Radiation Therapy Multifunction Laboratory and
Medical Imaging Laboratory -
School of Medical & Health Science (MHS)

1. GENERAL GUIDELINES

(a) For security reasons, all laboratories are locked unless occupied by staff and/or students during class or practice. The laboratory may be closed for scheduled maintenance work.

(b) Only those students who gain approval are allowed in the laboratory.

(c) All staff and students must know and practice the safety guidelines at all times while using the laboratory.

(d) Students should be knowledgeable of the care, handling, and proper use of equipment prior to using it in the laboratory. Students should strictly follow the instructions given by the instructor and follow the guidance given in the laboratory. Students should not remove anything from the laboratory without permission.

(e) Students should not keep any personal belongings unattended in all laboratories. Storage of items and books in the laboratories is not allowed.

(f) Students should not use and attempt to touch with any equipment unless trained and approved by your instructor.

(g) Any misconduct occurring in the laboratory will be reported to the teaching staff at Tel. 3468 6818 or via email mhs@twc.edu.hk.

(h) Students should inform course coordinators/teachers of any special medical conditions, allergies, or recent injuries, illnesses, surgeries, or communicable disease as soon as possible so that necessary precautions can be taken to protect the students and others.

(i) For any emergency such as fire, water leakage, flooding, students should immediately call Security Control Office (emergency response).
Contact information is as follows:

Contact Person	Tel. No	Location	Contact Hour
Security Control Room	3190 6610	G/F, KPC	24-hour

(j) All incidents must be reported to the School Executive Officer within 24 hours or the following working day.

2. CLEANING AND MAINTENANCE OF THE LABORATORY AND EQUIPMENT

It is the responsibility of the users (teachers/students) to maintain the equipment and physical space clean and tidy after using the laboratory.

(a) Tidy up equipment in the laboratory after class.

(b) Make sure to turn off the facility/equipment and put it back to original place after use.

(c) Keep the laboratory clean and ensure the work area is tidy before leaving.

(d) Turn off electric switches, light and air conditioner(s), and lock the doors before leaving the laboratory.

(e) Keep the laboratory equipment in good working condition. Any faulty or broken equipment, loss and unauthorized use of facility resources should be reported immediately to the teaching staff at Tel. 3468 6818 or your instructor.

3. COMPUTER USAGE AND REGULATION

(a) It is forbidden to download any software to the hard drives of any computer in the laboratory or on relevant servers without seeking the School's consent.

(b) It is forbidden to delete any software that is stored on the computer in the laboratory.

(c) Users are responsible for backing up their own work and data.

(d) Users are not allowed to plug-in any storage devices (e.g. USB memory card or SD card) to any treatment planning computer unless with the permission from the teaching staff. All storage devices must be new or are absent of any virus or other bugs that may be harmful to the computers.

4. CONSEQUENCES OF MISUSE

(a) Misuse of computing, networking or any laboratory equipment may result in the loss of usage privileges. Additionally, any misuse of a computing account may require financial restitution to the college for funds expended, and could result in college disciplinary action or civil / criminal action.

(b) Users may be held accountable for their conduct under any applicable college or departmental policies, procedures, or agreements. Any actions which detract from other users doing their work, or which would otherwise be deemed malicious, will result in the loss of access to the laboratory and possible college disciplinary action or civil / criminal action.

(c) Unauthorized use of the laboratory equipment for personal gain, or removal of equipment that constitutes theft, are subject to prosecution by the college. Furthermore, entering the laboratory facility with the intent, by whatever means, of accessing others' work or data for purposes of stealing constitutes misuse and will be prosecuted. Any complaints arising from misuse of the laboratory or resources will be directed to those responsible and appropriate disciplinary actions will be taken.

(d) Students are responsible for understanding policies and other safety information mentioned in this manual. Besides, students should keep laboratory safe and follow all safety procedures in the laboratory. To protect users, all the activities in the laboratory will be monitored and recorded under 24 hours closed circuit surveillance system.

