INSTITUTE OF TECHNOLOGY & MANAGEMENT, GWALIOR

INFRASTUCTURE POLICY

INTRODUCTION

The Infrastructure Maintenance Policy of the **Institute of Technology and Management (ITM), Gwalior**, is meticulously designed to ensure efficient and effective utilization of the institute's infrastructure. This policy outlines procedures for maintaining, utilizing, and upgrading physical, academic, and support facilities. It aligns with ITM's commitment to sustainability and social responsibility. The Infrastructure Maintenance Policy is periodically reviewed and approved by the Board of Governors.

OBJECTIVES

- **Regulatory Compliance**: Ensure that infrastructure maintenance and upgrades adhere to government regulations, building codes, and safety standards.
- **Asset Preservation**: Maintain equipment and assets to ensure longevity and prevent damage.
- **Effective Maintenance**: Properly maintain assets through timely repairs and replacements.
- **Sustainability**: Promote energy-efficient practices and sustainable materials to minimize environmental impact.
- **Cost Efficiency**: Make judicious decisions to prevent unnecessary expenses.
- **Transparency**: Maintain comprehensive records of maintenance activities, expenses, and work orders.

SCOPE

This policy applies to the following areas:
- **New Construction**: Standards and procedures for new construction projects.
- **Existing Facilities**: Guidelines for the upkeep and repair of existing facilities.
- **Electrical and Mechanical Systems**: Maintenance of electrical systems and mechanical equipment.

- **ICT Infrastructure**: Management and upkeep of ICT (Information & Communication Technology) infrastructure and related facilities.
- **Sports Facilities**: Maintenance of sports facilities to support student and staff activities.
- **Green Spaces**: Care and management of gardens and green spaces on campus.

INFRASTRUCTURE MAINTENANCE TYPES & PROCEDURES

Maintenance encompasses essential tasks aimed at preserving or restoring buildings and equipment to their original state or a condition where they can effectively serve their intended purpose. By ensuring continuous campus operation, we uphold the functionality and safety of our facilities.

The Institute conducts following types of maintenance.

1. **Routine Maintenance**

    ❖ **Frequency**: Carried out regularly (daily, weekly, monthly, or annually).
    ❖ **Tasks**: Regular inspections and machine servicing.
    ❖ **Objective**: Identify issues proactively to prevent equipment failure.

2. **Scheduled Maintenance**

    ❖ **Time Frame**: Fixed intervals.
    ❖ **Activities**: Inspections, adjustments, regular service, and planned shutdowns.
    ❖ **Purpose**: Maintain optimal performance and extend asset lifespan.

3. **Corrective Maintenance**

    ❖ **Focus:** Rectify and repair faulty systems and equipment.
    ❖ **Goal:** Restore functionality after breakdowns.
    ❖ **Note:** Corrective maintenance is also known as reactive maintenance.

4. **Emergency Maintenance**

    ❖ **Immediate Response:** Required for unexpected breakdowns or safety threats.
    ❖ **Priority:** Address health and safety risks promptly.

Our commitment to effective maintenance ensures a safe, functional, and sustainable campus environment. The table below presents the types and classifications of maintenance in the institute, along with an indicative description of works. All other maintenance related to ICT facilities, the library, and other support facilities can also be categorized according to this classification.

Table: 1 Types and Classifications of Maintenance in the Institute			
Types	**Type of Maintenance**	**Description of Work**	**Frequency**
Civil	Scheduled Maintenance	- Annual Whitewashing - Tank/Drainage Cleaning - Roof Inspections - Facade Maintenance - Pavement and Road Repair - Structural Inspections - Septic System Maintenance - Waterproofing Maintenance	Every year
	Routine/ Normal Maintenance	**Landscaping and Garden Areas**: Regular maintenance, including pruning, planting, and fertilizing. **Daily Cleaning**: Cleaning of buildings, streets, and washrooms. **Floor Cleaning and Repairs**: Regular floor cleaning and minor repairs of flooring materials. **Routine Inspections**: Conducting routine inspections. **Minor Repairs**: Performing minor repairs. **Painting Touch-ups**: Regular painting	Daily

