**

Response: B. Any 3 of the above

File Description	Document
Institutional data in the prescribed format (data template)	View Document
Geo-tagged photographs of the facilities.	View Document
Bills for the purchase of equipment's for the facilities created under this metric.	View Document
Provide Links for any other relevant document to support the claim (if any)	View Document

7.1.5

Green campus initiatives include

Describe the Green campus initiative of the institution including Restricted entry of automobiles, Use of Bicycles/ Battery powered vehicles , Pedestrian Friendly pathways , Ban on use of Plastic, landscaping with trees and plants etc in 500 words

Response:

For disposal of non-biodegradable waste specially plastic bags, bottles etc through eco-friendly manner, the university has installed a plasma pyrolysis plant with capacity 10 kg/hr at university campus. The plant is installed under a project entitled, "Development of an eco-friendly technology for safe disposal of Municipal Solid Waste (MSW)" (PI of the project: Dr. Bharat Kakati, Assistant Professor, ASTU) funded by DST, Govt of Assam. ASTU had constituted a committee in the year of 2022 to determine the condition of e-waste products of the university.

Apart from that ASTU has installed a solar rooftop facilities with total capacity 15 kW to produce green energy to save the electricity expenses. The university has conducting the world environment day regularly with active participation of all the employees of the university. The university continuously organize the different events and programs, suggested by the state and central Government for tea plantation, Swachh bharat mission etc.

File Description	Document
Policy document on the green campus/plastic free campus.	View Document
Geo-tagged photographs/videos of the facilities.	View Document
Circulars and report of activities for the implementation of the initiatives document	View Document

7.1.6

Quality audits on environment and energy are regularly undertaken by the institution

The institutional environment and energy initiatives are confirmed through the following

- 1.Green audit / Environmental audit**
- 2.Energy audit**
- 3.Clean and green campus recognitions/awards**
- 4.Beyond the campus environmental promotion and sustainability activities**

Response: E. None of the above

File Description	Document
Institutional data in the prescribed format (data template)	View Document

7.1.7

The Institution has Differently-abled (Divyangjan) friendly, barrier free environment

Write description covering the various components of barrier free environment in your institution in maximum of 500 words

- Built environment with Ramps/lifts for easy access to classrooms**
- Divyangjan friendly washrooms**
- Signage including tactile path, lights, display boards and signposts**
- Assistive technology and facilities for Divyangjan accessible website, screen-reading software, mechanized equipment**
- Provision for enquiry and information: Human assistance, reader, scribe, soft copies of reading material, screen reading**

Response:

The administrative block, academic blocks, examination block, the conference hall, Guest house etc of

the Assam Science and Technology University have the ramps facilities to provide a smooth environment for Divyangjan. The old academic block which is a Assam Type building structure has the ramp facility. The new academic building which is a multi-storage building with different classroom, conference hall, laboratories, washroom, Teachers cabin, different centres and cells have the both ramp and lift facility to help the Divyangjan.

7.1.8

Describe the Institutional efforts/initiatives in providing an inclusive environment i.e., tolerance and harmony towards cultural, regional, linguistic, communal socioeconomic and such other diversities (within 500 words).

Response:

The University is proactively taking efforts in providing an inclusive environment. The initiatives are to promote better education, economic upliftment of the needy, and set communal harmony. Institute has conducted lectures in the remote areas through the programme “*Catch Them Young*”, to attract the students for enrolment in the technical education through knowledge of STEM (Science Technology Engineering Mathematics). The university has also experimented the quality of drinking water available in the *Dipor Bill* area.

The extension activities are targeted towards enabling a holistic environment for student and the university stake holder’s development. University has always been at the forefront of sensitizing students to the cultural, regional, linguistic, communal, and socio-economic diversities of the state and the nation. The university has conducted sports/ cultural events among the affiliated colleges students.

The University celebrates cultural and regional programmes, Constitution Day, etc. to teach tolerance and harmony to the students.

The Gender Equality Policy focuses on equal access, opportunities, and rights for women and men.

Provisions for specially abled ensures that every single member of the department is aware of the care to be shown to the specially abled people.

The University has revised the curriculum with the inclusion of topics of India Knowledge System (IKS), Universal Human Values (UHV), related to human rights, peace, tolerance, love, compassion, harmony, promotion of social values, awareness of environmental protection, and ethics under mandate of NEP 2020.

