

Tulsiramji Gaikwad-Patil College of Engineering and Technology

Wardha Road, Nagpur-441 108





Approved by AICTE, New Delhi, Govt. of Maharashtra & Affiliated to RTM Nagpur University, Nagpur

Infrastructure Maintenance

The Institute possesses a wholly self-contained campus comprising of requisite infrastructure, which acts as a facilitator for the effective delivery of our curriculum and thereby fulfilling AICTE norms completely. The Institute provides excellent infrastructure to students with a vibe for availing the best of facilities. The Institute has well planned & well-designed area of around 5 acres with a built-up area of 21,900 sq m. The aesthetically designed campus has ultramodern facilities with academic wings for each department, administrative wings, laboratories, workshops, computer centre, spacious classrooms, well stocked library, conference hall, medical centre, sports ground etc. The institute has total 31 classrooms with modern

teaching aids thus providing detailed learning ambiance for students. The Institute maintains high standards of technical education by providing the wide array of high-class equipment's in total 77laboratories of various departments which help students implement practical knowledge thus acting as an interface between students and industry. The Institute patronizes a spirit of perpetual learning by rendering students' facilities like 07 tutorial rooms,07 seminar halls one for each department. Well-equipped incubation centre to nurture new and small ideas by helping them to survive and grow through the difficult and vulnerable early stages of development inland technology. It is our constant attempt to maintain pace with development needed for enriching personal and professional skills of students. The institute has developed well-equipped computer centre, CAD/CAM/CNC/SOM/HV lab and Entrepreneurship Development Cell, Industry-Institute Partnership Cell, R& D Cell. Amenities and facilities are well maintained which include lawn, ramp, and garden. CCTV surveillance at all strategic locations, generator back up, RO water purifier. Cafeteria is available in the institute. Housekeeping unit takes care of maintain complete cleanliness in the Institute. Infrastructural maintenance, electrical maintenance, and garden maintenance is done on a routine basis keeping in view the benefits of students. First aid facilities, Fire extinguishers are available with each department on each floor as a precaution to avoid major haphazard. Proper checking, periodical inspection, suggestion box, feedback from students, alumni and parents are taken which help in up keeping and maintaining the conducive learning environment within the campus.

The Institute is proactively involved in overall development of the students. Due importance is given to groom students in sports and cultural activities. In order to create atmosphere conducive to sports a Sports Committee has been constituted. This committee monitors the sports activities. There are facilities for Indoor and outdoor games. As the college has a big play ground the students play Cricket, Volleyball, Football, Kabaddi, Kho-Kho, Tennis etc. There is spacious hall for Indoor games which is availed of by students for Table-tennis, Chess and Carrom etc. There is also a section in the hall for yoga and meditation. There is room for music and in this room, there are musical instruments. The cultural activity is noteworthy. The students are trained in Indian classical dance and western dance. The students of the college evince their talents in cultural activities, competitions at University and State Level.

Institute has always eagerly taken an initiative to upgrade itself in providing IT facilities to students and faculty. With 100 computers in the year of establishment, the Institute now possesses 484 computers. The latest configuration of computer available in the Institute is Core i3/i5 with RAM 4 GB, 250GB HDD, HP Intel Core i3/2100 CPU @ 3.10 GHZ processor. The institute has high end Apple MAC OS Desktop Computer Laboratory. Each department has its own computing facility. Around 484 computers are LAN connected. The Institute has total 27 application software and 06 system software's.

The Institute has all requisite infrastructures like class rooms, faculty rooms, girls' common room, boyscommon room, laboratories, Seminar Hall, Auditorium and library. Few slots are exclusively reserved in regular time table to ensure effective utilization of the facilities. Concerned faculty members ensure thepresence of students & conduction of activities. The Institute has in-house maintenance team for maintenance of all Physical, Academic, and Support facilities such as building, electrical, plumbing, classrooms, laboratories, Sports complex and Library. General maintenance team handles Electrical, plumbing a nd building related issues. Regular check-up of Electrical appliances is done by electrical maintenance staff and maintained with immediate actions. Plumbing related issues such as leakages/blockages are managed on time by Plumbing team. Regular infrastructure inspection helps find repairs/paints requirements and the team arranges for the same. The college has its own Diesel Generator set. It is brought in operation when electricity board discontinues electricity supply. The college has fire extinguishers. The Institute gives utmost importance to cleanliness and hygiene in campus. A team of housekeepers takes care of hygiene and cleanliness to provide a congenial learning environment. Classrooms, Staff rooms, Seminar halls, Laboratories, etc are cleaned and maintained on daily basis. The maintenance officer conducts periodic checks to ensure the efficiency/working condition of the infrastructure. Periodic maintenance checks by staff keep all facilities operational. A centralized Computer Centre team maintains all software/hardware, CCTV & IT infrastructure related issues. Lab assistants under the supervision of the System Administrator maintain the efficiency of the college computers and accessories. The non-teaching staff is also trained in maintenance of Laboratory