		touch-ups.	
	Preventive Maintenance	● **Earthquake-Resistant Design**: Incorporating earthquake-resistant design in new buildings. ● **Damp Proof Course**: Implementing damp proof courses. ● **Waterproofing of Roofs**: Ensuring roofs are waterproofed.	At the time of construction of new buildings
	Corrective Maintenance	● Repairing Water Leaks: Fixing leaks in pipes and roofs. ● Patching Cracks ● Fixing Broken Fixtures ● Restoring Damaged Flooring ● Repairing Roof Damage ● Replacing Damaged Structural Elements ● Repairing Damaged Exterior Walls ● Fixing Faulty Sanitary Fixtures	As and when it is required
	Complaints/ requests	● Repair and maintenance of civil works	As and when request is received (within 24 hours)
Electrical	Scheduled Maintenance	**Annual Inspection of Electrical Systems:** ● Regular inspection and testing of the overall electrical system, including wiring, panels, and connections. ● Transformer Maintenance ● Generator Maintenance	Every year

		• Circuit Breaker Testing • Solar Panel Cleaning and Inspection • Electrical Panel Maintenance • Lighting System Checks • UPS (Uninterruptible Power Supply) Testing • Inspection of Power Distribution Systems • Electrical Safety Inspections • Battery Maintenance for Backup Systems	

	Corrective Maintenance	• **Electric Wiring in Old Buildings**: Addressing faulty wiring repairs.
		• **Major Breakdowns**: Repairing transformers and circuit breakers.
		• **Repairs and Replacements**:
		  o Faulty wiring repairs
		  o Transformer repairs
		  o Breaker and fuse replacement
		  o Power surge damage repairs
		  o Lighting fixture repairs
		  o Generator repairs
		  o Electric panel repairs
		  o Emergency lighting repairs
		• **Power Outages**: Managing and resolving power outages.
			Carried out as and when a situation arises

	Routine Maintenance	• Daily Visual Inspections • Cleaning Electrical Components • Bulb Replacement • Switch and Outlet Testing • Battery Checks	Carried out as and when a situation arises (within 12

		● Cable and Wire Inspections ● Inspection of Circuit Breakers ● Routine Testing of Electrical Systems	hours).
ICT	Scheduled Maintenance	● **Maintenance of Computers, LAN, Internet, Wi-Fi, MIS, LMS, CCTV Security System, LCD Projectors** ● **System Updates and Patches**: Regularly applying updates and security patches to operating systems, software applications, and firmware. ● **Data Backup**: Performing routine backups of critical data. ● **Hardware Inspections**: Scheduled checks of hardware components such as servers, storage devices, and network equipment. ● **Performance Monitoring**: Regularly monitoring system performance metrics such as CPU usage, memory usage, and network traffic. ● **Network Maintenance**: Performing regular checks and maintenance on network infrastructure, including routers, switches, and firewalls. ● **Software Licenses and Renewals**: Monitoring and managing software licenses and subscriptions to ensure they are up-to-date and compliant with legal requirements.	Carried out daily or as and when required
	Preventive	● **Installation of Antivirus/Network Security Software**: Ensuring the	As and when

		installation of antivirus and network security software in the institute's internet facilities.	required
	Complaints/ requests	• Addressing and resolving issues related to the repair and maintenance of internet and Wi-Fi facilities.	As and when requested
General Maintenance	Routine	Maintenance of Sports ground , Plantation, maintenance of lawn and garden in the institute	Daily
		Uprooting of tress	As and when required
		Fire extinguishers	Yearly

Our institute has established standard procedures to ensure the effective maintenance and upkeep of various departments, offices, and facilities. These procedures extend to purchase activities related to infrastructural maintenance specifically:

Store and Purchase Section: Working in collaboration with other section leaders, the Store and Purchase Section oversees all purchase-related activities associated with maintaining different sections within the institute.

