CAMPUS MAINTENANCE POLICY 2023
(Valid till may 2028)

1		**Introduction**
		Bannari Amman Institute of Technology (BIT) is committed to create the Centres of Excellence in Engineering, Technology and Management education having relevance to industrial and societal needs. Various policies are framed considering systems, processes and procedures followed in the Institute to ensure the inclusive growth of all the stakeholders associated with the Institute and to "Stay Ahead". The Bannari Amman Institute of Technology owns and operates an extensive portfolio of buildings, class room infrastructure, laboratory infrastructure, playgrounds, dining halls and other common amenities to deliver its teaching and research programmes. This document provides a management framework to ensure that these assets are maintained effectively to support the institute's strategic objectives. This document also presents a consistent approach to the maintenance of all institute assets and defines the roles and responsibilities of the Essential Services (ES) department. The ES department is the sole in-charge for the execution of policy by delegating the tasks to the identified coordinators of the concern department.
2		**Objective**
		The main objective of the campus maintenance policy is to ensure the maintenance and optimal utilization of various resources for enhancing the experience of learning and other facilities.
3		**Scope**
		Essential Services (ES) / Department is the sole provider of maintenance services for institute facilities and the ES Department is responsible to: • Ensure the maintenance responsibilities for college building, infrastructure, electrical, plumbing, air conditioning, horticulture, STP, Chiller, RO water plants, common area, staff quarters and their associated distribution systems. • Ensure the cleanliness and hygiene in academic areas such as classrooms, circulation space, laboratories, seminar halls and non-academic areas like gyms, conference rooms, rest rooms, auditoriums, cafeteria, and pest control and play grounds. • Providing routine services for the disposal of unwanted materials in public places and trashes of academic, non-academic, common area and staff quarters. • Renovation and replacement of interior painting, electrical work, plumbing, mechanical, civil, furniture's and water lines. • Sequential recording of complaint rectification in the log book and get it verified by ES department. • Disposal of scrap from institutional red tag area after proper recording as per the schedule. • Repair or replacement of plumbing, electrical and furniture after occupying the house, garden and other common amenities of quarters are chargeable as per prevailing market rates.
4		**References**
		Safety Guidelines and Material Safety Data Sheets (MSDS), wherever applicable as given by the suppliers.
5		**Availability of facilities,locations and other common aminities:**

Essential Services Department

Academic Area
1. Classrooms
2. Laboratories
3. Faculty Halls
4. HOD's Cabin
5. Department Library
6. Seminar Hall
7. Auditorium
8. Learning Center
9. TRC
10. NMC
11. Net Café
12. Principal Office
13. Smart Classrooms
14. Conference Halls
15. CoE

Non Academic Area
1. Ground
2. Gym
3. Power House
4. Chiller Plant
5. STP
6. Horticulture
7. RO Water Plant
8. Yoga Hall
9. Security Office

Common Area
1. Dining Hall
2. Cafeteria
3. Stores
4. ATM
5. Corridor
6. Lawn
7. Toilets
8. Civil Stores

Staff Quarters
1. House
2. Garden
3. Security Office

S No.	Services	Locations	Responsibility	Nature of work
1	Cleaning	**Academic Area:** Classrooms, Faculty Halls, HoD's Cabin, Department Library, Learning Center, Seminar Hall, Auditorium, Laboratories, Smart Classrooms, Conference Halls, Principal Office, Research Park, TRC, NMC, Net café and CoE	Cleaning Supervisors	Ensure the cleanliness and hygienic nature
		Non-academic Area: Hostels, Dining Hall, Cafeteria, Stores, ATM, Corridor, Toilets, Lawn, Civil Stores		
		Common Area: Ground, Gym, Cafeteria, Power house, Chiller plant, STP, Horticulture, RO water plant, Yoga Hall and Security service points		
		Staff Quarters: House, Garden, Security office		
		Campus Red Tag Area		
2	Repairing & Replacement			
2.1	Electrical Services	**Academic Area:** Classrooms, Faculty Halls, HoD's Cabin, Department Library, Learning Center, Seminar Hall, Auditorium, Laboratories,	Power House	Repair and replacement of lights, fans,