File Description	Document
Supporting documents on the information provided (as reflected in the administrative and academic activities of the Institution)	View Document

7.1.9

Sensitization of students and employees of the Institution to the constitutional obligations: values, rights, duties and responsibilities of citizens

Describe the various activities in the Institution for inculcating values for being responsible citizens as reflected in the Constitution of India within 500 words.

Response:

- **REPUBLIC DAY CELEBRATIONS & INDEPENDENCE DAY CELEBRATION**

Republic Day and Independence Day are celebrated vigorously every year in the campus of the University on 26th January and 15th August, respectively, to remember the day when the Constitution of India came into effect after India gained independence after a very long freedom struggle.

- **SAMVIDHAN DIVAS' (CONSTITUTION DAY) IS CELEBRATED ON 26TH NOVEMBER EVERY YEAR.**

The staff and the faculty members of the University campus as well as affiliated colleges, participates in webinars, Conferences, Expert talks, Bright talks etc. which have enriched the awareness about this aspect.

- **AZADI KA AMRIT MAHOTSAV:**

In view of the celebration of 75 years of India's Independence - 'Azadi Ka Amrit mahotsav', as directed by Government of India (G.O.No.11018/6/2021-EBSB), academic and cultural competitions was conducted in the university.

- **CELEBRATION OF HAAR GHAR TIRANGA**

To inculcate to increase the zeal to respect our Indian Flag, Flag was distributed to the staff members of the University through celebration of "HAAR GHAR TIRANGA"

- **CELEBRATION OF ENVIRONMENTAL DAY:**

University takes pride in launching the Plantation Programme wherein the focus does not stop with the sound academic foundation of the student community and various stake holders of the University but it moves a step forward to develop them as responsible citizens of the country.

- **CELEBRATION OF WOMEN'S DAY:**

To respect working women and the constitutional responsibility to the women's by men, University celebrates women's day every year.

- **ANTI RAGING CAMPAIGN:**

In comply the responsibility of the ARTICLE 21 of the constitution, University always make heavy

campaign of Anti Raging from time to time in the students of the affiliated colleges and the students of the in-campus programme

• **CELEBRATION OF SWACHHATA DAY:**

University Article 51A of The Constitution of India 1949.

File Description	Document
Details of activities that inculcate values necessary to nurture students to become responsible citizens	View Document

7.1.10

The Institution has a prescribed code of conduct for students, teachers, administrators and other staff and conducts periodic programmes in this regard.

- 1. The institutional Code of Conduct principles are displayed on the website**
- 2. There is a committee to monitor adherence to the institutional Code of Conduct principles**
- 3. Institution organizes professional ethics programmes for students, teachers, administrators and other staff**
- 4. Annual awareness programmes on Code of Conduct are organized**

Response: C. Any 2 of the above

File Description	Document
Policy document on code of ethics.	View Document
Institutional data in the prescribed format (data template)	View Document

7.2 Best Practices

7.2.1

Describe two best practices successfully implemented as per NAAC format provided in the Manual.

Response:

BEST PRACTICE-I

- 1. Title:** Promotion of Research and innovation with interdisciplinary/multidisciplinary thrust areas

2. Objectives of the Practice

Assam Science and Technology University (ASTU) established a Central Research Hub (CRH) to promote research culture, balancing teaching-learning and research. The objectives are:

- To provide state-of-the-art research facilities supporting interdisciplinary and multidisciplinary research, while building industry-academia collaboration and addressing societal needs.
- To embed a research-oriented culture among faculty and students of the university.
- To provide a platform for faculty members, students and research scholars to exchange ideas through conferences, seminars and workshops.

3. The Context

To align with SDG 4, SDG 7 and SDG 13, ASTU recognized the need to promote research and innovation across affiliated and constituent institutes. In line with its Vision and Mission, ASTU established a central research hub balancing pedagogy and research, while immersing students in interdisciplinary research. ASTU has taken multiple initiatives over the years few years to nurture research-oriented culture among the students and faculty.

4. The Practice

The university formed the university research committee (URC) with representatives from the affiliated institutes and senior officials to monitor research activities. Under the guidance of experienced faculty, ASTU established a CRH with four specialized laboratories:

•Multi-disciplinary Experimental & Testing Accessible Laboratory

•Energy Research Laboratory

•Material Science Research Laboratory

•Tribology Laboratory

Additionally, the CRH includes an IC Engine Research Laboratory and a Computational Research Laboratory.

