Eugenio María de Hostos Community College of The City University of New York

Department of Allied Health Sciences

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Quick Start Guide to the

Radiography Lab

The lab is for non-human use ONLY

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The radiography lab is available to students Monday through Friday; it is never available on Saturday or Sunday.

Lab hours are posted inside the display case located on the wall to the right of the entrance door.

To work safely in the lab, students must be aware of a few fundamental principles. The purpose of this booklet is to provide students with a brief overview of the radiography lab and their responsibilities.

This booklet covers the following topics:

1. **Lab Etiquette**
2. **Lab Safety**
3. **X-ray System**
4. **CR System (Cassettes)**
5. **DR System (Cassette-less)**
6. **Walking with Image Receptors (CR or DR)**
7. **Dosimeters**

All the material in this booklet will be covered in much greater detail during the semester.

Please read this booklet carefully.
Your safety is important to the faculty.

Lab Etiquette

Teamwork is critical to the success of the lab activities. Appropriate behaviour in the lab includes, but is not limited to, the following.

Students should:

1. Arrive on time for the lab activities.
2. Be prepared for the lab activities.
3. Work only in their assigned group.
4. Work constructively with their classmates.
5. Participate in all group activities.
6. Work collaboratively with their classmates.
7. Not attempt to dominate their classmates during group activities.
8. Not use the crowded lab as an excuse for inappropriate touching.
9. Return all equipment to its proper place after completing the lab activities.

Lab Safety

Working in the radiography lab can be exciting and rewarding; however, it can also be hazardous if students are not careful. Safe behaviour in the lab includes, but is not limited to, the following:

1. Students should always exercise caution and good judgment.

2. Students cannot work in the lab unless a staff member is present.

3. Students cannot radiograph each other or make an x-ray exposure if there is another student in the examination room.

4. College equipment/property cannot be borrowed or removed from the lab.

5. Students must always wear a dosimeter at the level of their neck/collar when operating the x-ray equipment.

6. ***Pregnant students must obtain a second (fetal) dosimeter***.
   The fetal dosimeter must always be worn at the level of the abdomen when operating x-ray equipment. If the student is wearing a lead apron, a fetal dosimeter must be worn under the lead apron at the level of their abdomen.
   The student must never switch the placement of the dosimeters

7. **Junior Fall Semester** Students should not take dosimeters out of the lab. Dosimeters should be placed back on the holding rack just before leaving the lab.

8. **Post Junior Fall Semester** Once the students successfully completes the Junior Fall semester; they will progress into the clinical phase. The student will have to wear the same dosimeter whenever they are working with ionizing radiation. Therefore the student will be responsible for carrying the dosimeter to the lab and clinical site

9. Students who lose their dosimeter cannot work in the lab until they are issued a replacement.

10. **If any equipment is dropped or broken, contact a staff member immediately.**

11. **All injuries must be reported to a staff member immediately.**

X-ray System (Shimadzu)

https://www.youtube.com/watch?v=W0PxO8x1ppo

Computed Radiography System

https://www.youtube.com/watch?v=K2yoavXRtrM&feature=youtu.be

https://www.youtube.com/watch?v=Pl2kb17YM24

Direct Radiography (Cassette-less System)

https://www.youtube.com/watch?v=vzO0stHjLPk&feature=youtu.be

https://www.youtube.com/watch?v=1tXtZKAm1kU&feature=youtu.be

Walking with Image Receptors

1. Do not swing the image receptors forward or backward when you are walking.
2. Hold the image receptors close to the side of your body.
3. Keep your hands close to your body.
4. Be very careful when carrying image receptors; they are large, heavy, solid, have pointed corners, and can cause serious injury.
5. If you bump into someone you could cause a rib fracture, abdominal or hip injury.
6. If you drop one onto your foot you could break/fracture a bone.

1. The Emergency Exit (Storage Room)

- The emergency exit door is located to the left of the workbench.
  - ✓ It is not to be used as a general entrance or exit to the storage room.
  - ✓ It is kept locked when labs are not in progress.
  - ✓ ***It must be unlocked (not open) when labs are in progress.***
  - ✓ ***Always double-check that the emergency exit door is unlocked before you begin any lab activity that involves the use of the storage room.***

Dosimeters

A dosimeter will be issued for the duration that they are in the program. Every student will utilize one dosimeter to monitor any radiation that might be exposed be it in the lab or at our clinical affiliations.

All radiography students are issued a dosimeter; it is placed inside a special holder. The dosimeter holder has a clip on the back; it must be worn on or near the collar.

Students are NOT permitted to work in the lab without a dosimeter.

Never remove the dosimeter badge from the lab.

There are two racks in the lab. They are mounted on the walls to the left and right of the door leading to the study room in the lab. The holding racks have been alphabetically labeled (A-C, D-F, etc.) to make storage and retrieval easier. Dosimeters must be returned to the holding racks at the end of the lab activity.