



গুৱাহাটী বিশ্ববিদ্যালয়
Gauhati University, Assam

MASTER PLAN OF GAUHATI UNIVERSITY CAMPUS



GAUHATI UNIVERSITY

A NAAC 'A' GRADE INSTITUTION



Introduction

Gauhati University (a NAAC A-grade institution) is the oldest and largest university in North-East India. Founded in the year 1948 under the Gauhati University Act, 1947; the University was established at the southern bank of the Brahmaputra, towards the northern edge of the Shillong plateau (26.1543°N, 91.6632° E). With a sprawling campus spread over an area of 508.8 acres, Gauhati University comprises of 48 Departments, 1 constituent Law College, an Institute of Distance and Open Learning (IDOL) and 6 Centres of Studies.

The University provides undergraduate and postgraduate courses across seven faculties namely Law, Medicine & Allied Health, Arts, Science, Commerce & Management, Sciences, Engineering and Technology. A total of 3627 students enrolled in the PG courses at Gauhati University in the session 2020-2021 while as many as One lakh fifteen thousand students were enrolled in UG courses in the 306 affiliated colleges during 2020-2021. The University consistently ranks as one of the best universities in the region, ranking 45th among all Indian Universities (National Institutional Ranking Framework -2021

Master Plan Objective

This document introduces the placemaking principles that set the vision for the Masterplan have evolved to address the opportunities within the site analysis which promote key objectives. These key objectives seek to :

- Improve the campus arrival and navigation experience to align it with the reputation of the University.
- Create high-quality pedestrian environments, including a central core to promote interaction and a sense of place.
- Deliver a connected and walkable campus that prioritizes sustainable transport choices.
- Use wayfinding and clear design aesthetic in urban design to provide a safe campus experience.
 - Boundary Wall around the campus to make a safe and protective campus.
 - Minimize the entry and exit point in the campus
- Provide high-quality facilities for our students, staff, commercial partners and visitors that meet the technological and sustainability objectives of the University.
- Enhance biodiversity across the site by linking key streets to the surrounding landscape
- Promote environmental sustainability and energy efficiency.

Masterplan components:

1. Streets and urban structure
2. Architectural form and character
3. Landscape and public realm framework

Campus Character:

1. Preserve and restore iconic Buildings
2. Protected Hilly area
3. Protected Water Bodies
4. Create memorable places.

Future Expansion:

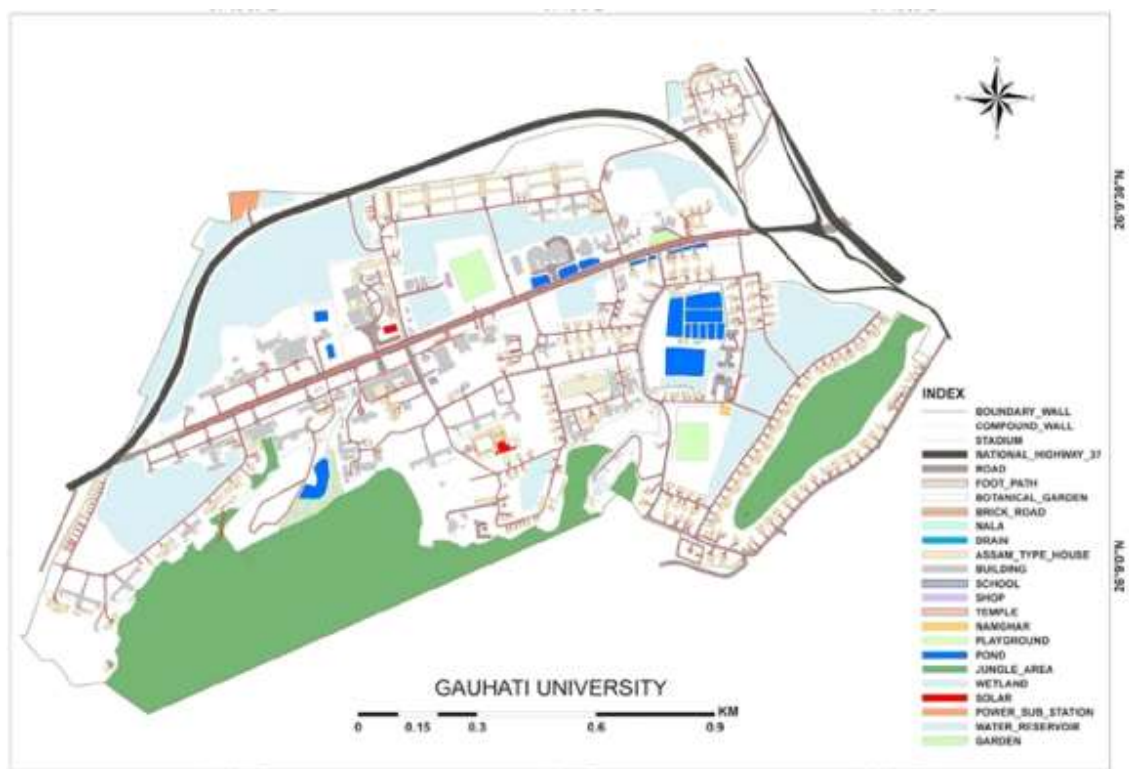
1. The protection of water bodies and hilly area in the campus while expanding or constructing new physical infrastructure will be taken due care in future expansion.
2. The existing old structure(Assam type) with a life span of more than 70 years may be dismantled to create space for modern structure/buildings

