

KINGS

ENGINEERING COLLEGE

An Autonomous Institution

Affiliated to Anna University, Chennai



**Standard Operating Procedure
for
LAB UTILIZATION AND
MAINTENANCE**

As per the Approval of Governing Council
(Updated in 2025)

PREFACE

The institution has well equipped interior designed laboratories in all the departments. The facilities available in the laboratories are periodically upgraded to meet out the requirements of the curriculum and also keep the students abreast of the changing technological demands. The effective utilization of the facilities will be ensured by the lab in-charges and the respective HoD's. The maintenance of stock, calibration and maintenance of equipment are carried out by lab instructors under the guidance of lab in-charges.

STANDARD OPERATING PROCEDURE FOR LAB UTILIZATION AND MAINTENANCE OF KINGS ENGINEERING COLLEGE, CHENNAI

There are well established systems in the institution for the optimal utilization of the laboratory infrastructure and its regular maintenance. This Standard Operating Procedure has to be adhered, by all the faculty, staff and students, while utilizing laboratory facilities and to ensure periodical maintenance of them.

Procedure to be followed for the conduction of laboratory sessions

- For smooth conduct of laboratory experiments students would be divided into batches with 3 members.
- Laboratory manuals would be given to the students at the commencement of the semester.
- The laboratory instructor and faculty in charge would announce the Do's, Don'ts and other precautions to be taken, depending upon the nature of experiment and the type of the laboratory.
- Students should be made aware about the departmental policies regarding the maintenance of laboratory, recording of observations and submission of record books.
- Faculty should give clear lecture on the theoretical aspects of all the experiments.
- Lab in-charges would check the readiness of the student with the objective and procedures of the experiment recorded in the observation note, through questioning before commencing the experiment.
- Students would note down the observations during the conduct of experiment and do the necessary calculations and analysis, if any.
- Before leaving the laboratory, instructor/Faculty In-charge should evaluate the observation and performance of the student.
- In addition to recording the findings of the experiment in the observation book, students are expected to submit the record book on completion of the experiment before the next laboratory session.
- One or two experiments would be conducted beyond the syllabus relevant to that particular laboratory course.

For each laboratory, a faculty member who has expertise in the particular domain would be assigned as laboratory in-charge who would support the lab handling staff members and lab technicians. Any purchase, maintenance and up-gradation in the laboratories would be carried out under the guidance of HoD, with the approval of the Principal.

OBJECTIVES

The objectives of the SOP of Lab Utilization and Maintenance are:

- To assign and adhere scheduled timetable for the effective utilization of the laboratories.
- To ensure absolute working condition of the equipments through periodical maintenance and replacement, if necessary.
- To arrange for availability of consumables for the smooth functioning of laboratory sessions
- To achieve optimal utilization of facilities in the laboratories, for the benefit of students
- To ensure safe and secure working environment in laboratories.

DUTIES AND RESPONSIBILITIES OF THE LABORATORY IN-CHARGE

- To maintain the Consumable Registers, Non-consumables Stock Registers, Lab manuals and data books.
- To forecast the requirements for consumables for their respective laboratory and procure the same, before the inception of every semester.
- To plan the procurement of any new equipment well in advance, for the forthcoming semester.
- To ensure that the existing infrastructure facilities in the labs should accommodate each batch to complete practical session successfully.
- To arrange / organize the laboratory for oral and practical examinations.
- To notify the users (staff / student) responsible for any breakage / loss etc. and recover costs.
- To ensure the cleanliness of the lab and switching off all equipments after use (to save energy).
- Requisition of consumables shall be submitted to the HOD, who in turn shall verify the same and forward to the Principal for necessary action.
- The Lab. Assistants are required to assist the respective Lab in-Charge for smooth functioning of the laboratories
- Lab Assistants and in charge shall be available for maintenance and care of resources/services of the institute
- All the Lab. Assistants, in coordination with the respective Lab In-Charge, are required to report matters, like maintenance/repairing, theft, damage etc. within the respective labs, to the HOD through faculty in charge of lab.
- Lab Assistants in coordination with Lab In-charge should ensure the display of (i)

List of Equipments/software with cost (ii) List of Experiments (iii) Lab Time Table (iv) Names of Lab In-charge / Lab Assistants etc. on the Lab Notice board.

- Lab In-charge and Lab Assistants are to report the matter in writing immediately to the HOD through faculty in charge as soon as they come to know about the missing/damaged item in their Lab. They also have the responsibility to find out/enquire about the missing/damaged item/article and suggest further action in order to replace / maintain (correcting damages) the missed / damaged items as well as prevent recurrence of the same.
- Lab Assistants in turn shall note down the missing items in the respective Lab Register.
- If the students are responsible for the loss/missing item, then an amount equal to twice the cost of the item plus the contingency charge as fine shall be levied from the concerned students.
- Students shall not be allowed to purchase and bring the item on their own, to replace the lost/missing item.

PROCURING LAB CONSUMABLES AND STATIONERY

The HOD's have to forecast the need for the additional equipments (including furniture) for the next year / semester and submit a proposal to the Management for the procurement of the same, through the Principal with a copy of Budget to be approved.