By adhering to these procedures, we maintain the functionality and longevity of our infrastructure, supporting the smooth operation of our institution.

MAINTENANCE SECTION

Responsibilities of the Civil Maintenance Section

Physical infrastructure facilities such as classrooms, laboratories, the library, the sports complex, the computer centre, etc., are maintained internally by the Civil Maintenance Cell

of the institute. The civil maintenance work is monitored by the building committee of the institute, which is chaired by a faculty member from the Civil Engineering Department.

- Develop and implement a comprehensive maintenance plan, including routine, scheduled, and preventive maintenance tasks.
- Create a maintenance schedule that includes timelines for regular checks, repairs, and upgrades.
- Conduct regular inspections of campus buildings, roads, drainage systems, and other infrastructure to identify maintenance needs and potential issues.
- Monitor the condition of structures and facilities to ensure they meet safety and operational standards.
- Manage and oversee the repair and restoration of damaged or deteriorated infrastructure, including structural repairs, plumbing issues, and electrical work.
- Address corrective maintenance tasks that arise from inspections or reports.
- Prepare and manage the maintenance budget, allocating funds effectively for different maintenance activities and projects.
- Ensure all maintenance activities comply with safety regulations, building codes, and institutional standards.
- Maintain accurate records of maintenance activities, including work orders, repair histories, and inspection reports.
- Prepare and present regular reports on maintenance status, issues, and improvements to institute management.
- Respond promptly to emergency maintenance needs, such as repairs required due to unexpected damage or infrastructure failures.
- Develop and maintain emergency response procedures and ensure staff are trained in handling urgent maintenance issues.

By fulfilling these responsibilities, the Civil Maintenance Cell ensures that the institute's infrastructure remains in optimal condition, supporting the institution's operations and enhancing the campus environment.

Responsibilities of the Electrical Maintenance Cell

The Electrical Maintenance Cell is responsible for managing and executing maintenance tasks related to the electrical systems within the institute. One faculty member from the EC & Electrical Engineering Department and one senior electrical supervisor are assigned the responsibility to monitor the electrical maintenance work. The technical staff, electricians, etc., are appointed in the institute for the smooth functioning of electrical maintenance activities.

Here are the key responsibilities:

- Oversee the installation, operation, and maintenance of electrical systems, including lighting, power distribution, and backup power systems (e.g., generators and UPS units).
- Conduct regular inspections of electrical infrastructure, including panels, wiring, and equipment, to identify potential issues and ensure compliance with safety standards.
- Address and resolve electrical issues as they arise, including repairing faulty wiring, malfunctioning equipment, and power outages.
- Ensure that all electrical maintenance activities comply with safety regulations, electrical codes, and institutional standards.
- Implement safety protocols to protect personnel and prevent electrical hazards.
- Manage the budget for electrical maintenance activities, including procurement of materials and hiring external contractors if necessary.
- Allocate resources efficiently and track expenditures related to electrical maintenance.
- Respond to electrical emergencies, such as power failures, electrical fires, or hazards, and coordinate repairs to restore service quickly.
- Develop and maintain emergency response plans for electrical incidents and ensure that staff is trained to handle emergencies.
- Engage and oversee external vendors or contractors for specialized electrical maintenance tasks or repairs.

- Maintain accurate records of electrical maintenance activities, including work orders, repair logs, inspection reports, and system updates.
- Prepare regular reports on the status of electrical systems, maintenance activities, and any issues or improvements to institute management.
- Plan and implement upgrades to electrical systems to enhance performance, efficiency, and safety.
- Monitor and manage energy consumption to optimize efficiency and reduce costs.
- Implement energy-saving measures and technologies to support the institute's sustainability goals.

By fulfilling these responsibilities, the Electrical Maintenance Cell ensures the reliable operation and safety of the institute's electrical systems, contributing to the overall efficiency and safety of the campus environment.