Land use and land cover

The Gauhati University campus is characterized by low lying residual hills towards the south which is gradually flattened interspersed with several wetlands towards the north and thus, making it a picturesque landscape suitable for a wide spectrum of flora and fauna. The Academic Departments and residential units/hostels have come up at the foothills or in gradually filled lowlands.

The present survey revealed a total of 484 acres of land in the main campus, of which 75 acres are under wetlands, 91 acres under natural forests and 2 acres under the botanical garden that together constitutes 168 acres (34.7%). Four segments of natural forests cover the southern hills. Organized plantations in the campus are mainly along the internal roads and residential units. There are a total of twenty wetlands of various sizes that are home to a wide diversity of aquatic flora and fauna. It is a matter of concern that a few of the wetlands have been observed to be silted up and presently under a thick cover of grass and aquatic weeds.

It is found that a total of about 77.95 acres (~16.3% of total) are under the built-up category, of which Assam type residential units, hostels, and administrative units form a significant part. In absence of available high ground, many of the wetlands are being filled up for new constructions. One 6- storied residential quarter is coming up as a part of a recent initiative of the GU administration for vertical expansion. The campus is cross-crossed with roads which covered an estimated area of approximately 20 Acres and the two stadiums covering an area of nearly 4 acres of land. Besides the main campus, The GU has two satellite blocks one at Jalukbari and the other one at the Ambari area of Guwahati city.



Gauhati University Plan

Table 1 - Built-up categories in Gauhati University Campus

Sl. No.	Land Use Category	Area (Acres)
1	GU Campus	483.713
2	Botanical Garden	2.04694
3	Road	20.1664478
4	Divider	0.617044
5	Road Unmetalled	0.186615
6	Foot Path	5.885191
7	Ring Well	0.00575
8	Sign Board	0.033346
9	OFC	0.001035
10	Oil Man Hole	0.000786
11	Rock	0.074877
12	Biofuel Unit	0.050387
13	Pump Station	0.00061
14	Car Track	0.870524

Sl. No.	Land Use Category	Area (Acres)
15	Brick Road	0.013168
16	Nala	0.360957
17	Protection Wall	0.001013
18	Drain	1.872992
19	Retaining Wall	0.053146
20	Bench	0.002516
21	Culvert	0.212044
22	ATM	0.00776
45	Foundation Stone	0.000212
46	Building Under Construction	0.006203
47	Overhead Tank	0.035068
48	Dust Bin	0.000603
49	EP Box	0.003566
50	Water Tank	0.270281
51	Car Parking	0.048694
52	Garage	0.325104
53	Bus Stop	0.019502
24	Building	19.694893
25	School	0.812026
26	Transformer	0.053045
27	Shop	0.217685
28	Generator	0.03877
29	Security House	0.025495
30	Temple	0.149728
31	Hut	1.31423
32	Namghar	0.12246
33	Water Pump	0.036395
34	Playground	4.00509
35	Septic Tank	0.400901
36	Pond	7.557342
37	Jungle Area	91.002504