				Smart Classrooms, Conference Halls, Principal Office, Research Park, TRC, NMC, Net café and CoE		switch boxes, electrical cables, motors, AC
				Non-academic Area: Hostels, Dining Hall, Cafeteria, Stores, ATM, Corridor, Toilets, Lawn, Civil Stores		
				Common Area: Ground, Gym, Cafeteria, Power house, Chiller plant, STP, Horticulture, RO water plant, Yoga Hall and Security office		
				Staff Quarters: House, Garden, Security office		
		2.2	Computer Systems & Networking	**Academic Area:** Classrooms, Faculty Halls, HoD's Cabin, Department Library, Learning Center, Seminar Hall, Auditorium, Laboratories, Smart Classrooms, Conference Halls, Principal Office, Research Park, TRC, NMC, Net café and CoE	NMC and TRC	Monitoring and maintenance of computer system and networking devices, Internet facility, Camera
				Non-academic Area: Hostels, Stores		
				Common Area: Power house, Horticulture, Security office, Civil Stores		
		2.3	Plumbing	**Academic Area:** Learning Center, Auditorium, Laboratories, Principal Office, Research Park and CoE	Plumbing Department	Monitoring and maintenance of water distribution system
				Non-academic Area: Hostels, Dining Hall, Cafeteria, Stores, Corridor, Toilets, Lawn		
				Common Area: Ground, Gym, Cafeteria, Power house, Chiller plant, STP, Horticulture, RO water plant, Security service points, Service points		
				Staff Quarters: House, Garden, Security office		
		3	Gardening	Lawn and Tree maintenance	Horticulture	Monitoring and maintenance of green

		4	Construction materials and Furniture	**Academic Area:** Classrooms, Faculty Halls, HoD's Cabin, Department Library, Learning Center, Seminar Hall, Auditorium, Laboratories, Smart Classrooms, Conference Halls, Principal Office, Research Park, TRC, NMC, Net café and CoE	Civil Stores	environment, trimming of tree, lawn and plants
				Non-academic Area: Hostels, Dining Hall, Cafeteria, Stores, ATM, Corridor, Toilets, Lawn, Civil Stores		Purchase and maintenance of material movement
				Common Area: Ground, Gym, Cafeteria, Power house, Chiller plant, STP, Horticulture, RO water plant, Yoga Hall and Security office		
				Staff Quarters: House, Garden, Security office		

The above listed areas are indicative only and may be added further as and when the facilities are added or established.

6		**Maintenance Schedule and Services**

Maintenance services offered by various Essential Service Providers aim at optimum utilization of various resources in the campus through (i) preventive maintenance, (ii) break-down maintenance, (iii) predictive maintenance and (iv) disaster prevention schedules for various equipment / facilities available in the Campus and avail the uninterrupted services and execution of various activities.

In-charges / Heads of the Essential Services shall prepare the detailed list of preventive and predictive maintenance schedules (Annexure I) and activities (for academic, non-academic, common areas and staff quarters) with required resources for execution for such activities. The schedule shall include the activities to be carried out in terms of daily, weekly, monthly and annual maintenance.

In the case of emergency requirements, which might arise due to failure of certain systems, In-charges / Heads of the Essential Services shall attend immediately and restore system back in appropriate conditions. On completion of maintenance activities, In-charges / Heads of the Essential Services shall prepare a detailed report (Annexure II) on the maintenance activities carried out to the Head of the Institution for further actions.

Chargeable Services

Any services offered to residents of staff quarters, which involve replacements of worn-out components / parts shall be replaced during the maintenance activities and cost of the components / parts shall be recovered from the residents, subsequently. However, replacement

		of furniture provided in the individual houses shall be replaced, in case if it wears out, once in 10 years at free of cost. **Updation of Stock Register** In-charges / Heads of the Essential Services shall maintain the stock registers (Annexure III) of various consumable items available with them and update them as and when the items are used for carrying out the maintenance activities. Periodically, In-charges / Heads of the Essential Services shall carry out analysis of consumption pattern of various items and present it to the stores for initiating purchase activities.
7		**Resource identification and Allocation**
		The ES department has to identify and distribute the manpower's under the selected supervisors and allocate the roles and responsibilities to complete the tasks assigned as per the schedule.
8		**Execution and Monitoring**
		• The ES / Department shall distribute the required equipment, materials and consumables with the safety devices, as may be applicable, to the selected supervisors. • The supervisors shall monitor the proper execution of the assigned tasks as per the schedule.
9		**Review and Analysis**
		• The supervisors shall analyze the complaints and categorize as preventive, predictive or breakdown and assign the job accordingly to the available manpower. • The ES / Department shall conduct the review meetings (Annexure IV) and physical verification (Annexure V) of identified location, at least once in a week.
10		**Certifications**
		Heads of the concerned ES / Department shall obtain mandatory certification to ensure the safety of systems deployed in the campus such as building safety, electrical safety, fire safety and lift safety, as and when they are due. In addition voluntary certification also can be obtained namely heavy rain, earthquake and heavy wind.
11		**LABORATORY MAINTENANCE** **Policy in Identification, Planning, Scheduling & Follow-up** All the Laboratories should be mapped with a faculty in-charge (Annexure VI) and the assigned faculty member should take responsibility for the lab maintenance activities and act as a point of contact. Role of the HoD is to monitor the activities and guide the Lab in charge. All the departments have to prepare an annual maintenance plan specific to the labs, at the start of the year. The annual plan shall consist of a list of lab equipment with its planning and scheduling of various maintenance activities for the year, which is necessary to keep the laboratory reliable (Annexure VII). Annual Maintenance Contract (AMC) shall be made with a third-party agency for the identified equipment for its service. Its working condition shall be monitored by the Lab in charge periodically. In General, Laboratory Maintenance activities are categorized as follows: 1. **Regular Maintenance:**

