

## ACE INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)

Approved by AICTE and Govt. of Andhra Pradesh, Accredited by NAAC(A Grade) | Recognized under 2(f) & 12(B) of UGC Permanently Affiliated to JNTUK, Kakinada. A.P. | ISO 9001:2015, ISO 14001:2015 and ISO 50001:2018 Certified Institution NH-16, Near Valluramma Temple, ONGOLE - 523 272, A.P., India, Ph.: 08592 278315, 9581456310 | www.pace.ac.in

### DEPARTMENT OF CIVIL ENGINEERING

The Civil Engineering Department has required number of laboratories with all equipments and software's for conduction of Experiments with in the curriculum including project works and off - program curriculum.

#### **Research:**

Lab utilization in research is crucial for students as it provides hands-on experience and reinforces theoretical knowledge. Efficient lab usage promotes skill development, fosters innovation, and enhances problem-solving abilities, all of which are essential for a successful research career. It also encourages collaboration and the application of scientific principles, ultimately contributing to the advancement of knowledge.

#### Projects:

Effective lab utilization for projects is pivotal for students as it maximizes the resources available, ensuring timely completion and high-quality results. It fosters teamwork, critical thinking, and practical skills application, enhancing the overall learning experience. Optimal lab use empowers students to tackle real-world challenges and prepares them for future scientific endeavors.

#### **Consultancy:**

The Department of Civil Engineering offers facilities for consulting services through laboratories, which provide a valuable platform for applying academic expertise to real-world problems. It offers a cost-effective and accessible resource for businesses seeking specialized knowledge and research capabilities. This collaboration bridges the gap between academia and industry, promoting innovation and mutual benefit.

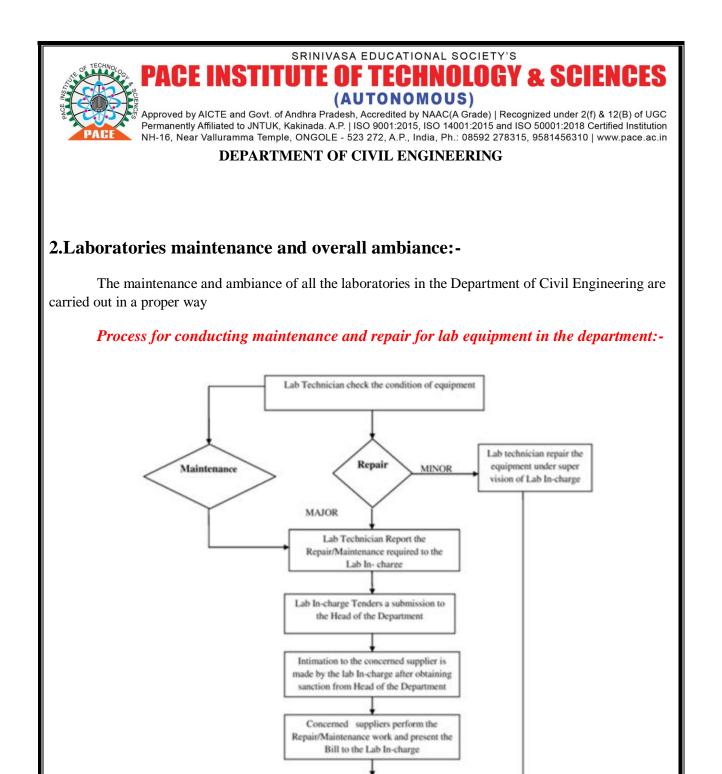
#### **Industry support Laboratory:**

Industry-focused lab utilization equips students with practical skills and knowledge aligned with realworld applications, enhancing their employability. It fosters collaboration between academia and industry, allowing students to address industry challenges and contribute to technological advancements. This experience bridges the gap between education and professional success, preparing students for fulfilling careers in their chosen field.

#### Maintenance:

Lab utilization for maintenance in college is crucial for several reasons:

- 1. Equipment Preservation: Regular lab maintenance ensures that costly equipment and facilities remain in good working condition, extending their lifespan and saving the institution money in the long run.
- 2. Safety: Proper maintenance reduces the risk of accidents and injuries, creating a safer environment for students, faculty, and staff.
- 3. Educational Continuity: Well-maintained labs ensure that students have access to the necessary tools and resources for their education, preventing disruptions in the learning process.



