

PHYSICS DEPARTMENT
Laboratory Policies

The Physics Department Laboratories are the following:

a) Advanced Physics Labs

Laboratory Name	Location
<i>Surface Physics Lab</i>	<i>STRC 311</i>
<i>Medical Physics Lab</i>	<i>STRC 312</i>
<i>Environment And RemoTe Sensing (EARTH) Lab</i>	<i>STRC 313</i>
<i>Computational Materials Design (CMD) Lab</i>	<i>STRC315A</i>
<i>Instrumentation Lab</i>	<i>STRC 315B</i>
<i>Solid State Physics Fabrication Lab</i>	<i>STRC 317</i>
<i>Solid State Physics Hi-vacuum Lab</i>	<i>STRC 319</i>
<i>Solid State Physics Furnace Lab</i>	<i>STRC 413</i>
<i>Electronics & Instrumentation Lab</i>	<i>STRC 414</i>
<i>iNano Lab</i>	<i>STRC 113</i>
<i>Condensed Matter Lab</i>	<i>SJ 408</i>

b) General Physics Labs

SJ 403	SJ 410	SJ 413
SJ 404	SJ 411	
SJ 405	SJ 412	

c) Graduate Physics Laboratory

SJ 402

The Following activities are allowed in the Physics Department Laboratories:

1. Faculty research work and research related activities including thesis consultation.
2. Research activities of undergraduate/graduate students that are particularly related to their thesis/dissertation.
3. Laboratory services, training and consultancy may be offered to outsiders for a fee in accordance with the guidelines and policies of the university.
4. Experiments for Senior High, Undergraduate, and Graduate Physics Laboratory Activities
5. Physics Learning Community Activities (Teachers and Physicists Professional Organizations).

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Policies on the Use of Laboratory rooms

1. The key to all laboratory rooms are kept by the technicians. The technicians will open the lab rooms only when there are laboratory classes.
2. The laboratory instructor must be the first and the last person in the laboratory room. Students are NOT allowed to enter the laboratory unless the instructor is already present.
3. Only those officially enrolled in Physics Laboratory Courses are allowed to enter the laboratory.
4. Refrain from smoking, eating, drinking, and littering in all physics laboratories.
5. Good housekeeping and safety precautions should be observed at all times.
6. Use all laboratory fixtures properly. Do not sit on tables and do not open cabinets or lockers unless there is an instruction to do so.
7. Maintain the cleanliness of the lab at all times.
8. The instructor should see to it that every utility (equipment, lights, water, gas, air con, etc.) is turned off except for the specially designated equipment where 24 hours air conditioning is required. He/she should then notify the technicians when classes are over, so the room may be locked.

Policies on the Conduct of an Experiment

1. Students are advised to read all precautionary notes on all pieces of equipment before using them. All questions about safety precautions on the equipment being used must be addressed to the lab instructor.
2. The lab instructor must first check the setup for experiments requiring the use of electrical components before any of these are plugged in or turned on. In case of faulty equipment, the instructor must be informed immediately so that a replacement can be secured from the Physics Stockroom.
3. Experiments involving the use of boiling water, heaters, and the like must be performed close to the water sinks in the lab.
4. Chemicals used in some experiments must be handled with utmost care. Used and unused chemicals must be returned to the Physics Stockroom as soon as the experiment is finished. Chemicals should never be thrown into the water sinks or the trash bins.
5. The lab technicians may be requested by the lab instructor to assist during a lab experiment but they are not required to stay in the lab rooms.

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Borrowing Procedures and Use of Equipment

1. The lab technicians in the Physics Stockrooms at SJ407 and SJ409 are responsible for the safekeeping and lending of all pieces of equipment used in the Physics Teaching Lab. All pieces of equipment necessary for physics experiments may be borrowed from the technicians at the Physics Stockroom.
2. Students must present an ID before any lab equipment is loaned.
3. Borrow only the pieces of equipment which are specified in your experiment or are required by the lab instructor.
4. Carry long pieces of equipment from the stockroom to your room and vice versa vertically. Don't carry too much.
5. The borrower and his/her group are held responsible for all pieces of equipment borrowed from the Physics Stockroom.
6. Pieces of equipment borrowed must be returned upon completion of the experiment.