and computer equipment's Parking facility is well organized. The campus maintenance is monitored through surveillance cameras. Proper inspection is done and verification of stock takes place at the end of every year. Central library has its dedicated human resource and the departmental libraries are looked after by the department office assistant and a faculty In-charge of the concerned department. All the departments take care of timely maintenance of the laboratory equipment. Most of the maintenance work is completed during summer break and a close monitoring of maintenance activities is a prime responsibility of Head of the Departments. Periodic reporting on requirements of repairs and maintenance are submitted by the HoDs to the Administrative office.



Maintenance
Policy
Document

Aim: To ensure the maximum efficiency and availability of equipments, utilities and related facilities at optimal cost and under satisfactory conditions of quality, safety and protection for the environment.

Objective:

- > To ensure maximum utility of equipment
- > To keep equipment safe and prevent from hazards
- > To improve product quality

Description: The campus holds well established standard systems and procedures for maintaining the physical, academic and support facilities that are governed by the supervision of faculty in charges in college level. They ensure the various aspects of utilization and maintenance of the physical, academic and support facilities such as maintenance of buildings, laboratories, classrooms, library, sports complex, computers, etc.

The proper function of equipment in all laboratories is ensured in every semester by the lab technicians and minor repairs such as installing replacement parts are carried out by them as and when they are needed. Then it is recoded in service register. When there is a major repair work, the purchase committee handles the service and maintenance request appropriately by placing an order to the corresponding engineering experts. Stock register is maintained in all laboratories and audits are conducted by stock verification committee to check the availability and working of the equipment in every year.

First aid kits are kept in all laboratories and department to meet out any eventuality. Fire extinguishers of adequate capacity and numbers are provided in eye catching spots in the college buildings especially in all laboratories. Fire extinguishers are well maintained and checked periodically and refilling is done well before the due date.

The various maintenance issues are furnished as below.

Computer Maintenance

- Set up weekly updates or automatic updates for computer software
- All the PCs and related equipment like printers, scanners, etc. are checked
- Installation of anti-virus program on the computers
- Back up of computers on a regular basis
- Hard disc cleanup and defragmentation utilities regularly
- All computers are checked for applications at start of semester
- Turn off all computers by selecting the shutdown option on the desktop
- Frequent maintenance of computers, AC, Printer and other equipment for every 6 months or as and when required.
- Software license renewal is done as per the license period.
- Turn off all computers by selecting the shutdown option on the desktop

Electrical Maintenance

Daily / weekly maintenance:

- Lab technician checks the working condition of the equipment/systems on weekly basis.
- 'Apparatus required' form is maintained in each lab to track the breakage and working of equipment's.
- Every day cleaning of equipment and work tables are done by the lab technicians.
- Floor cleaning of labs are done on daily basis by housekeeping department of the college.

Fourth Nightly maintenance:

- Floor mopping of labs are done twice in a week by housekeeping department of the college.
- The proper working of all the equipment is checked in all the laboratories with the help of the lab assistants and corrective measures are carried out.
- The maintenance report is maintained for all the laboratories by the concerned lab in charges.
- Once in three months UPS in charge checks the water level, voltage level and backup of the UPS.

Yearly maintenance:

- Scrap items in the laboratories are identified with the concern of the lab in charges, HOD and inspection committee.
- After decision by the inspection committee members the scrap items are sent to the scrap yard.
- Maintenance of battery & UPS in all the laboratories is carried out quarterly.
- Calibration of equipment are done and a report is maintained

Preventive maintenance:

- The working conditions of the equipment are periodically checked.
- The students are given instruction in handling the equipment before doing the experiments.
- Laboratory manual is given to the students which include list of experiments and the procedure of doing the experiments
- Stock register is maintained in laboratories and audits are conducted by stock verification committee to check the availability and working of the equipment.
- Suitable thickness of the wire based on current rating is used in the fuses to avoid the malfunctioning.