Sl. No.	Land Use Category	Area (Acres)
38	Wet Land	75.299581
39	Solar	0.373466
40	Tin Shed	0.051762
41	Bathroom	0.006493
42	Power Sub Station	0.991229
43	Water Reservoir	0.267077
44	Toilet	0.202206
54	Garden	0.539414
55	Panel Board	0.001973
56	Electric Room	0.000595
57	SahidBedi	0.013919
58	Statue	0.008653
59	Cycle Stand	0.022548
60	Hut Area	0.620613
61	NH	37 5.343

Existing Facilities

1. Amenities:

The University has very spacious auditorium. The Birinchi Kumar Baruah Auditorium (BKB) is well equipped with the modern staged lighting , sound and communication system which is more frequently used for academic (like seminar, symposium, workshop etc.) as well as cultural activities.



B.K.B Auditorium

Sports and games facilities are available for the students. Good facilities for Basketball, Volley ball, Badminton, Hand ball, Lawn tennis, athletics, etc. are available in the college campus. A Multipurpose Indoor Hall was also constructed in the University campus in which the students can play Badminton, boxing etc.

The Multipurpose Indoor Hall was newly constructed with provision of all modern amenities like Taraflex flooring with high luminous light and with a seating capacity of 1000

The Indoor hall has the provision of playing Boxing, Badminton, basket ball etc.



Newly Constructed Multipurpose Indoor Hall



Indoor Stadium

The other amenities that the University offers for the students, Teaching Staff and other employees

Table -2 List of Amenities

Sl no.	Name of Buildings	Depts. Accommodated/ activities
1	B.K.B. Auditorium	Auditorium Hall
	Extension of Main Entrance, VIP Entrance,	
2	Phanidhar Dutta Seminar Hall	Seminar Hall
3	Faculty House	Conference cum meeting hall for Faculties
4	AT Conference Hall	Conference hall
5	Dr. H.K Baruah Regional Botanical Resource Center	Botanical Garden & Research center
6	Barpujari Bhawan	Gauhati University North East Study Center
7	Student Day Home	Student's meeting Hall , common room
8	GU Astronomical Observatory	Astronomical observation

9	Indoor Stadium	Provision for indoor games like Badminton , Table tennis
10	Amphi Theater	1500 Capacity
11	Canteens/Cafeterias and Food Courts	
12	Multi-purpose Indoor hall (Newly Constructed)	Provision for indoor games like Badminton , Table tennis,Boxing
13	Bank & ATM	State Bank of India Punjab National Bank
14	Post Office	

2. Academic Building

The purpose of this study is to explore the perception of students about aspects of academic building that affect their wellbeing. The items are considered as parameters that are important to students' wellbeing in relation to academic buildings. The most emphasized aspects of academic building that are essential to meeting students need include thermal conditions, internet access, furniture, duration of access, availability of discussion room and availability of personal workstation. This implies that facilities managers in higher education institutions should give adequate attention to these identified aspects of academic buildings as they can potentially affect students output.



New Academic Building (Left) , GUIST Academic Building(Right)

The Krishna Kanta Handiqui Library was established to cater to the needs of the students, teachers and research scholars of the University and named after the founding Vice Chancellor of this university, the great Sanskrit Scholar Professor Krsihan Kanta Handiqui, who was also an Orientalist of world fame. It not only helps in supporting the classroom instructional programmes of the University, but also unfolds the horizon of knowledge in regard to the different research programmes carried out by the University.



K.K.Handiqui Library

The Brahmaputra Studies Centre is set up in the campus of Gauhati University to serve as a centre of National and International relevance and excellence to cater to the academic and social needs focusing on studies, research on various aspects of Brahmaputra River.