- The lab in-charge would prepare the list of equipments to be purchased along with the list of suppliers.
- The lab in-charge with the recommendation of the HOD would submit the proposal along with the budget and get the purchase approval from the Principal.
- Quotations should be called for from reliable suppliers and comparative (price) statement would be prepared. This would be verified by the accountant and administrative officer.
- The Lab in-charges and HOD may discuss with the Principal about the reliable suppliers, who can supply genuine / quality equipments.
- The purchase committee would be constituted to negotiate the first level pricing. The Principal /Dean would have final round of discussion with the vendors and the proposal would be submitted to the Chairman. The Chairman would finalise and approve price and the procurement proposal.
- Based on the approval, order may be placed with the supplying company. Purchase order would be prepared by the concerned lab in-charge (in the dummy letter head) would be signed by Principal and forwarded to the stores in-charge.

Store keeper would prepare the purchase order (original) and get the approval from the Chairman & Managing director.

- After confirming the delivery of equipment, Gate entry should be made, followed by the main store stock entry. Then, store keeper should transfer the items to the concerned department. In the department, the conditions of the equipment must be checked by the concerned lab in-charge and HOD and the details of items / equipments (stock) should be entered in the department stock register after checking its respective bills.
- The bills may be passed by the Department to the stores and accounts section only after ascertaining the good (effective) working condition of the equipments and the working history of equipments supplied by the respective company based on previous requirements (purchase orders).
- The account section would check the bills with purchase order and pass the bills for Management's approval to release payment after deducting the advance amount, if paid already.
- The payment information must be communicated to the HOD's by the account section or the HODs would enquire about the status of the bill payment in the office for their information.
- For consumable purchase, the lab in-charges and HOD's should submit the price list along with the list of items to be purchased and get the approval. The price list or quotation should be obtained from two or three shops (outlets).

STATIONERY

- After the last working day of an academic year, Hods should assess the requirements of stationery (Lab Record, Log Book, Students performance card, etc.) needed for the effective functioning of the Department.
- After consolidating the requirements of all the Departments and the storekeeper would take action for placing bulk purchase order for procuring stationery needed for the entire Institution, after getting appropriate approval from the Principal.
- After procurement, the stationery required for each Department would be distributed by the Store keeper in accordance with their requests placed through Inventory Portal.
- Special indent for stationery in bulk for specific purpose such as conduct of workshops / conferences / seminars, etc. has to be given by the HOD to the office well in advance (at least 10 days before the proposed date.) While preparing the special indent, the actual use of stationery during previous similar occasion should be mentioned for taking necessary procurement decisions.
- As and when the purpose of stationery procured has been over, the unutilized portion has to be returned to the office by the concerned HOD with appropriate records (the stationery obtained for a specific purpose shall not be used for normal work of the Department).

MAINTENANCE OF STOCK

- The staff in charge for each lab shall be responsible for the proper maintenance of the consumable and non-consumables, stock register of each lab.
- Each entry should be signed by the staff in charge of the laboratory and the HOD concerned.
- Whenever a new staff member takes over the in-charge of a lab, he/she should take charge of the laboratory from his/her predecessor after verifying the entries of the stock register. If there is any discrepancy, the fact should be reported immediately through the HOD to the Principal.
- If a staff member who is in charge of a particular lab has availed long leave, HOD should make alternate arrangements immediately to entrust the stock to another

staff member. The newly entrusted staff member should take possession of all the stocks immediately and the HOD has to report the respective alteration to the Principal.

- Any breakage or damage of an item during its use should be immediately recorded in the stock register against the respective item in the remarks column. This should include the reason for the damage and any breakage fees to be collected from the staff member / student, responsible for the damage. In case of expensive items, the matter should be reported to the Principal immediately for its recovery through breakage fees. For inexpensive items, the breakage fee should be collected after ensuring completion of the practical classes of the concerned semester.
- Similarly, loss of any item should also be recorded in the register and reported to the Principal for its cost recovery from person responsible for it.
- After the recovery of the costs, the item lost / damaged has to be removed from the stock register after obtaining specific orders from the Principal.
- If any old item is beyond repair and cannot be put into the use, the same can be condemned after obtaining approval from the Principal. This has to be entered in the stock register.
- No transfer of any equipment / accessories from one lab to another lab (even within the same Department) should take place without prior permission of the Principal. As and when such a transfer has been made, a note against the item mentioning the date of issue, date of receipt and other relevant particulars, should be made in the respective stock register of the laboratory.
- If any equipment is not functioning within the guarantee period, the respective company should be informed and called upon for initiating the process of rectification at the earliest.
- Ensuring Periodic service and maintenance of equipments has been made mandatory. The necessary action should be taken by the lab in-charge / system administrator with the approval of HOD and Principal.

STOCK VERIFICATIONS

- Unscheduled / Uninformed checks on stocks (Computers) would be carried out by the HOD in his/her Department at least once in a year. Principal or any member of the Management may conduct similar checks.

- Apart from surprise checks, annual verification has to be carried out by the staff members deputed by the Principal from other Departments before the end of the academic year.
- The stock verification for equipments / accessories would be done in a single day at a stretch.
- Discrepancy noticed, if any, during stock verification should be reported to the Principal immediately for further action

In view of the above, Kings Engineering College aims at:

- Timely up-gradation, replenishment, repairing and replacement of the lab resources and services.
- Setting standardized maintenance and utilization procedures for lab resources.
- Ensuring the safety of the students and faculty during lab sessions




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