Responsibilities of the Network and Hardware Cell

The Network and Hardware Cell in an institute is responsible for managing and maintaining the institute's information and communication technology infrastructure. The ICT facilities are maintained by the network administrator, who is supported by lab technicians and computer operators. The Network and Hardware Cell operates under the supervision and guidance of the Head of the Department (HOD) of Computer Science and Engineering (CSE) and Information Technology (IT).

Here are the key responsibilities:

- Oversee the operation, management, and maintenance of IT systems, including servers, workstations, networking equipment, and software applications.
- Develop and implement schedules for routine maintenance tasks such as software updates, hardware checks, and system backups.
- Conduct regular reviews and maintenance of IT infrastructure to ensure reliability and performance.
- Troubleshoot and resolve technical problems promptly to minimize disruptions.

- Monitor system performance, including server health, network traffic, and application performance, to identify and address potential issues before they impact users.
- Implement and manage security measures to protect IT systems from cyber threats, including firewalls, antivirus software, and encryption.
- Regularly update security protocols and conduct vulnerability assessments to safeguard sensitive information and infrastructure.
- Ensure regular backups of critical data and system configurations to prevent data loss.
- Develop and maintain disaster recovery plans to restore systems and data in case of failure or data loss.
- Manage and maintain IT hardware, including computers, servers, printers, and network devices.
- Oversee the installation, licensing, and updating of software applications and ensure compatibility with existing systems.
- Maintain comprehensive documentation of IT systems, configurations, maintenance activities, and support requests.
- Plan and implement upgrades and enhancements to IT infrastructure to keep pace with technological advancements and institutional needs.

By fulfilling these responsibilities, the Network and Hardware Cell ensures that the institute's technology infrastructure operates smoothly, supports academic and administrative functions, and meets security and performance standards.

Responsibilities of the General Maintenance Cell

The General Maintenance Cell in an institute is responsible for managing and overseeing a broad range of maintenance activities, ensuring the overall functionality, safety, and cleanliness of the campus environment. Here's a detailed overview of its responsibilities:

- Oversee the routine upkeep of campus facilities, including administrative offices, classrooms, laboratories, and recreational areas.

- Ensure that all facilities are clean, well-maintained, and functional.
- Coordinate and manage cleaning services for offices, classrooms, restrooms, and common areas.
- Address minor repair needs such as fixing damaged furniture, repairing doors and windows, and resolving plumbing issues.
- Handle basic maintenance tasks that do not fall under specialized maintenance categories.
- Maintain an inventory of general maintenance supplies and equipment, including cleaning agents, tools, and minor repair materials.
- Order and restock supplies as needed to ensure availability for maintenance tasks.
- Assist with the setup and rearrangement of furniture and equipment for events, classes, and other activities.
- Ensure that safety equipment, such as first aid kits and fire extinguishers, is available and functional.
- Work in coordination with civil, electrical, and ICT maintenance cells to address maintenance issues that require interdisciplinary support.
- Oversee waste disposal and recycling programs on campus to ensure proper management of waste materials.
- Address and resolve maintenance issues reported by users in a timely manner.
- Maintain records of maintenance activities, including work orders, completed tasks, and inventory usage.
- Prepare reports on general maintenance status, issues, and improvements for review by institute management.

By fulfilling these responsibilities, the General Maintenance Cell helps to ensure that the institute's physical environment is safe, functional, and conducive to the smooth operation of daily activities.

RESPONSIBILITIES AND ACTIVITIES FOR MAINTENANCE OF THE CENTRAL LIBRARY

The maintenance of the Central Library ensures that the library's facilities, collections, and services are well-maintained to support academic and research activities. The Central Library is looked after by the Librarian and other supporting staff for maintenance and enrichment.

Here's a detailed overview of the responsibilities and activities involved in maintaining a Central Library:

- Regular inspection and repair of physical books and documents to address issues like torn pages, binding damage, and mildew.
- Ensuring that books and other materials are correctly shelved according to the library's classification system.
- Organizing materials to facilitate easy access and retrieval by users.
- Conducting periodic inventory checks to account for all library materials and identify missing or damaged items.
- Managing the acquisition and withdrawal of library materials, including processing new acquisitions and removing outdated or damaged items.
- Maintaining library computers, printers, scanners, and other technology equipment to ensure they are operational and updated.
- Performing regular software updates and security patches on library systems and databases.
- Training library staff on basic maintenance procedures and safety protocols.
- Ensuring staff are knowledgeable about the proper handling and care of library materials and equipment.