5. LABORATORY SAFETY
5.1. Code of Conduct

(a) Smoking, eating or drinking is strictly prohibited in the laboratories. No food and

beverages are allowed in the laboratory.

(b)   Shoes must be worn at all times in laboratory.

(c)   You must never distract or startle other users in the laboratory. Practical jokes or horseplay in the laboratory will not be tolerated at any time.

(d)   Malfunctioning equipment should not be used, please report to the teaching staff at Tel. 3468 6818 or by email.

5.2. Electrical Safety

(a)   Wet materials should not be placed around electrical outlets or equipment.

(b)   Staff and students must report immediately to teaching staff any frayed electrical cords, cracked plugs, missing outlet covers, etc., as well as any problems encountered while using electrical equipment.

(c)   No electrical cords will be left on the walkway. Extension cords will be properly taped to the floor if used over a walkway.

(d)   Only three-prong plugs that contain a ground wire should be used to power equipment in the laboratories.

5.3. Physical Space / Equipment

(a)   All cabinet doors should remain closed when not in use.

(b)   The laboratory spaces, floors and bench areas should be kept clean and tidy after use.

(c)   Laboratory doorways are kept clear of obstacles at all times.

5.4. Thermoplastic Oven

(a) The oven should remain switched off when not in use.

(b) The oven should be used under teacher's supervision.

(c) The oven should be switched off after use and before leaving the laboratory.

5.5. Setup Laser

(a) All lasers should remain switched off when not in use.

(b) User should not look at the lasers directly.

(c) All lasers should be switched off after use and before leaving the laboratory.

5.6. Setup Couch

(a) All cabinet doors should remain closed when not in use.

(b) The laboratory spaces, floors and bench areas should be kept clean and tidy after use.

(c) Laboratory doorways are kept clear of obstacles at all times.

5.7. Nitrogen gas usage

(a) The valve of nitrogen gas cylinder is in close position when not in use.

(b) It will be used under teacher's supervision.

(c) The ventilation fans should be turned on at all times when using the nitrogen gas.

(d) Turned the valve of nitrogen gas cylinder to close position after use.

5.8. TLD readout machine / oven

(a) The TLD readout machine / oven should be switched off when not in use.
(b) Turn on the nitrogen gas valve and supply the TLD readout machine with nitrogen during TLD readout.
(c) The ventilation fans should be turned on at all times during the readout process.
(d) Switch off the readout machine, oven and turned off the valve of the nitrogen gas cylinder after use.

6. EMERGENCY RESPONSE

(a) Students should know the location of the firefighting equipment and first aid equipment in the laboratory.
(b) Notify the General Office at Tel. 3190 6710, the Laboratory Technical Officer or your instructor immediately after any injury, fire, explosion or spill in the laboratory.
(c) Student should familiarize themselves with the building evacuation procedures and fire escape routes before using the laboratory.

6.1. Fire

6.1.1. Minor Fire

(a) Alert other people in the laboratory that there is a fire.
(b) Stop all your practice immediately.
(c) Call/Designate someone in the laboratory to call:
   (i) Security Control Office at Tel. 3190 6610 and/or
   Security Guard will contact required personnel to respond to the laboratory.
(d) **If it is safe to do so,** attempt to confine and/or extinguish the fire.
   (i) If the fire is small and the danger is not imminent, attempt to contain it with a fire extinguisher, inform others of your actions.
   (ii) If the fire is contained, stand by in a safe location to assist responding personnel.
   (iii) If the fire is **not containable**, follow the procedures for a major laboratory fire.

6.1.2. Major Fire

(a) Alert other people in the laboratory that there is a fire.
(b) Stop all your practice.
(c) Begin evacuating the laboratory to safe area. Bring along your mobile phone and a wet towel (if readily available).
(d) Sound the nearest fire alarm by activating the break-glass alarms.
(e) Inform the Security Control Room at Tel. 3190 6610 if time permits.
(f) Close **(Do not lock)** the door when leaving.
(g) Exit building using staircases as quickly as possible. **(Do not use lifts).**
(h) Proceed to the Designated Assembly Point. Do not leave the assembly area until

instructed by the Security Guard to do so.

