

Harcourt Butler Technical University

100 YEARS
1921 - 2021

HARCOURT BUTLER TECHNICAL UNIVERSITY

MAINTENANCE POLICY

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1. Summary

This document outlines the University's Maintenance Policy. It outlines the university's system and procedures for new construction and maintaining and utilizing the physical, academic, and other support facilities-laboratory, library, sports, computers, and classrooms.

2. Maintenance Policy Statement

“To ensure that all maintenance activities in the University are conducted in a planned manner and are consistent with the Vision and Mission of the University and in line with prescribed standards/specifications and guidelines.”

This Maintenance Policy forms a part of the HBTU's Strategic Plan. It demonstrates the University's commitment to planning and constructing new infrastructure and maintaining the existing one in a strategic, cost-effective, environmentally safe, and timely manner in line with the latest norms and standards/Guidelines. The university shall comply with the standard Construction and maintenance practices as per the government-approved procedures and guidelines issued from time to time.

3. Scope

The scope of this policy shall cover the following:

- New construction of buildings/infrastructure
- Repair and maintenance of existing buildings/infrastructure
- Other Civil infrastructures such as roads, sewerage systems, stormwater drains, and on-site waste treatment facilities.
- Electrical and Mechanical Infrastructure
- ICT Infrastructure
- Departments and Laboratories
- Sports facilities
- Horticulture



4. Introduction

This Maintenance Policy forms a part of the HBTU's Strategic Plan. The policy shall demonstrate the university's commitment to plan and construct new infrastructure and maintain the existing one in a strategic, cost-effective, environmentally safe, and timely manner in line with the latest norms and standards/Guidelines.

5. Types of Maintenance

Maintenance is defined as the work required to preserve or restore buildings and equipment to their original conditions or to such a condition that they can be effectively used for their intended purpose, ensuring the ongoing operation of the campus. The university conducts the following four types of maintenance:

- a) Routine/Normal Maintenance
- b) Preventative Maintenance
- c) Scheduled Maintenance
- d) Corrective Maintenance
- e) Complaints/ requests from departments, offices, hostels, residents etc.

Normal/Routine Maintenance

Cyclic or planned work activities funded through the annual budget, carried out to continue or achieve either the originally anticipated life of a fixed asset (i.e. buildings, equipments etc) or an established level of performance. Normal/routine maintenance is performed on capital assets such as buildings and equipment to help them reach their originally anticipated life.

Preventive Maintenance

A planned and controlled program of periodic inspection, lubrication/oiling, and replacement of components and cleaning is done to extend the useful life of building systems and keep them operating near the design level. Thus, objectives of the preventive maintenance include the following:

- Reducing the occurrence of breakdowns.
- Prevention of earthquakes, dampness, and seepage of buildings
- Reducing energy consumption.
- Reducing overall maintenance costs

Scheduled Maintenance

Scheduled Maintenance refers to any repair, cleaning, or replacement of components or systems performed on a periodic basis to prevent its malfunction/failure. It is a task in which there is a fixed time interval frame for carrying out maintenance. Scheduled maintenance includes inspections, adjustments, regular service, and planned shutdowns

Corrective Maintenance

It refers to maintenance wherein defects have been observed in civil, mechanical, electrical or ICT infrastructure during its design life or operation. It includes cracks, seepage, plasters, breakdown of equipment etc.

Table 1 presents the types and Classifications of Maintenance in the University along with an indicative description of works. All other maintenance related to ICT facilities, library, and other support facilities can also be categorized as per this classification.

Table 1: Types and Classification of Maintenance in the University

Types	Type of Maintenance	Description of work	Frequency
Civil	Scheduled	Patchwork of roads immediately after rainy season	Once a year (November) (also as and when required)
		Whitewash of all buildings (academic, main building, central facilities, hostels)	Every four years
		Whitewash of staff residences	Every four years
		Cleaning of Overhead tank, water tanks in hostels and OHTs/Sintex plastic overhead tanks in academic buildings and residences	Every six months
	Routine /normal	Cleaning of offices, buildings, streets, and washrooms in the University	daily
	Preventive	a) Earthquake-resistant design of new buildings b) Damp proofing course c) Water-proofing of roofs	At the time of construction of new buildings
	Corrective	Waterproofing, spalling of plaster from the ceiling	As and when the need arises
Mechanical	Major	Carpeting of roads	Every seven years
	Complaints/ requests from hostels/residents	Repair and maintenance of civil works	As and when a request is received (within 24 hrs)
	Scheduled	Cleaning of sewer and stormwater drains	Every six months
	Emergent	Major breakdown of pumps resulting in a breakdown in water supply	As and when the situation arises (within 12 hrs)
Electrical	Complaints/ requests from hostels/residents	Repair and maintenance of mechanical works	As and when a request is received (within 24 hrs)
	Corrective Emergent	Electric wiring in old buildings	Every five years
		Major breakdown of transformer/fire in transformer	As and when a situation arises
		Power breakdown because of heavy rain/wind and consequent uprooting of electric poles and cables	
Complaints/requests from offices/ departments/hostels/residents	Repair and maintenance of electric supply	As and when a request is received (within 06 hrs)	