Make-Up Classes

1. Special or make-up experiments outside of regular class hours are discouraged.
2. In case of a special or make-up experiment outside the regular class hours, the student has to confirm the availability of the technicians, the equipment, and the lab room before scheduling one with his/her instructor.
3. Special or make-up experiments outside the regular class hours are allowed only upon the approval of the lab instructor.
4. No special or make-up experiments are allowed if the lab instructor cannot be present during the special or make-up experiment.
5. Special or make-up experiments must be performed only in a lab room.
6. Lab technicians are not required to assist the student during the special or makeup experiment
7. Make-up experiments on the thirteenth week of the term are discouraged.

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Policies on the use of Research Equipment

1. Students/researchers should not use any of the instruments in the laboratories unless approved by the Research Laboratory Head.
2. Students/researchers may use equipment during the charted schedule of use.
3. Researchers must fill-up the log in/out notebook every time he/she uses particular equipment.
4. Nobody may use any equipment unassisted unless allowed in writing by the adviser, laboratory head to do so.
5. Priority of Use of Equipment comes as follows:
 - a. Physics Lab class use takes precedence over individual use or group use outside that of a class (e.g., a thesis group)
 - b. Lending of equipment to other users is done on a first-come, first-served basis.
 - c. Reservation of equipment must be made not earlier than two weeks before the intended day of use. Exceptions to these are in courses whose schedule of activities has been communicated to the laboratory staff before the start of classes.
6. Users who need to cancel an equipment reservation must notify the respective laboratory head, ASF, or technician at least a day before the original schedule.
7. Researchers who are not enrolled in a Physics Laboratory course or a Thesis Writing course under the DLSU Physics Department will be billed for the use of major equipment.
8. Instruments should not be moved out of its ROOM without a form and unless allowed in writing by the laboratory head to do so.

Policies on the Use of Laboratory rooms for research purpose

1. Only those authorized to work (research lab members, students enrolled in laboratory courses or thesis writing, and research assistants) inside the laboratory are allowed to enter the laboratory.
2. Students should log before and after working in the laboratory.
3. Eating, drinking, and application of cosmetics are strictly prohibited inside the laboratories, especially in laboratories where chemicals are used. This is to avoid the accidental ingestion of hazardous chemicals from the contamination of food, drinks, and cosmetics. This is also for the prevention of accidental damage of equipment from food/drink spillage.
4. Good housekeeping and safety precautions should be observed at all times.

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5. Keep door vision panels open/unobstructed to allow viewing of workers and activities within the laboratory at all times without having to enter.
6. The last person to leave the room should see to it that every utility (equipment, lights, water, gas, air con, etc.) is turned off except for the specially designated equipment where 24 hours air conditioning is required. Also, he/she should close the windows and lock the doors.
7. The last day students are permitted to work in the laboratory will be the final day of the term (Grade Consultation Day).

Policies on the Conduct of a Research Experiment

1. No student is allowed to do an experiment (hazardous) ALONE in the laboratory.
2. All researchers are required to attend a "Laboratory Safety Orientation" to be conducted by the Laboratory Head or his/her research assistant prior to actual experimentation.
3. Always wear the appropriate laboratory outfit for eye and skin protection during the conduct of an experiment that involves the handling of biological samples, hazardous chemicals, radioactive substances, open flames, high voltages, and those that involve heavy and motorized equipment. Also, pay close attention to the disinfection and sanitary storage of the said protective gears.
4. Researchers who are going to work with chemicals have to submit the material safety data sheets (MSDS) of all the chemicals they need for their research. They have to give a signed copy (sign their respective names, ID numbers, thesis advisers, and title of the thesis on the sheets) of the MSDS to the ASF before they can get their chemicals. This ensures that the students have read the MSDS and that they are familiar with the proper protocols in terms of handling, storing, and disposing of the chemicals and that they know what to do in case of an accident.
5. For everyone's safety, all secondary containers (boxes, ziplock bags, bottles, etc.) that will be used to contain chemicals/samples/specimens used in the experiment must be properly labeled at all times. Label must include the following:
 - a. COMPLETE name of substance (Acronyms and chemical symbols are not allowed as this may cause confusion)
 - b. Appropriate hazard warning, if any (whether it is toxic, carcinogenic, flammable, infectious, etc.)
 - c. Expiry date
 - d. Name of the owner, phone number, and local address.