(i) Be prepared to provide the responding personnel with sufficient details about the fire.

(j) Do not re-enter the building in alarm until authorized by a Security Guard/fireman.

6.1.3. Emergency Evacuation Alarm

(a) Begin evacuating the laboratory as soon as you hear the emergency evacuation alarm – **regardless of the tone** (e.g. intermittent or steady).

(b) Stop all the practices work.

(c) Begin to evacuate the laboratory immediately.

(d) Close **(Do not lock)** doors when leaving.

(e) Exit the building using staircase as quickly as possible **(Do not use lifts).**

(f) Proceed to the Designated Assembly Point. Do not leave the assembly area until instructed by the Security Guard.

(g) Do not re-enter the building until authorized by a Security Guard/fireman.

6.2. Flood/ Water Leak

(a) Call Security Control Room at Tel. **3190 6610** (emergency response).

(i) Provide your name, laboratory room number, contact number, any person injured and the nature of the injury if applicable.

(ii) Security Guard will contact required personnel to respond to the laboratory.

(b) **If it is safe to do so**, attempt to stop the flow of water or confine the flood area using whatever materials available, such as bed sheets.

(c) Assist responding personnel as necessary.

(i) Be prepared to provide the responding personnel with sufficient details.

6.3. Power Loss

(a) Stop all laboratory works.

(b) Switch off all electrical appliances/equipment (except those on uninterrupted power supply).

(c) Laboratory without power must be evacuated. You can return when full power has been restored.

(d) Reset/restart and check equipment to ensure it is functioning properly.

6.4. Nitrogen gas leaking

(a) Stop all laboratory works.

(b) Turn the valve of nitrogen gas cylinder to close position.

(c) Switch on the ventilation fans.

(d) Laboratory must be evacuated. You can return when full power has been restored.

(e) Reset/restart and check equipment to ensure it is functioning properly.

7. FIRST AID

7.1. Minor Injury:
    (a)   Treat with the supplies contained in the first aid box provided (if any) in the laboratory, or

    (b)   Visit the Security Control Room at the G/F entrance to request first aid assistance from one of the first aiders of the College, or

    (c)   Call the Security Control Room at Tel. **3190 6610** to request first aid assistance in the laboratory. Provide your name, laboratory number, laboratory phone number, and the nature of your injury (including any hazardous materials involved).

7.2. Major Injury/Serious Sickness:
For example, the person is unconscious, mentally confused, convulsing, fainting, or has breathing difficulties, severe bleeding, major wound, pallor/cold sweating, etc.,

7.2.1 Seek Help – Summon assistance from someone nearby to call for help.
    (a) **<u>Call 999</u>**
    (b) **Notify** the Security Control Room at Tel. **3190 6610**.
        (i) Request for first aid assistance from the first aider of the College.
        (ii) Wait for the attending Security Guard/medical personnel.

7.2.2 General Consideration
    (a) Put the injured/sick person in a comfortable posture.
    (b) Do not move the injured person unless he/she is in imminent danger.
    (c) Check that you and the injured person are in a safe place while waiting for help.

7.2.3 If you have first aid training, provide appropriate first aid and/or if trained, cardiopulmonary resuscitation (CPR) as needed, until the arrival of further medical help. Keep observing the injured/sick person after applying first aid treatment until arrival of further medical help.

7.2.4 Assist responding personnel (Security Guards and Paramedics) as necessary.
    (a) To provide a handover when further medical help arrives if necessary.

8. ACCIDENT/INCIDENT REPORTING
    (a) Any incident occurring in laboratory during school hours must be reported immediately to the School at Tel. 3468 6710 and /or teaching staff at Tel: 3468 6818.