Breakdown maintenance:

- Minor repairs are carried out by the lab technicians. When a major repair occurs, service report is obtained from industry person. Approval for service of equipment is obtained from concerned in charges.
- Service register is maintained in each laboratory.
- Breakdown maintenance of the personal computer is done by concerned in charges.

Ambience:

The infrastructure and added facilities in the laboratories create the right ambience for the students to conduct experiments in the laboratories.

- Spacious and well-furnished laboratories with good ventilation and lighting facilities are available.
- All laboratories are equipped with essential equipment to meet the requirements of the curriculum.
- Equipment specification for all machines is displayed.
- Identification Number for each equipment is marked on the devices/Equipment/furniture's/tables.
- Working models and devices in the form of charts are displayed in the laboratories.
- Do's and Don'ts are displayed in all the laboratories.
- List of experiments are displayed in all the laboratories.
- The laboratory manuals prepared are available in both soft and hard copies.
- Laboratories are utilized beyond the college hours for the convenience of the students and the faculties.

Laboratory Maintenance:

All the labs in the department are very well equipped with all the equipment to conduct the practical as Per curriculum. All the labs are equipped with good technical support staff available during working hour

Following are the details checks in laboratory:-

- o Calibration for equipment are done
- The Equipment are tested for its working condition in the starting of semester
- o Fire Extinguishers are recharged after expiry date
- The equipment's are periodically serviced and maintained in every semester
- Equipment was tested for its working conditions during the start of odd semesters and if any problems found it was rectified by servicing.
- The painting of the equipment done to prevent from corrosion
- o The machines were run frequently to check the working condition.

Physical Infrastructures

- The institute has constituted a team for maintenance of physical infrastructures
- The committee shall look after all the maintenance of physical infrastructural facility

Guidelines for the maintenance of physical infrastructure:

- 1. Prepare the routine and preventive maintenance schedule
- 2. Emergency maintenance shall be completed on priority basis
- 3. The consolidated report of the yearly maintenance shall be prepared and submitted to authorities.

Responsibilities of maintenance of the infrastructure:

Sr. No.	Equipment/infrastructure	Routine Check	Monitoring Authority	College-level Coordinator
1.	General Electrical maintenance	Electrician, Lab Assistant and Lab-in- charge	Head of the respective Department	Head of Electrical Department
2.	Air-conditioner	Concerned In charge	Head of the respective Department	Head of Mechanical Dept
3.	Generator and Power Supply	Electrician	Head of Electrical Department	Head of Electrical Department

4.	Solar Systems	Electrician	Head of Electrical Department	Head of Electrical Department
5.	Computers and Peripherals such as Printers, Scanners, LCD/DLPs	Department- level Computer Coordinator	Head of the respective Department	Director IT Infrastructures
6.	Internet connectivity and Wi-Fi	Lab Assistant and Lab-in- charge	Head of the respective Department	Network Administrator
7.	Website	Department Computer In- charge	Head of the respective Department	College Website In charge
8.	ERP(Enterprise resource Planning)	IT Infrastructure Committee	Principal	Director IT Infrastructures
9.	CCTV and Biometric	IT Infrastructure Committee	Principal	Director IT Infrastructures
10.	Software	Lab in-charge and Subject In-charge	Head of the respective Department	Head of the respective Department
11.	Library	Librarian	Principal	Library Committee
12	Workshop	Workshop Technician	Workshop Superintendent	Head of Mechanical Department
13	Civil Works	Supervisor	Concerned In charge	Head of Civil Engineering
14	Water-coolers and Purifiers	Supervisor	Concerned In charge	Head of General Engineering
15	Plumbing	Supervisor	Concerned In charge	Head of Civil Engineering
16	Classroom-benches and overall furniture including notice boards	Supervisor	Concerned In charge	Store In charge
17	Sports facilities	Sports In- charge	Principal	Sports in- charge
18	Gardening	Supervisor	Concerned In charge	Gardening In charge

- The college helps to keep the infrastructure in optimum working condition. Many preventive maintenance policies are functional to prevent breakdown of facilities such as, generators, internet and Wi-Fi, gardening, housekeeping.
- An annual maintenance contract is signed with the external agency for housekeeping Work order for a period of 1 year with including material and labour is issued for Housekeeping which includes cleanliness twice a day
- An annual maintenance contract is signed with external agency for ERP. Work order for period of 1 year is issued
- Garden Maintenance is carried out through in-house team to keep the campus green and clean.
- Generators are maintained on weekly basis

Maintenance	In	charge
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Date:









