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# LABORATORY POLICY AND GUIDELINES

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# The Mico University College

## LABORATORY POLICY & GUIDELINES

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#### **CHANGE HISTORY**

DATE OF CHANGE	NATURE OF CHANGE	Reviewer(s)
May 2014	Original version drafted.	Lab. Cmte.
Sept 2019	Updated template, format and layout	R. Wright

For more information about policy development, consult the Policy Formulation and Management Policy on The Mico website at themico.edu.jm/policies.

#### 1. Introduction

The laboratory classes at The Mico University College provide students with first-hand experience with course concepts and with the opportunities to explore methods used by scientists in their discipline. The laboratory session has particular challenges and opportunities that differ from those in a standard classroom environment.

The Mico University College is committed to providing a laboratory environment which is safe, healthy and secure by establishing and maintaining the highest standards in this regard and holding its constituents accountable.

The University College shall therefore take steps to protect the University resources from unauthorized access, misuse or removal and shall promote measures commensurate with the potential risks, imposed in a manner that does not unreasonably hamper research.

#### 2. Scope

The Policy shall apply to all users of any laboratory at The Mico University College (Lecturers, Technicians, Laboratory Assistants and Students) whether the laboratory is associated with a Natural Science, Computer Studies, Industrial Technology, Human Ecology and Hospitality or any other related area.

#### 3. Definitions

Practical Experience Includes:

- Laboratory exercises
- Course projects / Research
- Virtual labs linked to identified courses
- Off-campus field study
- On-campus field study: Faculty project(s)
- Participation in External Expos
- Participation in Faculty Expos
- Practicum 3B presentations
- Faculty Online Resources

#### 4. Policy Objectives

The Policy aims to

- i. Establish a framework for Improving and enhancing the quality of the learning experience of students
- ii. Establish standards for the management and operations of the laboratories.



- iii. Encouraging compliance with the safety standards, rules and regulations.
- iv. Promote on-campus field work
- v. Establish guidelines for the responsibilities of all the stakeholders

#### 5. Policy Statements

#### 5.1. The Overall Environment

The Mico University College shall ensure that its laboratories are suitable to promote teaching and learning in the respective disciplines of the Faculty.

#### 6. Responsibilities

#### 6.1. The University College

The University College shall

- i. As far as possible provide an environment to encourage scholarship and research through laboratory exercises
- ii. Ensure that every effort is made to address situations that may pose a hazard in the lab.

#### 6.2. The Academic Board

The Academic Board shall:

i. Approve the Laboratory Policy and shall receive reports on the monitoring of the policy's implementation and maintenance.

#### 6.3. The Faculty Board

The Faculty Board shall:

- iii. Ensure the implementation of the Policy
- iv. Participate in accreditation activities and other external reviews, which have implication for the laboratories.

#### 6.4. The Laboratory Committee

The Laboratory Committee shall:



- i. Manage the policy, to ensure that all stake holders have the necessary information and to ensure compliance with the Policy.
- ii. Promote Safety and the proper use of the facilities by all stakeholders staff, students and other stakeholders.
- iii. Monitor resources to support student learning and make recommendations.
- iv. Evaluate the laboratory processes continuously and make suggestions for change as necessary.
- v. Establish a Laboratory Schedule by the start of the academic year
- vi. Report to Faculty Board on the Committee's activities.
- vii. Invite external stakeholders' opinion on courses, programmes and services.
- viii. Participate in accreditation activities and other external reviews.

## 6.5. The Head of Department (HOD)

The HOD shall:

i) Approve the Lab schedule, and see to assignment of staff

#### 6.6. The Academic Staff (Lecturers who use the Laboratories)

The Lecturers who use the Laboratories shall:

- i. Ensure that students are familiar with the laboratory equipment and with their proper use to accurate results and to minimize risks
- ii. Provide the necessary safety training and/or information especially when a new hazard has been identified.
- iii. Ensure that students are familiar with information regarding laboratory safety and emergency procedures, before students start to use the laboratories.

#### 6.7. The Lab Assistant

The Lab Assistant shall:

- i. Assist with daily routine functions regarding the operations of the laboratory.
- ii. Liaises with the Lecturer/Head of Department to ensure that the laboratory has the requisite supplies and equipment to support the teaching and learning of the course and maintain record of consumables.
- iii. Ensure that the laboratory is prepared for use by setting out equipment and materials for classroom/department use and clear class room demonstrations
- iv. Assists staff with basic laboratory facility organization, management and maintenance issues related to safety, equipment utilization etc. as needed.

#### 6.8. Students

The Students shall:

- i. Become familiar with the laboratory equipment and with the proper use of such equipment to ensure useful results, and to minimize risks.
- ii. Become familiar with information regarding laboratory safety and emergency procedures prior to the first laboratory session. It is important that students realize that their personal laboratory safety depends mostly on them. Students should also realize that while effort will be made to address situations that may pose a hazard in the lab, the information and instructions provided cannot be considered all-inclusive.
- iii. Adhere to written and verbal safety instructions throughout the academic term. Since additional instructions may be given at the beginning of laboratory sessions, it is important that all students arrive at each session on time.
- iv. Not work alone or unsupervised especially when dealing with hazardous materials, as labs, shops, etc. are full of potential hazards that can cause serious injury and or damage to the equipment. The change of an accident occurring when adhering to the safety precautions will be minimal. With prior approval, at least two people should be present so that one can shut down equipment and call for help in the event of an emergency. With good judgement, the chance of an accident in this course is very small.
- v. Safety training and/or information should be provided by the lecturer, teaching assistant, lab safety contact, or staff member at the beginning of a new assignment or when a new hazard is introduced into the workplace.

#### 7. Guidelines

#### 7.1. General Laboratory Expectations & Policies

- a) General Guidelines
  - i. Laboratories shall have hours of operation Monday through Friday, 8:00 a.m. until 8:00 p.m. and on weekends as needed;
  - ii. Laboratories shall have a supervisor i.e either the Lecturer, Lab Technician or a Lab Assistant;
  - iii. Laboratories shall be regarded as a specialized class room and therefore shall meet the requisite standards for a class room;
  - iv. Laboratories shall have safety rules and regulations that must be observed at all times and therefore the following shall not be permitted in any of the laboratories.
    - Smoking
    - Eating or drinking (save and except Human Ecology and Hospitality)
    - Noise (Sound levels must be kept to a minimum)
  - v. The labs are for students, staff and faculty of The Mico University College only. (Therefore ID's may be checked).



- vi. All individuals using the laboratories are expected to conduct themselves in a professional manner.
- vii. All accidents (major and minor) are to be immediately reported to the supervisor.
- viii. Accesses to all exists, fire extinguishers, electrical panels, emergency showers, and eye wash stations must be kept clear. The area surrounding smoke alarms must also be kept clear.
- ix. All heavy items must not be stored above table height. Therefore any overhead storage of supplies on top of cabinets should be limited to lightweight items only.
- x. Conserve resources.

#### b) For Computer labs

Student will be permitted to use the labs for university related purposes.

Students are not permitted to

- i. Move any lab equipment and/or cables.
- ii. Use laptops are NOT permitted to be plugged into the jacks without permission. Laptops are permitted in the labs
- iii. Reconfigure the computers. This includes but not limited to altering or deleting files or programme, installing software, and changing the appearance of the desktop. If you make changes because of an assignment, you will be required to restore the original settings.
- iv. Install any type of software
- v. No illegal copying of ANY materials.

#### c) Required Materials for Labs

Every student should come to lab prepared to begin work immediately. This means that students should bring with them

- a hard cover lab book or loose-leaf folder (as necessary)
- pen, pencil, eraser etc.
- practical manual
- scientific calculator (where appropriate)

#### d) Students' Guidelines

#### Students are expected to -

- i. read through and attempt to understand the assigned lab before attending the lab session;
- ii. arrive on time for labs, as labs begin on time and end on time. Students are not expected to stay after the lab period is over. Students should come to lab expecting to spend the full time allotted;



- iii. pay careful attention to instructions. Laboratory sessions generally begin with a short orientation that will consist of an overview and explicit instructions or examples as necessary. Being attentive will provide valuable insights for lab report;
- submit individual work although students are expected to work together in a cooperative in nature. Students are not expected to copy lab reports or to create "group reports" unless this is specifically authorised by the lecturer. Students, however may work together to understand fully the experiment and analysis;
- v. borrow equipment from other individuals or tables without the lab instructor's permission. If a student is missing an item or have an item that is not working, they are required to inform the lab instructor. If a student has borrowed something from another lab station, it must be returned at the completion of the exercise.
- vi. work in a responsible manner and to exercise good judgement and common sense.
- vii. Ask for help and guidance from the Lecturer or Lab Assistance, if at any time there is uncertainty as to how to handle a particular situation.

#### 7.2. Emergency Response

All persons using any laboratory shall -

- i. Be responsible for reading and becoming familiar with the safety guideline and fire alarms, and will be required to follow the instructions during an emergency
- ii. Know the location of the fire extinguisher, eye wash, and safety shower in any laboratory they use and know how to use them.
- iii. Not handle any material or equipment which is unfamiliar
- iv. Notify the instructor immediately after any injury, fire or explosion, or spill.
- v. Know the building evacuation procedures.

## 7.3. General Laboratory safety

- i. Never eat, drink, or smoke while working in the laboratory and always wash hands before leaving the lab and before eating.
- ii. Read labels carefully.
- iii. Do not use any equipment unless you are trained and approved as a user by your supervisor.
- iv. Wear safety glasses or face shields when working with hazardous materials and/or equipment and wear gloves when using any hazardous or toxic agent.
- v. Clothing: When handling dangerous substances, wear gloves, laboratory coats, and safety shield or glasses. Shorts and sandals should not be worn in the lab at any time. Shoes are required when working in the machine shops.
- vi. Ensure that long hair or loose clothes, make sure it is tied back or confined.
- vii. Keep the work area clear of all materials except those needed for your work. Extra books, purses, etc. should be kept away from equipment that requires air flow or ventilation to prevent overheating and always clean your work area before leaving.