Brahmaputra Studies Centre

Table 3- List of Academic Block

Sl no.	Name of Buildings	Depts. Accommodated
1	Sc. Block-I	Physics
2	Sc. Block-II	Chemistry
	Annexed Building (1st Floor)	Chemistry
3	Sc. Block-III	Botany
4	Sc. Block-IV	Anthropology, Geology & Geography

	Vertical Extension (2nd floor over Anthropology)	Anthropology
	Vertical Extension (2nd floor over Geology)	Geography & Geology
5.00	Sc. Block-V	a) Zoology & Bio-technology
		b) Animal House-1
		c) Bio- informatic lab -
		d) Glass House -1
		e) Glass House-2
		d) Animal House
	Vertical Extn of 2nd floor (middle & east side)	Zoology & Bio-technology
	Vertical Extn of Bio tech Dept. (West Side)	Zoology
	GU Bio-diversity & Aqua culture center under Zoology Dept.	Aqua culture lab (A.T.)
		Aquarium House (A.T.)
		Co ordinator's Office Build. (A.T.)
		Over- Head Tank & Pump House
		Accommodation build. for Reseach Scholars
6	Arts & Law Building	Philosophy, History, Mathematics, GU Law College, Library & Information Science & Office of the Secy. University Classes.
	Vertical Extn of 2nd floor over 1st floor	G.U. Institute of Sc. & Tech (GUIST)
7	New Arts Build. (Additional)	English, Hindi, Arabic
8	MBA Build.	M.B.A. Dept.
	MBA Annexed Build	M.B.A. Dept.
9	Education Build. 1st floor of Education Build.	Education Dept Education Dept
10	MIL & Folklore Build.	Folklore, MIL,ELT & Linguistics
	Extn of 2nd floor over MIL & Folklore	MIL & Seminar Hall
11	Commerce Build.	Dept of Commerce
	GF & 1st floor of Annexed Build	Dept. of Commerce
	2nd floor of Annexed Build.	Dept. of Commerce
12	USIC Build.	Dept of Instrumentation & USIC
	2nd floor of USIC Dept.	Dept. of USIC
13	Statistics Build. 1st floor (West Side)	Statistics & Population Research Center Statistics Dept.
14	Vidhi Vidya Bhawan	L.L.M.

15	Build. for Elect. & Com. Sc.	Electronics & Computer Sc.
	2nd floor of Elect. & Com. Sc.	Electronics & Computer Sc. And Comuter Center
16	Build. for Women Study Research Center	Women Study Research Center, Students' Career Counseling. & Commerce
17	Main Environment Sc. Build.	Environmental Sc. Dept.
	A.T. Building near Botany	Environmental Sc. Dept.
18	Boro Build	Dept. of Boro
19	Build. for Journalism	Dept. of Journalism
20	Build for UGC Academic Staff College	UGC Academic Staff College
21	KKH Library Build	Library
	KKH Annexed Build	Library
22	IDOL Build.	IDOL
	Store Cum & Canteen of IDOL	Store & canteen, Seminar Room
23	IQAC Build	Extension Education Center, Adult continuing Education, IQAC
24	New Academic Building (Near Market)	Pol. Sc.; Assamese; Economics; Sociology; Women Studies; ELT&Linguitics; Snanskrit; Foreign Language
25	GUIST Build.	
26	New Academic Building near Education Dept.	Psychology, Disability Centre.
27	Build. for Mass Comunication (GF)	Mass Com. & SLET Commission
	1st Floor of Mass Com. Build.	MamoniRoisom Chair office
28	Persian Build (A.T.)	Dept. of Persian
29	Center for Brahmaputra Studies (Under Construction)	Studies and research on Brahmaputra River
30	Construction of Instrumentation & USIC Building (Under Construction)	
31	Consruction of New Academic Building(G+1) (Under Construction)	