    (b) After school hours, the incident should be reported to Security Control Room at Tel. 3190 6610 (emergency response).

    (c) All incidents must be reported to Security Control Room and the School Executive Officer within 24 hours or the following day.

9. MEDICAL IMAGING Laboratory

9.1 GENERAL GUIDELINES

(a) For security reasons, all laboratories are locked unless occupied by staff and/or students during class or practice. The laboratory may be closed for scheduled maintenance work.
(b) Only those students who gain approval are allowed in the laboratory.
(c) All staff and students must always know and practice the safety guidelines while using the laboratory.
(d) Students should be knowledgeable of the care, handling, and proper use of equipment prior to using it in the laboratory. Students should strictly follow the instructions given by the instructor and follow the guidance given in the laboratory. Students should not remove anything from the laboratory without permission.
(e) Students should not keep any personal belongings unattended in all laboratories. Storage of items and books in the laboratories is not allowed.
(f) Students should not use and attempt to touch any equipment unless trained and approved by your instructor.
(g) Any misconduct occurring in the laboratory will be reported to the school at Tel. 3468 6710 or via email mhs@twc.edu.hk.
(h) Students should inform course coordinators/teachers of any special medical conditions, allergies, or recent injuries, illnesses, surgeries, or communicable disease as soon as possible so that necessary precautions can be taken to protect the students and others.
(i) For any emergency such as fire, water leakage, flooding, students should immediately call the Security Control Office (emergency response).
(j) All incidents must be reported to the School Executive Officer within 24 hours or the following working day.
Contact information is as follows:

Contact Person	Tel. No	Location	Contact Hour
Security Control Room	3190 6610	G/F, KPC	24-hour

9.2 CLEANING AND MAINTENANCE OF THE LABORATORY AND EQUIPMENT

It is the responsibility of the users (teachers/students) to maintain the equipment and physical space clean and tidy after using the laboratory.
(a) Tidy up equipment in the laboratory after class.
(b) Make sure to turn off the facility/equipment and put it back to original place after use.
(c) Keep the laboratory clean and ensure the work area is tidy before leaving.
(d) Turn off electric switches, light and air conditioner(s), and lock the doors before leaving the laboratory.
(e) Keep the laboratory equipment in good working condition. Any faulty or broken equipment, loss and unauthorized use of facility resources should be reported immediately to the school of at Tel. 3468 6710 or your instructor.

9.3 COMPUTER USAGE AND REGULATION

(a) It is forbidden to download any software to the hard drives of any computer in the laboratory or on relevant servers without seeking the school's consent.
(b) It is forbidden to delete any software that is stored on the computer in the laboratory.
(c) Users are responsible for backing up their own work and data.

(d) Users are not allowed to plug in any storage devices (e.g. USB memory card or SD card) to any treatment planning computer unless with the permission from the teaching staff. All storage devices must be new or are absent from any virus or other bugs that may be harmful to the computers.

9.4 CONSEQUENCES OF MISUSE

(a) Misuse of computing, networking or any laboratory equipment may result in the loss of usage privileges. Additionally, any misuse of a computing account may require financial restitution to the college for funds expended and could result in college disciplinary action or civil / criminal action.

(b) Users may be held accountable for their conduct under any applicable college or departmental policies, procedures, or agreements. Any actions which detract from other users doing their work, or which would otherwise be deemed malicious, will result in the loss of access to the laboratory and possible college disciplinary action or civil / criminal action.

(c) Unauthorized use of the laboratory equipment for personal gain, or removal of equipment that constitutes theft, are subject to prosecution by the college. Furthermore, entering the laboratory facility with the intent, by whatever means, of accessing others' work or data for purposes of stealing constitutes misuse and will be prosecuted. Any complaints arising from misuse of the laboratory or resources will be directed to those responsible and appropriate disciplinary actions will be taken.