ICT facilities	Scheduled	All AMC-related aspects of ICT Infrastructure	Every year/as per agreement/warranty period
	Preventive	Installation of antivirus/network security software in university internet facility	At the time of new facility/augmentation of facility/or as per warranty period
	Complaints/requests from faculty/ departments/offices/ hostels	Repair and maintenance of internet/wi-fi/LAN etc	As and when a request is received (within 12 hrs)
Horticulture	Scheduled	Grass cutting of all playgrounds, lawns in academic areas, playgrounds	Four times a year
	Routine	Plantation maintenance of lawns and gardens in the campus	Routine
	Emergent	Uprooting of trees/scrubs because of heavy rain /wind	As and when the situation arises

Standard procedures have been in place for the maintenance and upkeep of various other departments, offices, facilities, and purchase activities connected to infrastructural maintenance. The Store and Purchase Section of the University, in collaboration with the Maintenance and other Section Incharges, takes care of the purchase-related activities concerned with the maintenance of various sections.

6. Maintenance Section

All new constructions and repair/renovation of the existing building and other infrastructure is carried out by the Civil Maintenance section of the university. The University has got a full-fledged Maintenance Section, which is responsible for carrying out all kinds of new construction and maintenance (of civil, mechanical, and electrical). The maintenance section is headed by Professor In-Charge, Civil Maintenance. Depending upon the need, a Deputy Chairman is also nominated by the Vice-Chancellor on the recommendation of Professor I/C Civil Maintenance. The section also has an Assistant Engineer (Civil) ably supported by Junior Engineers and other technical supporting staff (from Civil, mechanical and electrical) to look after the construction and maintenance of the University buildings, roads, water supply lines, sewer lines, etc. The civil maintenance department has two sub-sections, namely electrical maintenance and mechanical maintenance. Each of them is headed by a Faculty In-charge.

The mechanical maintenance section maintains utilities such as pump house, overhead tank, plumbing, carpentry, operation of sewer lines, and all other petty repairs in the university. The services of plumbers, operators, foremen, electricians, and plumbers are available on the east campus. Maintenance of physical facilities is carried out by the University's Maintenance section. The university has its own water supply based on groundwater. The internal water supply system including the tube well and distribution system is undertaken by the maintenance section.

The electrical maintenance section of the university is responsible for ensuring power supply to both campuses along with the operation and maintenance of electrical-related issues. The electrical maintenance section is also responsible for operating the electrical substation on the east campus of the university. It also addresses all electrical-related complaints of all departments, offices, and residential accommodations in the university. The hostels on the west campus are also provided with electric generators.

Specifically, the functions of the maintenance section are as follows:

- To carry out the construction of new infrastructure and maintenance of existing one- civil, mechanical, electrical etc.
- To carry out the maintenance of the main building, various departments, and central facilities within the campus, in matters pertaining to cleanliness and hygiene
- To carry out the maintenance of all furniture housed within the various blocks/ buildings of the college campus
- To carry out the maintenance of all electrical and mechanical maintenance within the various buildings of the university.
- To carry out the maintenance of the water supply system within the university campus.
- To carry out the maintenance of the power supply within the university campus.
- To undertake all liaison works with local bodies like Kanpur Nagar Nigam,



Kanpur Development Authority, and Kanpur Electricity Supply Company Limited.

- To coordinate the implementation of Annual Maintenance Contracts (AMC) pertaining to cleaning works, plumbing works, electrical works, electrical equipment (including transformers, air conditioners, etc.), fire extinguishers, telephone, etc.
- To prepare and submit bills related to any of the activities as stated above to the competent authority for necessary payment to be made thereof.

All maintenance-related requests by departments, offices, hostels, and residents shall be submitted to the Professor In-charge, Civil Maintenance. The request is reviewed in terms of scope of work, priority, and urgency of immediate redressal before arriving at the decision to take up the maintenance.

7. Campus Infrastructure

The HBTU Kanpur (erstwhile HBTI Kanpur) owns two campuses, namely the east and west located at a distance of 3 km apart.

East Campus

The east campus spread over 74 acres of land primarily houses academic activities and the west campus has residential and boys' hostel facilities. The east campus of the university has a Main building that houses the administrative offices, the School of Chemical Sciences (except Leather Technology), the School of Basic and Applied Sciences, and the School of Humanities and Social sciences. In addition, the main building on the east campus has 33 classrooms, washrooms, and offices for the administration and Deans. Further, the east campus has got separate buildings for various departments- Civil, Mechanical, Electrical, Electronics, Computer Science, Leather Technology, new chemical engineering, and electronics building. Each of these departments has additional classrooms, seminar rooms, laboratories, amenities, and faculty rooms. In all the east campus





Civil Maintenance Section Office



Mechanical Maintenance Section Building



Electrical Maintenance Section Office

has around 75 laboratories, 65 classrooms, and other instructional facilities. It also houses one lecture theatre complex, a Central workshop, parking, two auditoriums, two incubation cell buildings, a guest house, bank, cafeteria, Centenary pillar, six girls hostels, two boys hostels, STEP Building, overhead tank, and pump house, Electrical sub-station, Sports facilities- badminton court, lawn tennis court, basketball court and security posts.

West Campus

The west campus spread over 250 acres largely houses the residential campus with massive open space. It houses seven boys' hostels, faculty and staff quarters, Vice Chancellor Bungalow, Centenary Auditorium (Shatabdi Bhawan), post office, ATM, posts. Gymnasium, playground with cricket pitch, basket-ball court, community center, overhead tank and pump house.

8. Departments and Maintenance of Laboratory Equipment

The University laboratories are well equipped with state-of-the-art equipment and facilities with the proper stock maintenance. Each of the laboratories is assigned a Laboratory In-charge who is responsible for submitting maintenance/upgradation related to the proposal. The respective In-charges, technical staff, and lab assistants are responsible to maintain the laboratory equipment and general upkeep of the laboratories. Technical and support staff of respective departments monitor effective utilization of the laboratories. Stock registers and asset registers are maintained by the departmental office in consultation with lab In-charges. Breakage and repair if any, are reported to the Head of Department or the faculty-in-charge as the case may be and suitable measures are taken for speedy functioning of the equipment. For the day-to-day petty maintenance activities, every department is sanctioned an imprest money of Rs. 5000/-. For the maintenance activities, which are not possible to be taken-up in-house, external





Electrical Sub Station



Office building of Electrical Sub-station



Workshop of Mechanical Maintenance

equipment manufacturers are called or agreements/AMCs are signed with the relevant agencies. Depending upon the need, an annual maintenance contract (AMC) is carried out for high-end equipment, servers, and computers. The repair and maintenance of other electronic gadgets like computers, projectors, interactive smart boards, printers, and photocopiers are maintained by respective departments. All Classrooms with furniture, teaching aids, and laboratories are maintained by the respective department staff and attendants and supervised by the respective Head of the Department.

9. Maintenance of ICT Facilities

The university has a Computer Centre located in the Computer science Department of the University. It comes under the overall control of the Head, of Computer Science and engineering. The ICT facilities (in terms of campus-wide network infrastructure, wif-fi, LAN, and Servers are maintained by the System Manager. The System manager is supported by programmers and computer operators. The support staff maintains the computers, servers, Campus Wi-Fi, and other internet-related issues. The annual maintenance of computers in the computer center including the required software installation and antivirus renewal/upgradation is carried out under the overall control of the System Manager. Based upon the complaint received from departments and administrative offices of the university, the internet-related issues are looked after/resolved by the computer operators. Maintenance activities pertaining to the IT infrastructure including Computer Centre, Internet lease lines, Wi-Fi facility, MOOCS development Studio, Media Centre, University Website, University ERP System, IT enabled Classrooms, Seminar Halls, Auditoriums etc. are managed through well-defined IT Policy of the University.





10. Maintenance of the Central Library

The University has a Tagore Central Library apart from the departmental libraries developed in every department for the purpose of keeping program-specific books. In addition, the University has a digital/cyber library through which faculty and students can access books, journals, and other learning resources in an online mode through computers available in the Tagore Library and various departments. Tagore Central Library is looked after by the Professor, Incharge (Library), Librarian, and other supporting staff for the maintenance and enrichment.