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6. All computers and their accessories in the research laboratories are to be used for research related activities only. Unauthorized usage of a research computer will be subject to disciplinary action.
7. Researchers are required to clean up work space including tables and sinks, and accidental chemical spillover. Unwashed glass wares and unlabeled specimen and other research-related items lying or left unattended for several days in the laboratory/workplace/sink will be cleared away/ discarded by the laboratory personnel.
8. Researchers should comply with the Code of Research Ethics of the University.
9. Researchers should not dispose of hazardous materials together with regular waste materials. Researchers should comply with the Guidelines on the Disposal of Laboratory Hazardous Wastes as found in <http://www.dlsu.edu.ph/announcements/laboratory-hazardous-waste-management-plan.pdf>
10. Waste containers used must be appropriate for the hazardous waste material that is to be disposed and they must be properly labelled with the complete name (abbreviations or chemical symbols are unacceptable) of the waste, Waste CODE as per DENR classification, estimated volume or mass, date of disposal, researcher name, and researcher contact number.
 - a. In order to reduce personal risk and minimize waste at the source, limit the quantities of materials purchased, and use only what is needed. Use the smallest amount of the least hazardous chemical available that will achieve the desired research result.
 - b. Constant monitoring of an ongoing experiment is a must.

Policies on Doing Research Experiments beyond Office Hours

1. Overnight work requiring the use of sensitive instruments may only be done when a faculty that accompanies the students knows how to operate the instrument.
2. Undergraduate students, working **outside regular office hours** (Monday to Friday, 5pm to 10pm) should be accompanied by their adviser or the adviser's research assistant or graduate student.
3. Graduate students can work **beyond the regular office hours** (Monday to Friday, 5pm to 10pm) provided he/she is accompanied by a faculty or another graduate student.
4. A Special Permit for Campus Access (SPCA), which may be downloaded at <https://www.dlsu.edu.ph/offices/vcadmin/pdf/spca.pdf>, must be accomplished for working beyond 10:00 P.M. on Mondays to Fridays, as well as for working on Saturdays, Sundays, and/or Holidays. A copy of this permit should be provided to the concerned laboratory head.

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Policies on Materials Requisition

1. The department provides the student with materials which are of general use in the research and teaching laboratories. Requests for chemicals, glassware, or other laboratory materials must be communicated by the laboratory instructor or thesis adviser to the academic service faculty who fills out the downloadable form "REQUEST FOR PROCUREMENT of SERVICES and MATERIALS" found at <http://intranet.dlsu.edu.ph/downloads/forms/pdf/po-RPSM.pdf> upon the approval of the Department Chair.
2. Particularly expensive materials that are not routinely used in the physics laboratories will have to be purchased by the student or by the mentor charged to his/her research fund, if available. Request for additional research-related assistance from the department must be formally communicated by the faculty concerned to the department for approval.