3. Teachers Quarter/Flat

Table 4- List of flats/quarters

Sl.No	Name of Building	
1	Qtr no.-30	1
1.1	VC Bunglow(New)	1
2	Teachers	

	Teachers Qtr. (Assam Type-I)	
	Teachers Qtr. (Assam Type-II)	
	Teachers Qtr.(Assam Type-III)	
	Teachers Qtr.(Assam Type-IV)	
	Teachers Qtr. Assam Type- Part House)	
	RCC Teacher's flat -I (Two Storied)	
	RCC Teacher's flat -II (Two Storied)	
	RCC Teacher's flat -III (Two Storid)	
	RCC Teacher's flat (Three Storied)	
	Total	
3	Warden	
	Warden qtr.	
	Total	10
4	Officers	
	ADM qtr. (Type-I)	
	ADM qtr. (Type-II)	
	ADM RCC flat -I (Two Storied)	
	RCC Doctors' Flat (double unit) (G,F.)	
	Total	17
5	3rd Grade	
	Hospital staff qtr.(3rd grade)	
	RCC Flat for C-Grade Staff	
	O.A. Qtr. (3-Grade) (Single)	
	O.A. Qtr. (Double Unit)	
	RCC Flat for O.A.(3 -Grdae) (Two Storied)	
	Total	50
6	4th grade	
	Hospital staff qtr.(4th grade)	
	4th grade Qtr. (Single Unit))	

	4th grade qtr. (Double Unit)	
	Hostel's Menial Barrack	
	RCC Flat for D- Grade flat	
	Total	126

4. Hostels

University has its own hostels for accommodation of students which are at walking distance from the University Academic blocks. In allotment of the hostel rooms, priorities are given to the students who are from the far distance from the college and students from the weaker section of the society. Merit is other important criteria for allotment of the hostel facilities to the students.

Separate Hostels for Boys and Girls were constructed in the campus with proper facilities like Water purifier, Hall room, proper hygiene Kitchen Hall. The Hostels were well connected with road.



Fig – RCC Boys Hostel



Fig- RCC Girls Hostel

Table 5- List of Hostels

Sl.No.	Name of Building
1	A.T Boy's Hall-4
2	A.T Boy's Hall-5
3	A.T Boy's Hall-6
4	A.T Boy's Hall-7

5	A.T Girl's Hall-2
6	A.T Girl's Hall-3
7	A.T Girl's Hall-10
8	RCC-1 Girl's Hall-1
9	RCC-2 Girl's Hall-4
10	RCC-3 Girl's Hall-5
11	RCC-4 Girl's Hall-6
12	RCC-5 Girl's Hall-7
13	RCC-6 Girl's Hall-8
14	RCC Girl's Hall -9
15	S.C Boy's Hostel (Babu Jagjiban Ram)
16	Gandhi Bhavan Reserch Scholar Hostel
17	RCC-1 Boy's Hostel
18	RCC-2 Boy's Hostel
19	RCC-3 Boy's Hostel
20	RCC-4 Boy's Hostel
Sl no	Name of Building
21	RCC-5 Boy's Hostel
22	A.T Boy's Hostel -8
23	A.T Boy's Hostel -9

5. Administrative Blocks

The University administrative block is the main arena comprising of various important departments and cater to the administrative requirements of the staff and students alike.



Administrative Block

Table 6 – List of Administrative blocks

S/no	Name of Buildings	Accommodation
1.00	Office of the Vice-Chancellor	Office of the V.C. ; Dean of Faculties & Academic Registrar, P.R.O.
	2nd floor of VC Office	Office of the Academic Registrar & Web site cell
2	Administrative Build (main)	Office of the Registrar & Controller of Examinations
	2nd floor of the Admn. Build.	General Br. ; Cetral Store; P.M. 's Office; Examination Rooms, Meeting Br.
3	Additional Office Build (A.T.)	Examination Works & Administrative Branches
4	Press Build	University Press
5	Works Dept.	Office of the University Engineer & Estate Office Including extension.
6	GU Hospital	Hospital & CMO Office
7	Examination & Evaluation Building	Office of the Dy. Controllers
8	Building for DSW Office	DSW Office
9	TNEIF BUILD-3 (Building for NEP)	(Under Construction)
10	TNEIF BUILD-2	(Under Construction)

Proposed future Infrastructure development for the next 5 years:

Sl no	Name of Project	Proposed Location	Proposed Estimated Value
1	G+5 Residential flat for Professors	26°09'25.2"N 91°40'14.3"E	₹10.00 crores
2	Central Instrumentation Facilities	26°09'11.4"N 91°39'37.1"E	₹ 6.50 crores
3	Vice- Chancellor Office	26°09'19.5"N 91°39'39.3"E	₹ 9.80 crores
4	RCC C-Grade Residential Flat	26°09'36.7"N 91°40'13.3"E	₹ 1.70 crores
5	Development/ Improvement of various Internal roads of University campus		₹ 1.30 crores
6	Construction of approach road from G.U main road to NH- bypass	26°09'21.1"N 91°39'44.7"E	₹ 2.40 crores
7	Internal road from Sundarbari Gate to Teachers Qtr 75 along with reconstruction of Boundary wall.	26°09'01.7"N 91°40'16.0"E	₹ 1.98 crores

GREEN AUDIT

Gauhati University is committed to responsible stewardship of resources and to demonstrate leadership in sustainable academic practices. The University supports the climate neutrality goals as outlined by the Government of India and routinely monitors the sustainability of the research and education mission through the Green Audit Committee. The policy goals of the Gauhati University Green Audit are :

- Identification and documentation of the strengths and areas of improvement within sustainable operations of administrative, academic and research laboratories via gap analysis, and outlining actions that can be implemented to further targets.
- Increase environmental awareness throughout campus and motivate all stakeholders for optimized sustainable use of available resources.
- The importance of the program is to collect baseline data of environmental parameters and resolve the environmental issue before they become a problem. To achieve the goals, Gauhati University Green Audit Committee endeavors towards the following objectives: ∞ To identify current and emerging environmental issues

WASTE MANAGEMENT

In order to avoid the use of plastic in the campus, and to encourage the use of biodegradable materials as alternatives to achieve the goal of plastic free campus, a few steps were undertaken. A portion of the Leaf litters from the campus were effectively used for aerobic/vermi composting, the composted material were used as manure. It is known that recycle of paper waste instead of incinerate or burning where an Institution can look into. Further, management of solid-waste is one area where every all stakeholders are more-or-less aware of the issues involved. Each of these sections/ stakeholders have appropriated their own set of solid-waste management practices as per their convenience, requirements and availability of resources. Investigation reveals that 19 Academic Departments of the University have a total of 185 numbers indoor dustbins installed for solid-waste disposals. In average terms, each of these departments has a provision of < 10 dustbins. The departments of Geology, Botany, HRDC and GUINES further maintain bio-degradable and vermicompost facilities. The teacher's quarters maintain on an average 2 personal dustbins for solid-wastes disposals and also a pit for dumping of organic wastes.

- 42% of the Academic departments and 50% of residential quarters maintain separate disposal systems for dry and wetwaste.
- the culture of separating biodegradable waste from non-biodegradable ones is prevalent in the teacher's quarters and in 42% of academic departments but is absent in hostels.
- For 52.6% of academic departments, the accumulated solid waste is lifted by GMC, for 26% of departments; it is land while for the rest it is composted.
- For 75% of the teacher's quarters, the entire amount of non-biodegradable wastes accumulated is lifted by the GMC every alternate day in a week. For the remaining 25% of quarters, only 80% of the waste is lifted by GMC, while the remaining is land filled and composted
- Similarly, only 50% of hostels have adopted land filling and composting processes, while the remaining 50% allow the wastes to be lifted by GMC only.
- Daily cleaning is in practice for all the departments and special cleaning drives are initiated periodically by the students and faculty of these departments to imbibe and foster GO-GREEN culture on the campus.



Waste segregation facility in GU
Departments

ENERGY AUDIT

According to Energy Conservation Act, 2001, Energy Audit is the verification, monitoring, and analysis of the use of energy including submission of a technical report containing recommendations for improving energy efficiency with costbenefit analysis and an action plan to reduce energy consumption.

The Energy and electricity audit aimed to cover the aggregate consumption of Electrical and Natural gas energy within the Gauhati University campus including academic and administrative blocks. In different hostels, LPG cylinders are primarily used for cooking purposes and the number of uses was also counted. Domestic LPG connections were not included in the present study.

Moreover, Gauhati University is taking its initiative to utilize renewable energy such as solar power to compensate for the necessity of electrical energy within the campus. To achieve that goal, a number of Solar Panels are installed in different parts of the campus. On the other hand, to minimize the consumption of electrical energy highly efficient and low-power consumable LED light panels are being installed phase-wise in different hostels, Administrative and Academic buildings.