To strengthen the faculty competency in teaching, research, and administration to present research and build network ASTU organized numerous faculty development program (FDP), short-term courses, training programs-cum-internship programs, conference, seminar etc. These initiatives included such FDPs on topics like “Research Methodology and Pedagogy in Teaching Learning”, “Familiarization with Latex: A powerful tool for Technical Writing”, hands-on programs for ANSYS software, LabVIEW, and MATLAB, “National Conference on Recent Advances in Science & Technology (NCRASST)”, “International Conference on Renewable & Alternate energy (ICRAE)”, innovation challenge event “Sandhan”, etc. ASTU also offered grants of Rs 1.5 to Rs 3.0 Lacs under “Collaborative Research Project Scheme” to support faculty research. Internship is offered by the Department of Energy Engineering.

5. Evidence of Success

ASTU received grant of Rs20cr from MHRD under TEQIP-III. Faculty members have published a good number of research papers in reputed journals. Dr. Bharat Kakati has received a grant from Science and Technology Department, Assam for plasma pyrolysis plant. ASTU funded around 100 research projects of its own departments and affiliated institutes. Several patents have been filed and granted. The university has a total of seven Centres, 110 PhD supervisors and 210 research scholars including 10 AICTE doctoral fellows (ADF) contributing ongoing research and extension activities.

6. Problems Encountered and Resources Required

The lack of sanctioned posts for faculty members and technical staffs, limited research grants and resources for upgrading research facilities hinder the university's momentum in teaching and research. Although the university generates some revenue by providing research services at minimal fee, further infrastructural and logistical support is necessary for the continuous improvement of the research facilities.

BEST PRACTICE-II

1. Title: Academic reforms

2. Objectives of the Practice

Academic reforms are essential to meet the contemporary challenges in higher education and equip students with the knowledge and skills necessary for employability, entrepreneurship and research. The objectives of academic reforms are:

- To implement interdisciplinary choice-based curricula and research domains.
- To design a student-centric, job-oriented curriculum that makes them industry ready.
- To execute NEP 2020 guidelines for both technical and non-technical courses.
- To inculcate a culture of lifelong learning through innovation, critical thinking, and problem solving approach.
- To implement effective monitoring and evaluation mechanism for academic programs.

3. The Context

The university recognized the limitations of the rigid educational model and introduced innovative teaching and learning methods. These include choice-based credit systems (CBCS), flexible learning options, industry and research integration, student-centered teaching approaches, access to Massive Open Online Courses (MOOCs), etc.

4. The Practice

The university has updated its curriculum in line with AICTE-Outcome-Based Education Policy and NEP 2020. All UG engineering courses span 4 years (i.e. 8 Semester), with PEOs, POs and COs designed to meet academic and industry needs. Key features of the revised curriculum include:

- A Student-centric, flexible and multidisciplinary learning-based curriculum.
- Compulsory courses such as Skill Enhancement Course, Value Added Course, Product Design

and Development, and Compulsory Internship.

- Emphasis on Human Values, Ethics, Soft Skills, Gender Sensitivity, Environmental awareness and societal responsibility.
- According NEP 2020, Multiple Exit and Multiple Entry provisions for UG courses.

The CBCS promotes interdisciplinary education and holistic development, allowing students to select elective courses from various disciplines. The university adheres to a uniform Academic Calendar and has an automated course registration and grade entry portal in ERP system for timely declaration of results and efficient academic administration, ensuring an average gap of 30 days between evaluation and declaration of results. The university regularly conducts convocation to offer the degree to the students. The university promotes MOOCs, refresher courses, and encourages faculty to participate in UGC supported orientation programs. Furthermore, the Academic Bank of Credits (ABC) facilitate the academic mobility of students, allowing "credit transfer" between institutions under NEP 2020 provisions.

To enhance industry-academia links, the university mandates compulsory industrial training, includes industry experts in program boards, organizes industry-academia meets, and has signed MoUs with industries for internships and skill development.

5. Evidence of Success

Interdisciplinary learning has allowed students to connect ideas and concepts across different disciplines, fostering critical thinking and real based problem-solving skills. Students have received awards for paper and poster presentations at conferences or workshop. The University organized academic lectures by industry experts, webinars, online training programs, industry visit, etc. to enhance students' readiness for industry.