(d) Students are responsible for understanding policies and other safety information mentioned in this manual. Besides, students should keep the laboratory safe and follow all safety procedures in the laboratory. To protect users, all the activities in the laboratory will be monitored and recorded under 24 hours closed circuit surveillance system.

9.5.1 Code of Conduct

(a) Smoking, eating or drinking is strictly prohibited in the laboratories. No food and beverages are allowed in the laboratory.

(b) Shoes must be always worn in the laboratory.

(c) You must never distract or startle other users in the laboratory. Practical jokes or horseplay in the laboratory will not be tolerated at any time.

(d) Malfunctioning equipment should not be used, please report to the school of at Tel. 3468 6710 or your instructor.

9.5.2 Electrical Safety

(a) Wet materials should not be placed around electrical outlets or equipment.

(b) Staff and students must report immediately to teaching staff to teaching staff any frayed electrical cords, cracked plugs, missing outlet covers, etc., as well as any problems encountered while using electrical equipment.

(c) No electrical cords will be left on the walkway. Extension cords will be properly taped to the floor if used over a walkway.

(d) Only three-prong plugs that contain ground wire should be used to power equipment in the laboratories.

9.5.3 Physical Space / Equipment

(a) All cabinet doors should remain closed when not in use.
(b) The laboratory spaces, floors and bench areas should be kept clean and tidy after use.
(c) Laboratory doorways are always kept clear of obstacles.

9.5.4 Thermoplastic Oven

(a) The oven should remain switched off when not in use.
(b) The oven should be used under the teacher's supervision.
(c) The oven should be switched off after use and before leaving the laboratory.

9.5.5 Setup Laser

(a) All lasers should remain switched off when not in use.
(b) User should not look at the lasers directly.
(c) All lasers should be switched off after use and before leaving the laboratory.

9.5.6 Setup Couch

(a) All cabinet doors should remain closed when not in use.
(b) The laboratory spaces, floors and bench areas should be kept clean and tidy after use.
(c) Laboratory doorways are always kept clear of obstacles.

9.5.7 Nitrogen gas usage

(a) The nitrogen gas cylinder is in close position when not in use.
(b) It will be used under the teacher's supervision.
(c) The ventilation fans should be always turned on when using nitrogen gas.
(d) Turned the valve of nitrogen gas cylinder to close position after use.

9.5.8 TLD readout machine / oven

(a) The TLD readout machine / oven should be switched off when not in use.
(b) Turn on the nitrogen gas valve and supply the TLD readout machine with nitrogen during TLD readout.
(c) The ventilation fans should be always turned on during the readout process.
(d) Switch off the readout machine, oven and turned off the valve of the nitrogen gas cylinder after use.

9.6.1 Fire

9.6.1.1 Minor Fire

(a) Alert other people in the laboratory that there is a fire.
(b) Stop all your practice immediately.
(c) Call/Designate someone in the laboratory to call:
   (i) Security Control Office at Tel. 3190 6610 and/or
   Security Guard will contact required personnel to respond to the laboratory.

(d) If it is safe to do so, attempt to confine and/or extinguish the fire.
    (i) If the fire is small and the danger is not imminent, attempt to contain it with a fire extinguisher, inform others of your actions.
    (ii) If the fire is contained, stand by in a safe location to assist responding personnel.
    (iii) If the fire is not containable, follow the procedures for a major laboratory fire.

9.6.1.2 Major Fire

(a) Alert other people in the laboratory that there is a fire.
(b) Stop all your practice.
(c) Begin evacuating the laboratory to a safe area. Bring along your mobile phone and a wet towel (if readily available).
(d) Sound the nearest fire alarm by activating the break-glass alarms.
(e) Inform the Security Control Room at Tel. 3190 6610 if time permits.
(f) Close (Do not lock) the door when leaving.
(g) Exit building using staircases as quickly as possible. (Do not use lifts).
(h) Proceed to the Designated Assembly Point. Do not leave the assembly area until you are instructed by the Security Guard to do so.
(i) Be prepared to provide the responding personnel with sufficient details about the fire.
(j) Do not re-enter the building in alarm until authorized by a Security Guard/fireman.

