LABORATORY

USER GUIDELINES

FOUNDATION IN SCIENCE | FOUNDATION IN ARTS

UTS

SCHOOL OF FOUNDATION STUDIES

1.0 INTRODUCTION

(i) Block 13 laboratories include **Computer Laboratory 5**, **Language Laboratory**, **Physics Laboratory** and **Biology/ Chemistry Laboratory**. These facilities are used for formal classes under the Foundation Programmes at the School of Foundation Studies. At other times, the lab is open for classes held by other programmes or are used for school activities such as workshops and consultations. All users are expected to adhere to the given rules and regulations.

2.0 LABORATORY USAGE POLICY

(i) Laboratory must be pre-booked by project supervisor, accompanying lecturer, or event organizer at least one week before the date of booking.
(ii) Lab usage for projects by students must not conflict with any regular laboratory schedule.
(iii) Access to laboratory facilities is only permitted between 8 am to 5 pm. The laboratory is closed on Saturday/Sunday/Public Holiday.
(iv) Related document: **LABORATORY FACILITIES BOOKING FORM AND EQUIPMENT LOAN FORM.**

2.1 PHYSICS/ BIOLOGY/ CHEMISTRY LABORATORY SAFETY RULES

(i) General Lab Safety Rules:

a. Be sure to read all fire alarm and safety signs.
b. Ensure you are fully aware of the nearest lab exit and the location of the fire alarm.
c. Make sure you know where your lab's safety equipment—including first aid kit(s), fire extinguishers, eye wash stations, and safety showers—is located and how to properly use it.
d. Open flames should never be used in the laboratory unless you have permission from a qualified supervisor.
e. Heated glassware or apparatus should be handled using gloves that provide heat protection. Place the heated item in a safe place to cool. Avoid rapid change of temperature by placing the heated item on a buffering material e.g., pot stand, cork pads etc.
e. If there is a fire drill, be sure to turn off all electrical equipment and close all containers.
f. Always work in properly ventilated areas.
g. **Do not chew gum, drink, or eat while working in the lab**.
h. Laboratory glassware should never be utilized as food or beverage containers.
i. Be sure to check glassware for chips and cracks before using. Notify your lab supervisor of any damaged glassware so it can be properly disposed of.
j. Never use lab equipment that you are not approved or trained by your supervisor to operate.
k. If you are the last person to leave the lab, make sure to lock all the doors and turn off all ignition sources.
l. Do not work alone in the lab.
m. Never leave an ongoing experiment unattended.
n. Never lift any glassware, solutions, or other types of apparatus above eye level.
o. Never smell or taste chemicals.
p. Do not pipette by mouth.
q. Make sure you always follow the proper procedures for disposing of lab waste.
r. Report all injuries, accidents, and broken equipment or glass right away, even if the incident seems small or unimportant.
s. If you have been injured, yell out immediately and as loud as you can to ensure you get help.
t. In the event of a chemical splashing into your eye(s) or on your skin, immediately flush the affected area(s) with running water for at least 20 minutes.

(ii) Dress Code:

a. Always tie back hair that is chin-length or longer.
b. Make sure that loose clothing or dangling jewelry is secured or avoid wearing it in the first place.
c. Never wear sandals or other open-toed shoes in the lab. Footwear should always cover the foot completely.
d. Never wear shorts or skirts in the lab.
e. When working with Bunsen burners, lighted splints, matches, etc., acrylic nails are not allowed.

(iii) Personal Protection:

a. When working with equipment, hazardous materials, glassware, heat, and/or chemicals, always wear face shields or safety glasses.
b. When handling any toxic or hazardous agent, always wear the appropriate gloves.
c. When performing laboratory experiments, always wear **a smock or lab coat**.
d. Hands must be washed regularly.
e. When using lab equipment and chemicals, be sure to keep your hands away from your body, mouth, eyes, and face.

(iv) Electrical Safety Rules:

a. A power pack must be the last item to be turned on during an experiment involving voltage use. Set the voltage dial to the lowest setting before dialing to the desired value.
b. Make sure all electrical panels are unobstructed and easily accessible.

2.2 WORK ETHICS

(i) The work area must be **tidy** and **clean**. The bench must be emptied after every laboratory session. An on-going experiment must be labeled with the following information:
   a. Owner of the apparatus or experiment setup.
   b. Contact number.
   c. Potential hazard. E.g., Caution! Hot Surface.
   d. The duration of the experiment.

(ii) Stools in the lab must be placed in their designated place.

(iii) Bags should not be placed on the working bench. Only materials required for work should be kept in the work area. Everything else should be stored safely out of the way.

(iv) Solid & liquid waste categories and their methods of disposal are simplified in the given table:

No	Waste categories	Examples	Disposal method
1	Sharps	Needle, razor blades	Sharps waste bin
2	Glass	Broken glassware	Glass bin
3	Solid chemicals	Contaminated magnesium oxide powder	Original bottle and labeled as '**waste**'
4	Organic liquid waste	Toluene, methanol	Original bottle and labeled as '**waste**'
5	Aqueous waste	Contain less than 40% of organic waste.	Segregate into either one of three collection bottles, according to their pH level: (i) acidic (pH<4) (ii) Neutral (4<pH<10) (iii) Basic (pH>10)
6	Batteries		Batteries collection bin
7	Mercury	Mercury contaminated items, broken thermometer	(i) Use sulfur powder to contain spillage. (ii) Place contaminated materials into a designated bottle for mercury waste.

2.3 COMPUTER LABORATORY & LANGUAGE LABORATORY RULES

(i) Wash your hands before using the computers, headphones, or microphones.
(ii) No food and drinks are allowed in the laboratory.
(iii) Only use the workstation given by your instructor.
(iv) Do not change the setting of the computer or download materials without the permission from the lab coordinator.
(v) Pay attention to your instructor. Do not click away when teaching is in session.
(vi) Clean your workstation before leaving.
(vii) Make sure to shut down the computer before leaving.
(viii) Do not leave valuables or personal belongings in the laboratory.

3.0 EQUIPMENT SAFE-HANDLING GUIDELINE

(i) User must read the **handling instructions** of the borrowed equipment before using it.
(ii) Assistance from the Lab Technician must be requested if the user is not an expert user of the equipment.
(iii) Permission to use the equipment will be revoked should the user is found to have mishandled the equipment.
(iv) Immediate report must be made to the Lab Technician should the user recognizes irregularities about the equipment being used.
(vi) The equipment must not be moved from allocated space in the Laboratory. Storage space for the equipment should also be specific and not easily changed.
(vii) The equipment must be returned as it was first received by the user. Any damage or missing parts must be reported to the Lab Technician.
(viii) **IMPORTANT:** Equipment containing loose items e.g., Physics Laboratory Experiment Sets, must be borrowed as a whole unit and returned as a whole unit. The arrangement of the components must be as the accompanying diagram stamped on the storage box. Lab Technician must ensure the availability of the components **before** the set is taken and **after** the set is returned**.**

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