By focusing on these responsibilities and activities, the maintenance of the Central Library ensures that the facility remains a valuable and functional resource for students, faculty, and researchers, supporting the educational and research goals of the institute.

SECURITY

- Security guards are deployed on the campus.
- Entry to and exit from the campus are restricted through two gates only.

- Security guards on duty shall check the ID cards and uniforms of the students and permit them to enter the campus accordingly.
- Any outsider should be informed by the security guard to write their details, such as the purpose of visit, whom to meet, contact number, etc., in a register placed with the security.
- Any material brought to the campus shall be checked by the security guards and entered in the register.
- Materials going out (returnable and non-returnable) of the campus shall obtain a gate pass from the reception desk, and the duplicate copy of the gate pass shall be filed with the security supervisor.
- The security supervisor shall verify the materials mentioned in the gate pass against the physical items, and the same shall be entered in the register kept at the security gate.
- Security guards on duty shall be vigilant and observe any suspicious movements inside the campus.
- Visitors shall use gate no. 4, and their details shall be entered in the register upon their arrival.
- The security supervisor shall check and verify the register periodically.
- The security supervisor shall conduct surprise checks on the campus during holidays to ensure that the security guards are in place and only one gate is open for any entry and exit.

BUDGET AND RESOURCES

- **Annual Budget**: Allocation of funds for routine, preventive, and corrective maintenance.
- **Resource Allocation**: Ensure availability of necessary tools, equipment, and materials for maintenance activities.

The policy outlines the budgetary provisions for maintenance activities, ensuring that sufficient funds are allocated to keep the infrastructure in optimal condition. Cost-effective measures will be implemented to avoid unnecessary expenses.

- The budget for repair and maintenance shall be prepared by the Estate Officer and submitted to the Director's Office for approval.
- All purchases made shall be recorded properly in the inward register for stock, and all materials used as part of repair and maintenance shall be recorded in the outward register, both maintained by the Store In-Charge.
- A record of the list of materials moving out from the central store shall be maintained by the Store In-Charge.
- The Security Supervisor shall verify the list of materials moving in and out of the campus against the list submitted and raise the gate pass accordingly.
- Departmental heads shall submit any requirements for labs and their consumables in the annual budget to the Director's Office.
- The budget will be placed in the Budget Allocation and Utilization Committee for approval.
- Upon approval of the budget, quotations are invited from vendors, which are shortlisted and then approved by the Central Purchasing Committee.
- Items purchased are received by the Store In-Charge, who will make an entry in the stock register and forward the item to the requesting department/program. The requesting departments shall then make entries in their respective stock registers.

SAFETY AND COMPLIANCE

- **Safety Standards**: Adherence to safety standards and regulations during all maintenance activities.
- **Compliance**: Ensure compliance with local, state, and national regulations regarding building maintenance and safety.

REVIEW & IMPROVEMENT

- **Annual Review**: This policy will be reviewed annually or as needed to reflect changes in infrastructure, technology, and regulatory requirements.
- **Feedback Mechanism**: Collect feedback from faculty, staff, and students to improve maintenance procedures and will be considered in updating the policy.

CONCLUSION

The Infrastructure Maintenance Policy is a cornerstone of ITM's dedication to fostering a safe, functional, and sustainable environment for its students, staff, and the broader community. This policy underscores the institute's commitment to maintaining high standards in infrastructure management, ensuring that all facilities are well-maintained and resources are utilized efficiently. By adhering to this policy, ITM not only enhances the quality of life on campus but also promotes a culture of responsibility and sustainability. This comprehensive approach benefits everyone involved, from students and staff to visitors and the wider community, reinforcing ITM's role as a leader in educational excellence and environmental stewardship.