9.6.1.3 Emergency Evacuation Alarm

(a) Begin evacuating the laboratory as soon as you hear the emergency evacuation alarm – regardless of the tone (e.g. intermittent or steady).
(b) Stop all the practices work.
(c) Begin to evacuate the laboratory immediately.
(d) Close (Do not lock) doors when leaving.
(e) Exit the building using the staircase as quickly as possible (Do not use lifts).
(f) Proceed to the Designated Assembly Point. Do not leave the assembly area until instructed by the Security Guard.
(g) Do not re-enter the building until authorized by a Security Guard/fireman.

9.6.2 Flood/ Water Leak

(a) Call Security Control Room at Tel. 3190 6610 (emergency response).
    (i) Provide your name, laboratory room number, contact number, any person injured and the nature of the injury if applicable.
    (ii) Security Guard will contact required personnel to respond to the laboratory.
(b) If it is safe to do so, attempt to stop the flow of water or confine the flood area using whatever materials available, such as bed sheets.
(c) Assist responding personnel as necessary. (a) Stop all laboratory work.
    (i) Be prepared to provide the responding personnel with sufficient details.

9.6.3 Power Loss

(a) Stop all laboratory work.
(b) Switch off all electrical appliances/equipment (except those on uninterrupted power supply).
(c) Laboratory without power must be evacuated. You can return when full power has been restored.

(d) Reset/restart and check equipment to ensure it is functioning properly.

9.6.4 Nitrogen gas leaking

(a) Stop all laboratory work.
(b) Turn the valve of nitrogen gas cylinder to close position.
(c) Switch on the ventilation fans.
(d) Laboratory must be evacuated. You can return when full power has been restored.
(e) Reset/restart and check equipment to ensure it is functioning properly.

9.7 FIRST AID

9.7.1 Minor Injury:

(a) Treat with the supplies contained in the first aid box provided (if any) in the laboratory, or
(b) Visit the Security Control Room at the G/F entrance to request first aid assistance from one of the first aiders of the College, or
(c) Call the Security Control Room at Tel. 3190 6610 to request first aid assistance in the laboratory. Provide your name, laboratory number, laboratory phone number, and the nature of your injury (including any hazardous materials involved).

9.7.2 Major Injury/Serious Sickness:

For example, the person is unconscious, mentally confused, convulsing, fainting, or has breathing difficulties, severe bleeding, major wound, pallor/cold sweating, etc.,

9.7.2.1 Seek Help – Summon assistance from someone nearby to call for help.

(a) Call 999
(b) Notify the Security Control Room at Tel. 3190 6610.
   (i) Request for first aid assistance from the first aider of the College.
   (ii) Wait for the attending Security Guard/medical personnel.

9.7.2.2 General Consideration

(a) Put the injured/sick person in a comfortable posture.
(b) Do not move the injured person unless he/she is in imminent danger.
(c) Check that you and the injured person are in a safe place while waiting for help.

9.7.2.3 If you have first aid training, provide appropriate first aid and/or if trained, cardiopulmonary resuscitation (CPR) as needed, until the arrival of further medical help. Keep observing the injured/sick person after applying for first aid treatment until the arrival of further medical help.

9.7.2.4 Assist responding personnel (Security Guards and Paramedics) as necessary.

(a) To provide a handover when further medical help arrives if necessary.

9.8 ACCIDENT/INCIDENT REPORTING

(a) Any incident occurring in the laboratory during school hours must be reported immediately to the School at Tel. 3468 6710 and /or teaching staff at Tel: 3725 6284.

(b) After school hours, the incident should be reported to Security Control Room at Tel. 3190 6610 (emergency response).

(c) All incidents must be reported to the Security Control Room and the School Executive Officer within 24 hours or the following day.