General Safety Guidelines

1. Be very familiar with the procedures, materials, and equipment that will be needed for the experiment. Also, be familiar with limitations (power/voltage rating, proper equipment grounding, load bearing capacity, working temperature, cool-down/warm up time, etc.) of the equipment to be used for the experiment, as well as of the hazards associated with the materials.
2. Be familiar with the safety features of the laboratory such as the location of safety showers, fire extinguishers, bucket of sand, pail, medicine boxes, fire escapes, etc.
3. Experiments that involve handling of biological or chemical samples should NOT be performed whenever water is not available.
4. Proper conduct must be observed at all times. Horseplay, practical jokes, or other behavior that may startle, confuse, or distract other laboratory workers should neither be engaged in nor condoned.
5. Do not use, touch, or taste any substance from unlabeled or doubtfully labeled containers.
6. Maintain exits, aisles, and safety equipment (e.g., fire extinguishers, sand pails) free of all obstruction.
7. Open-toed footwear, sandals, and high-heeled shoes must not be used when doing experiments that involve handling of biological or chemical samples and handling of heavy equipment. Long hair must be tied back and loose clothing confined to avoid coming in contact with chemicals, flames, or moving equipment.

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8. Inspect all pieces of equipment before use. Be sure that your glassware and equipment are free from flaws such as cracks, chips, and obvious defects. Chipped or cracked glassware should not be used; cracks can cause the glassware to fail during use and cause injury. Return these to the stockroom for repair or disposal.
9. Be alert to unsafe conditions and actions, and call attention to them or report them so that corrections can be made as soon as possible
10. All injuries, however minor, must be reported to the thesis adviser, lab technician, or ASF immediately. The ASF prepares the accident report for record purposes. If the injury is minor, the thesis adviser, technician, or ASF may administer first-aid treatment. If the thesis adviser, technician, or ASF does not feel confident in administering the treatment, the student should be sent to the clinic accompanied by another person who is authorized by the thesis adviser.

Breakage, Loss, and Damage to Lab Equipment

1. Breakages, loss, equipment failures, malfunctions or other unusual equipment performance should be reported immediately to the technician, ASF, thesis adviser, or laboratory head.
2. The borrower and his/her group members are responsible for the replacement or payment of the broken, lost, or damaged equipment.
3. In case of broken, lost, or damaged equipment, the technicians are authorized to note down all information about the borrower which will be necessary for proper documentation.
4. The cost of the damage to the equipment is assessed by the lab coordinator and technicians and a billing statement is forwarded to the borrower.
5. Students must pay for, repair, or replace the broken, lost, or damaged equipment on or before the 12th week of the trimester; otherwise, they would not be cleared from the lab and not be allowed to enroll in the following trimester. Furthermore, they would not be given their final grade for that lab subject.
6. Once the equipment has been paid for, replaced or repaired, students would be issued a clearance signed by technician or ASF, and the laboratory head/coordinator.

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1. At the end of the thesis/research period, students must return all items borrowed from the lab and secure a clearance from the head/coordinator. All students must submit their laboratory clearance to their Thesis Adviser before their final thesis/Dissertation Defense. No final Grade for the thesis/dissertation may be issued unless the lab breakage has been settled.

By signing a clearance, the technician or ASF and the laboratory head or coordinator agrees that the student:

- a. has returned what he/she had borrowed from the lab including glassware, tools, instrument parts, and manuals,
- b. has settled all obligations (breakage, damage, or loss), if any, in the research laboratory,
- c. has cleaned the research lab, working area, refrigerator, locker, glassware, fumehood etc., and
- d. has properly disposed of his/her waste, or properly segregated and labeled his/her waste containers.

Inventory

1. Every research laboratory must maintain an inventory of equipment in the research laboratory. It is the responsibility of the laboratory head to coordinate with members of his/her group and submit an updated inventory at the start of every academic year. This is to be submitted to the Asset Management Office of the University. The inventory form can be downloaded at <http://intranet.dlsu.edu.ph/downloads/forms/pdf/item-list-form.pdf>.
2. Every research laboratory must maintain an inventory of **chemicals** used or stored in the research laboratory. The chemical inventories for all research laboratories must be entered into the department's chemical inventory database.
3. The teaching lab inventory will be kept by the laboratory coordinator.
4. The laboratory coordinator shall take charge of the overall annual inventory of the Physics Department Laboratories in the St. Joseph's Hall and STRC labs and stockrooms.