6. Problems Encountered and Resources Required

Inadequate budgetary, low fee structures, frequently changing criteria by apex bodies, appointment of faculty members, lack of vision in some areas and shortage of qualified personnel have impacted the pace of academic reforms implementation. Despite these issues, ASTU has successfully introduced several key academic reforms in recent years.

File Description	Document
Best practices as hosted on the Institutional website	View Document
Any other relevant information	View Document

7.3 Institutional Distinctiveness

7.3.1

Portray the performance of the Institution in one area distinctive to its priority and thrust within

1000 words**Response:**

Science and Technology is the main priority and thrust area of the Assam Science and Technology university. The main aim of the university is to provide quality of education and research in the field of science & technology. To conduct and carry out high quality research in the field of science and technology, a central research hub (CRH) is established by the university in the year 2018 with the primary aim of nurturing scientific temperament and research culture among the budding young minds of the region for innovation. The state of the art research labs at ASTU are equipped with cutting edge technologies and equipment. The name of the different laboratories established under CRH are given below:

- Multi-disciplinary Experimental & Testing Accessible Laboratory (METAL)
- Energy Research Laboratory (EEL)
- Material Science Research Laboratory (MSRL)
- Tribology Laboratory (TL)
- Plasma pyrolysis Laboratory
- Internal Combustion Engine Research Laboratory
- Computational Research Laboratory

The university is continuously working on to create the best possible environment with state-of-the-art facilities for research and innovation to flourish within the region. The group of experienced faculties are permanently engaged by the university to conduct high end research works in the field plasma science, material science, tribology, energy, waste management and disposal, waste water etc. The central research hub is equipped with different high end research facilities like iPVD reactor, DSC, TGA, Optical emission and absorption spectroscopy, Contact angle measurement set up, high vacuum pumps, Pin/Ball on Disc tribometer, Journal Bearing Tester, Four Ball Tester, Micro Vickers hardness tester, IC engine, HR optical microscope, Rheometer, Computerized VCR, Downdraft Gasifier, 10kW, Bomb Calorimeter (Digital), Flash and fire point apparatus (Digital), Five sensor flue gas analyzer, Ash fusion Analyzer, Cloud point and pour point Apparatus, Rotary Vacuum Evaporator, Automatic Polishing Machine, Stir casting furnace, Diamond Sectioning Machine, Muffle furnace, Hot air oven, Hot mounting press, Cold mounting press, Rockwell hardness tester, digital oscilloscope, Function generators etc. The faculty members are responsible for carefully guide the students at every step of their journey till they find their own path. Apart from the in-house faculty, the students and faculties of affiliated colleges/institutions of ASTU and other institutes/university are also used the facilities. Good number of students from the various institutes of entire North-Eastern region i.e. NEHU, Gauhati University, Tezpur university, JIST-Jorhat, AEC, Guwahati, JEC-Jorhat, Pub-Kamrup college, Sipajhar college etc have completed their internship program at CRH, ASTU. For successful completion and review the research activities, the university has constituted research and development cell as well as Consultative Research Committee (CRC). To carry out high quality research work, the university has signed a good number of MoUs with different nationally and internationally reputed research institutes/university like IASST, Guwahati, People's University, Russia, Curtin University, Australia, etc.

Last five years, a good number of research projects are successfully done by the faculty members of the university. A good number of publications and book chapters are published by the faculty members and students in both nationally and internationally reputed journals. A research works related to the development of an advance hybrid plasma coating reactor is registered as Indian patent in the year 2023.

To motivate and encourage the young students/faculty members for research and innovation, the university has conducted various conferences, workshops, expert lectures in last five years.

File Description	Document
Appropriate webpage in the Institutional website	View Document

5. CONCLUSION

Additional Information :

No remark.

Concluding Remarks :

The Assam Science and Technology University is responsible to upgrade the quality of education by providing international standard teaching and research infrastructure to its students, faculty, and staff. The focus on continuous improvement and quality assurance is evident in the various measures that the university has implemented to support the development of its staff and programs. The University has a mandate of Engineering student participation in start up and innovative ideas in future academic endeavours. For this purpose the syllabi and the academic regulatory body are being synchronized as per mandate of NEP 2020.

The university emphasize to bridge the ancient wisdom of the region with modern technology and provide solution to overcome the region specific challenges for socio-economic development.