- viii. Always inform the instructor if a thermometer is broken. Do not clean mercury yourself.
- ix. Disposal Students are responsible for the proper disposal of used material if any in appropriate containers.
- x. Equipment Failure If a piece of equipment fails while being used, report it immediately to your lab assistant or tutor. Never try to fix the problem yourself because you could harm yourself and others.
- xi. Never taste anything in the laboratory, nor pipette anything by mouth, nor use open flames unless instructed to do so.
- xii. Check you glassware for cracks and chips each time you use it. Cracks could cause the glassware
- xiii. Do not leave an on-going experiment unattended. However, if leaving a lab unattended, ensure that all ignition sources are turned off and that the doors are locked.

# 7.4. Electrical safety

- i. Obtain permission before operating any high voltage equipment.
- ii. Maintain an unobstructed access to all electrical panels.
- iii. Wiring or other electrical modifications must be referred to an authorised person.
- iv. Avoid using extension cords whenever possible. If you must use one, obtain a heavy- duty one that is electrically grounded, with its own fuse, and install it safely. Extension cords should not go under doors, across aisles, be hung from the ceiling, or plugged into other extension cords.
- v. Never, ever modify, attach or otherwise change any high voltage equipment.
- vi. Always make sure all capacitors are discharged (using a grounded cable with an insulating handle) before touching high voltage leads or the "inside" of any equipment even after it has been turned off. Capacitors can hold charge for many hours after the equipment has been turned off.
- vii. When adjusting high voltage equipment or a laser which is powered with a high voltage supply, USE ONLY ONE HAND. Your other hand is best placed in a pocket or behind your back. This procedure eliminates the possibility of an accident where high voltage current flows up one arm, through your chest, and down the other arm.

## 7.5. Mechanical safety

- i. Use only approved nozzles when using compressed air, and never direct the air towards any person.
- ii. Ensure than guards on machinery are in place during operation.
- iii. Exercise care when working with or near hydraulically- or pneumatically-driven equipment. Sudden or unexpected motion can inflict serious injury.

## 7.6. Chemical safety

i. Treat every chemical as if it were hazardous.



- ii. Make sure all chemicals are clearly and currently labeled with the substance name, concentration, date, and name of the individual responsible.
- iii. Never return chemicals to reagent bottles. (Try for the correct amount and share any excess.)
- iv. Comply with fire regulations concerning storage quantities, types of approved containers and cabinets, proper labelling, etc. If uncertain about regulations, contact the building coordinator.
- v. Use volatile and flammable compounds only in a fume hood. Procedures that produce aerosols should be performed in a hood to prevent inhalation of hazardous material.
- vi. Never allow a solvent to come in contact with your skin. Always use gloves.
- vii. Never "smell" a solvent!! Read the label on the solvent bottle to identify its contents.
- viii. Dispose of waste and broken glassware in proper containers.
- ix. Clean up spills immediately.
- x. Do not store food in laboratories.

#### 8. The Laboratory Committee

8.1. Statement

The purpose of the Laboratory Committee is to oversee and manage the operations with the laboratories of The Mico University College.

Organisation of the Laboratory Committee

- i. A Laboratory Committee shall be established at the institution, with the Dean of the Faculty and Science and Technology having the overall responsibility for the Committee and who shall act as Chairperson of the Committee.
- ii. The composition of the Committee shall not exceed 12 persons, with the membership including the Heads of Departments, Laboratory Assistant/Technicians, a student representative and any other persons determined by the Committee to complete its membership.
- The Committee shall hold regular meetings, the frequency to be determined by the Committee.
  The Committee shall maintain minutes of its meeting, as well as, records of correspondence and activities.
- iv. The Committee shall establish a system by which it obtains suggestions and reports directly from staff and students as it relates to the operations of the laboratories
- v. The Committee shall ensure that where necessary, persons are adequately trained to use the laboratories.

#### 8.2. Committee Procedures

i. Schedule

The Committee shall meet regularly, the frequency to be determined by the Committee. The Committee shall maintain minutes of its meeting, as well as, records of correspondence and activities.

ii. Agenda



Any member may place items on the agenda for discussion at a Committee meeting. Relevant papers shall be circulated in advance to allow members adequate time for preparation.

iii. Minutes

Minutes shall be sent to each Committee member, and may be posted for all faculty employees, where it is deemed necessary to advise personnel of decisions taken. Minutes may be retained for three years.

iv. Conduct of Meetings

Meetings shall be conducted by the Chairperson. In the absence of the Chairperson, the members in attendance will select a member as Acting Chair, who will conduct the meeting.

v. Quorum

At regular meetings, a quorum shall be one half of the appointed members. In the absence of a quorum, a Committee meeting may continue except that no formal votes shall be conducted.

vi. Sub-Committees

Sub Committees may be formed to carry out tasks on behalf of the Committee as required.

vii. Reporting

The Committee shall provide bi-annual reports to the Faculty Board on its activities, its observations and evaluations and its recommendations.