Lab In-charge enters it in the relevant Head in the Repair / Maintenance register of the concerned Laboratory and sends the report to the HOD. Head of the department forwards the bill to the Administrative office.

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## SRINIVASA EDUCATIONAL SOCIETY'S ACE INSTITUTE OF TECHNOLOGY & SCIENCES (AUTONOMOUS)

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## DEPARTMENT OF CIVIL ENGINEERING

### Maintenance:

Technical staff is available for maintenance of equipment's and software's Regular preventive maintenance of equipment is carried out before the commencement of the semester.

- If any minor repairs are noticed, they are carried out by the Laboratory assistants.
- Major repairs are outsourced by the following the procedure of the institution.
- Laboratory equipment's calibration & servicing are done frequently.
- A register is maintained in each lab to monitor the repair and servicing of each equipment/Instrument.
- Stock Register maintained.
- Software up gradation and scrap disposal done before commencement of semester.
- First Aid kit and Fire extinguishers are available in the laboratories, and are checked regularly.
- The tools and equipment are cleaned after completion of experiments.
- The labs are maintained clean and neat.
- The maintenance of computers is taken by CSE and I.T departments.

## **Overall Ambiance:**

- All laboratories are equipped with necessary equipment/ software to meet the requirements of curriculum.
- Laboratories and equipment are kept clean and dust fire with regular cleaning and maintenance.
- In all laboratories, sufficient instructional area and working place is available.
- Laboratory manuals are available to the students in the respective labs.
- Sufficient natural lighting system is available, along with the artificial light in every corner of the rooms.
- Labs are furnished with white / black boards.
- A digital classroom is provided with LCD projector which is usefull for presenting power point presentations and showing videos.
- Relevant IS code books are available for all the faculties and students for reference.
- Vision, Mission, PEOs, PSOs and faculty In charge boards are displayed in all the laboratories.
- Lab layout, List of experiment, Do's and Don'ts boards are displayed.
- Safety instruction charts are displayed.



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## DEPARTMENT OF CIVIL ENGINEERING

## 3. Safety measures in laboratories:

The wiring and electrical installations are checked for leakage and earthing. The safety of equipment and wires are provided by Miniature Circuit Breaker (MCB) and Earth Leakage Circuit Breaker (ELCB). MCB provides protection during short circuits. Fuses provide protection from over currents. Proper earthing is provided, so that it can protect from internal faults.

### The safety measures taken in the laboratories are listed below:

- Specific safety Rules like Do's and Don'ts are displayed and instructed for all the students.
- Technical supporting staff monitors the labs at regular times.
- First aid box and fire extinguishers are kept in each laboratory.
- Students are supposed to wear lab Apron and shoes.
- Damaged equipment's are identified and serviced at the earliest.
- Laboratories are maintained in a clean and systematic manner.
- In CAD Lab, PCs are loaded with antivirus and firewall software's.
- Students are restricted from carrying cell phones or any other electronic gadgets to prevent any sort of distraction..
- The students are instructed not to wear bracelets, necklace or other loose jewellery when working with machinery.
- Don't operate the equipment you are not familiar with, Always receive proper training for the equipment prior to use.
- Clean up your work area before leaving



## **DEPARTMENT OF CIVIL ENGINEERING**

## Safety measures in laboratories:

## **1.First Aid box**



## 2.Fire extinguisher



# **TO OPERATE EXTINGUISHER**

#### Pull Pull the pin.

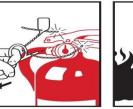
Aim Aim the nozzle at the base of the fire.

#### Squeeze

Squeeze the operating handle to release the extinguishing agent.

#### Sweep

Sweep from side to side at the base of the fire until it goes out.









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## 3. Safety instructions are displayed in the lab





S.No	Safety Measures	Symbol
1	Do not handle electrical appliances with wet hands	
2	Switch off Electrical supply before working with the machines	CAUTION Switch off electrical supply before working on this machine
3	Ensure proper grounding of electrical earth terminal	CONNECT AN EARTH TERMINAL TO THE GROUND
4	Please wear gloves while working with hot objects	CAUTION CAUTION CONTRACTOR CONTRACTOR CAUTION
5	Safety shoes must be worn while working outside the lab area	CAUTION SAFETY SHOES REQUIRED



• Students are supposed to wear lab Apron and shoes.

## 4.Proper earthing