A Laboratory consists of equipment,

- Mechanical - Lubrication, Calibration of Measuring Tools, etc.,
- Electrical - Activities concerned with working and safety.
- Electronics - Calibration and other activities concerned with working and safety.
- Chemical - Proper labeling, preparation and disposal of chemicals such as acids, bases, salts, etc.
- Biotech - Calibration and other activities concerned with working and safety.
- Computer Systems - Maintaining System performance through removing temporary memory, Anti-virus update, inspecting the working condition of software, updating necessary software, uninstalling unwanted software, etc.

General Service & Cleaning comes under regular maintenance

2. **Preventive Inspection:** Equipment Inspection with a checklist.
3. **License Update:** Software Renewal Process.
4. **Purchasing of consumables & breakage replacements**

- As per the prepared annual schedule*, planned activity should be completed with no compromise in the quality of work.
- Activities shall be carried out by a team of Lab technicians and the Lab in-charge.
- The results of activities should be communicated to the Head of the Department & IQAC Verticals.
- Faults identified are to be rectified as soon as possible through repair/breakage replacement / Total replacement within the set target time.
- Proper documentation of all the activities should be followed for future reference (Annexures VIII-XIII). Photographs shall also be taken for each activity (Cleaning is exceptional)
- Internal Audits should commence periodically to verify the completed & planned activities.

Annual schedule shall be planned to not disturb the student's utilization hours. On the other hand, once the students come to make use of a particular equipment, it should be ready to use.

Activities-based Specific Policies

1. AMC/ General Service

- Identified Specific Equipment shall be taken care by a third party agency under AMC, nominated external agencies should possess the capabilities of doing the job.
- Based on the type/need of the laboratory equipment, general service shall be done at the regular interval of time.
- Accidental machine faults should be taken under special attention & should be rectified as soon as possible. Documents of General service and Accidental maintenance service should be maintained. (Annexure X)

2.Calibration

- Based on the nature of the equipment, calibration activity is to be scheduled as follows:

○ Lab equipment shall be calibrated at *manufacturer-fixed intervals.*
○ Certification requirements shall be justified based on the purpose. Certifications should be done by authenticated agencies.
○ Electronic items shall be calibrated under *manufacturer-said intervals & guidelines.*

3.System Performance maintenance

● Concerning the usage and accumulation of data in the computer system, it should undergo to said Regular Maintenance *weekly/monthly* (Annexure XI)

4.Preventive Maintenance

● Major / Serviceable equipment should be taken for preventive inspection under regular intervals, which is to identify the faults and to rectify them before failure occurs.

● A detailed Inspection checklist shall be prepared consisting of equipment basic details and a list of functional parameters. (Annexure VIII)

● During the inspection, equipment test runs should be carried out and a checklist to be filled.

5. Purchasing of consumables & breakage replacements

● Requirements of consumables should be identified and shall be purchased at the start of the year. Unwanted / Excess purchases of consumables shall be avoided and Expiry date verification shall be carried out periodically.
● Consumables purchases are to be initiated well in advance by keeping purchase process time in mind to ensure availability at the time of use. A separate stock register with purchase orders and invoices shall be maintained for audit purposes.

6. Laboratory Practices

● New purchase: A laboratory should have sufficient Tools / Equipment / Software / Facilities according to the number of Intake and updated curriculum. New purchases should be planned and initiated accordingly. A separate register with purchase orders and invoices shall be maintained for audit purposes.

● Standard Operating Procedure: A laboratory should have a separate standard operating procedure of all the major equipment.

● Asset Entry: Asset details should be maintained properly through the asset management software tool (i.e. Entry of newly purchased equipment / computer, updating change of location, Tagging QR Code).

● 5s Follow-up: Entire Lab facility area and equipment should be cleaned regularly and the report shall be brought to the knowledge of the head of the department.

- Special Activities like painting of equipment and its platforms, 5s markings, etc shall be done as and when required.

- Waste Disposal Policy shall be developed and followed as per standards. Chemical & Hazardous bio-waste should be disposed of as per the standards; Microbiological safety should be followed in the laboratory, if any.

- A laboratory should consist of a First Aid kit separately and it should possess necessary things ready for anytime use.

- User Responsibilities: Users should be educated about the proper utilization of the laboratory facility and equipment.

- With respect to Computer Labs, users should not install unauthorized software, avoid risky online behaviour, and report any issues or concerns to laboratory staff.

- Backup and Data Protection: Establish protocols for regular data backups to prevent data loss in the event of hardware or software failures. In the specific storage location, backups shall be stored under a defined interval of time.

- Physical Security: Physical security measures shall be followed to protect the computer accessories/tools. This can include guidelines for locking doors when not in use, restricting access to authorized personnel, and monitoring the laboratory to prevent theft or damage.

- Documentation: Maintain up-to-date documentation of the hardware and software inventory, including serial numbers, licenses, and warranty information. This documentation can assist in tracking maintenance activities, troubleshooting and planning for future upgrades.

7. Emergency Protocols concerning accidental failure

- Students/users of particular equipment should be educated by a Lab technician or Lab in charge to follow the emergency protocols when an accidental failure occurs (i.e. pushing the emergency button, switching off the power source, etc.) to save the users from a hazard as well as the equipment. A Short note on precaution and Emergency protocols shall be displayed at the notable position nearby the equipment.

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Annexure I

Preventive and predictive maintenance schedule

S. No.	Date	Department	Location	Type of service	Maintenance Type (Preventive / Predictive)	Action taken	Remarks	Signature of person who raised the complaint

Annexure II

Details of Maintenance Activities

S. No.	Date	Department	Location	Type of service	Maintenance Type (Preventive / Predictive)	Action taken	Items replaced / repaired	Attended by	Average time taken

Annexure III

Stock Registers of consumable Items

S. No.	Date	Name of the Item	Stock			Price per item	Quantity	Total Amount
			Received	Issued	Balance			

Annexure IV

Review Meeting

S. No.	Date	Review of Services rendered	No. of. Complaints				Remarks
			Received	Resolved	Pending	Reason for Pending	

Annexure V

Physical Verification

S. No.	Service	Location	Department	Date of physical verification	Remarks

Annexure VI

Laboratory in charges Details

Department	Laboratory Name	Faculty In charge	Contact Number	E- Mail ID

Annexure VII

Laboratory Annual Maintenance activity plan

Name of the Laboratory													
S.No.	Machineries	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
	Listing Major / Serviceable Equipment												

Mention the activities in the respective month - Regular Maintenance, AMC, Calibration, Preventive maintenance, Software license update, etc.

Annexure VIII

Major Equipment Preventive Maintenance/Predictive Maintenance Check list

Name of the Laboratory	
List of Major Equipment	Time Interval of Inspection

			Date of Inspection :
Basic Information			
Name of the Laboratory			
Name of the Equipment			
Purchased Year			
Manufacturer			
Mode of Operation & Data Display	Digital	Analogue	Combined
Power Requirement			
Frequency of use (in days/months)			
Date of Last use			
PARTICULARS & FUNCTIONS	Comments on the condition		
1.			

List the particulars & functions and fill in the respective working condition.

Annexure IX

Equipment Calibration Details

Date :	
Name of the Laboratory	
Name of the Equipment	
Calibration is done by	
Particulars Calibrated	
Description of the Calibration done	

Annexure X

Equipment Service Details

Date :	
Name of the Laboratory	
Name of the Equipment	
Service done by	
Particulars serviced	
Description of the General Service	

Annexure XI

Equipment Regular Maintenance Details

Date :	
Name of the Laboratory	
Equipment / Computer System	
Activity done by	
Description of the Activity	

Annexure XII

Software License Update Details

	Date :
Name of the Laboratory	
Number of systems with Specification	
Software Name & Number of the installed system	
Details on the License update	

Annexure XIII

Purchase of Equipment / Tools / Consumables

	Date of Purchase:
Name of the Laboratory	
Particulars Purchased	
Total Cost	
Details on the Purchase	If major equipment is purchased, submit a short write-up consisting of all the details