11. Maintenance of the Central Workshop

For inculcating various skills in the students, the University has a Central Workshop where facilities for various shops like Machining, Carpentry, Fitting and Bench Working, Black Smithy, Foundry, Welding, and Sheet Metal are available. Every shop in the workshop is equipped with modern machines and tools. Various activities of the workshop are managed by a dedicated team of Workshop Superintendent, Asstt. Workshop Superintendent, Jr. Engineer, Foremen, Instructors, Mechanics, and other Staff.

12. Maintenance of Sports Facilities

To provide support in various sports, University has a Sports Sub-Council that has a Chairman, a Convener, a Student Secretary & representatives, and support staff, who collaboratively look after various sports activities and facilitate the needs of different sports. Sports facility for students has been created on different grounds on both campuses of the University. University Students Council in general and Sports Sub-Council, in particular, take care of these grounds and hold various competitions and activities throughout the year. A full-time regular Physical Education Instructor is available for coordinating the sports and games activities and training the students. The gymnasium is supervised and maintained by the Physical Education Instructor. The university owns Sports infrastructure including cricket, football, grounds, volleyball, tennis, badminton, basketball



13. Maintenance of Hostels

All hostels have necessary amenities like individual cots, study tables, chairs & wardrobes with a locking facility. The hostel is maintained well with a team of our Maintenance staff. The hostel is provided with 24 hours power backup with a good drinking water facility. The other facilities available include a mess, a common room with a TV and a Lounge. Students are provided with wi-fi internet facilities the hostel during the prescribed time. Wardens and Ward boys are appointed for the overall maintenance of the hostels. Repairing on regular basis is done for furniture, doors, windows, fan, lights, water purifiers, and electrical points. Regular cleaning of hostels, washrooms, kitchens, corridors, and surroundings is done. Cleaning of overhead water tanks, drainage system, and Septic tanks are carried out on regular basis.

14. Campus Cleanliness

Cleaning of the campus areas including the academic and administrative buildings is performed daily in the morning before the regular classes begin with the help of regular and outsourced staff members.

15. Annual Stock Checking

of furniture, lab equipment, stationery, ICT facilities, and sports items in all departments/sections of the university is carried out through the process of Physical Verification of Stocks and equipment auctioned, if not in use/or have completed their useful life.

16. Roles and Responsibilities

The "Building and Works Committee" (BWC) is the principal statutory body as per the HBTU Act, whose role is to decide the development and renovation of new Civil Infrastructure in the university. It has outside experts from the Public Works Department and other construction agencies which are involved in construction-



related activities in the university. Once an infrastructure development proposal is approved in the BWC, it is put up before the Finance Committee of the University for the allocation of budget.

For effective implementation of the university's maintenance policy, the roles and responsibilities of the main stakeholders shall be as under:

a) Nodal Officer, Maintenance Policy

The Professor In charge, Civil Maintenance shall be the Nodal Officer and he/she shall have the overall responsibility to ensure the compliance of this Policy. He/she shall have to coordinate all the related activities. He/she shall also be responsible for arranging O&M/AMC of all sewers, electrical, and other building-related infrastructure.

b) Heads of Departments/Faculty members/Lab Incharges

- Submitting proposals for new construction and renovation of existing ones in their respective departments.
- Ensuring general cleanliness of their respective departments /laboratories.
- All wastewater infrastructure (toilets, urinals, sinks in laboratories etc) and other related appurtenances in their respective departments/laboratories are in working condition so as to ensure smooth flow of sewage/wastewater to the sewers.

c) Dean of Student Welfare (DSW)

The DSW shall ensure and coordinate the maintenance of all the hostels and compliance with this Maintenance policy through the respective wardens. He shall submit all proposals for new construction/maintenance/renovation of existing ones in all hostels of the university.



d) Hostel Wardens

- Ensuring general cleanliness of their respective hostels.
- The wardens shall ensure the compliance of this maintenance policy.
- They shall ensure that all the wastewater infrastructure (toilets, urinals, sinks in laboratories etc) and appurtenances in their respective hostels are in working condition so as to ensure smooth flow of sewage/wastewater to the sewers.

e) System Manager

Maintenance and upkeep of all IT facilities in the University.

f) Physical Education Instructor

Maintenance and upkeep of the sports facilities including playgrounds.

g) Professor, Incharge, Library

Maintenance, up-gradation, and enhancement of the library facilities.

h) Workshop Superintendent

Maintenance of the central workshop facilities.