

SOP and Code of Conduct  
*Mathematics and Data Science Computation Laboratory*  
2023

The purpose of compiling this standard operating procedure for the *Mathematics and Data Science Computation Laboratory* is to help expedite laboratory management to maximize the usefulness of the laboratory and all the resources in it, so that it can help realize the vision and mission of the Department of Mathematics and Data Science FMIPA Andalas University. Activities within the scope of laboratory management include practicum, use of computational laboratory equipment, use of computational laboratories for research (coursework and final assignments) and research collaboration, learning practices, discussions (response and assistance), simulations or the like.

#### A. LABORATORY FUNCTION AND STRUCTURE

##### 1. Function

The main function of the *Mathematics and Data Science Computation Laboratory* as a means to practice or apply theory, research and scientific development in the Department of Mathematics and Data Science FMIPA Andalas University, so that it becomes an important element in educational and research activities, especially in the field of learning. In detail, the *Mathematics and Data Science Computation Laboratory* acts as:

- a. Center for practice, training, research, final project and learning resources for lecturers and students of the Department of Mathematics and Data Science.
- b. Center for research, community service and development for lecturers and students of the Department of Mathematics and Data Science.
- c. Center for the development of Mathematics sciences such as Programming, Computational Mathematics and Data Analysis in the Department of Mathematics and Data Science.
- d. Workshop Center, human resource development and service center for the academic community and society in improving the quality of learning in the field of information technology.

##### 2. Laboratory Structure

The structure of the *Mathematics and Data Science Computation Laboratory* consists of the Head of the Laboratory, Laboratory Assistants and Practicum Participants.

- 1) The Head of Laboratory is the manager of the laboratory by utilizing all resources in a planned, supervised, and evaluated manner.
- 2) Coordinators and Deputy Coordinators are assistants appointed to coordinate the duties and work of laboratory assistants.
- 3) Division and course coordinators are assistants who are appointed to be responsible for all activities that support laboratory performance and coordinate practicum in the relevant courses.
- 4) Laboratory assistants are students selected through an *open recruitment* process to provide explanations of practicum material for students for certain subjects and manage the laboratory.
- 5) Practicum participants are students who have registered for the relevant courses in the current semester who take part in practicum activities in the current semester.

## B. LABORATORY RULES

The rules that apply in the *Mathematics and Data Science Computation Laboratory* are as follows:

- a) Code of Conduct for the Use of Computing Laboratory
  - 1) Students or lecturers are required to fill out a laboratory visit book (outside the practicum schedule).
  - 2) Students or lecturers who borrow laboratory equipment must fulfill the terms of borrowing and returning.
  - 3) Students are prohibited from making noise in the laboratory.
  - 4) Eating, drinking and smoking are prohibited in the laboratory.
  - 5) Dispose of garbage in the bins provided.
  - 6) All laboratory visitors are required to keep the laboratory clean.
  - 7) All students who visit or practice in the laboratory, must tidy up all laboratory equipment used.
  - 8) Do not bring laboratory equipment out of the laboratory room without permission from the Laboratory Head or Laboratory Assistant.
  - 9) It is forbidden to take laboratory equipment home.
  - 10) All laboratory visitors must keep the laboratory inventory safe.
  - 11) In the event of damage and loss of laboratory equipment, visitors who damage or lose the equipment must report to the laboratory assistant and replace the equipment.
  
- b) Practicum Code of Conduct
  - 1) Every student who takes a course with a practicum is required to take the practicum.
  - 2) Dress according to the provisions as stipulated in the practicum being followed.
  - 3) Students must be present in the laboratory 15 minutes before the practicum begins.
  - 4) Before entering the laboratory room, each student must have studied the practicum material and made preparations for the practicum beforehand.
  - 5) During the practicum, it is prohibited to make noise, eat, drink and smoke in the laboratory.
  - 6) After the practicum, the workplace must be cleaned and tidied up, and the tools returned to their place.
  - 7) Students who cannot attend the practicum must report to the assistant practicum coordinator of the course concerned.
  - 8) Laboratory equipment used in practicum is the responsibility of the students, so they must be careful in using it.
  - 9) Every laboratory user is **FORBIDDEN to** change any type of setting regarding the computer settings in the laboratory.
  - 10) Any laboratory user is **FORBIDDEN from** entering any type of data or program into the computer without the permission of the laboratory assistant.
  - 11) Every laboratory user is **FORBIDDEN to** delete or move any data or software in the form of files or directories on the computer.
  - 12) Every laboratory user is **FORBIDDEN from** making noise or playing any type of game in the laboratory during the practicum.
  - 13) Every laboratory user is **FORBIDDEN to** do any form of damage to the facilities in the laboratory.

- 14) The use of the laboratory is adjusted to the predetermined schedule. If you want to use the laboratory for a longer time than the schedule, then the practitioner must ask permission from the laboratory assistant.

### C. LABORATORY USAGE PROCEDURES

Basically, *Mathematics and Data Science Computation Laboratory* is built to support theoretical teaching and learning activities. But it is still possible to use other than these purposes as long as it is an academic support for both students and lecturers.

#### 1. Laboratory Usage Procedures for Research and Final Project Students

If a student will carry out research using laboratory infrastructure, the steps that must be taken are:

1. The student registers the research plan with the Assistant Coordinator, as outlined in the research proposal. This request is accompanied by:
  - a. Implementation schedule
  - b. Software used
  - c. Names of students involved in the research
2. The assistant prepares the implementation schedule, the necessary software and coordinates with the Head of the Laboratory and the student concerned.

#### 2. Laboratory Usage Procedure for PPM, Workshop, or Training.

Procedures that must be carried out if the lecturer / student team will use Laboratory infrastructure for PPM, workshops or training are:

1. The coordinator (lecturer / student) of the activity submits an application / proposal to the Head of the Laboratory along with the need to borrow the intended laboratory equipment / room.
2. If the application/proposal is approved by the Head of the Laboratory, the Head of the Laboratory will give a disposition to the Assistant Coordinator about the need to use the room/lab.
3. The coordinator of the activity concerned registers the research implementation plan with the Head of the Laboratory, as stated in the research proposal. This request is accompanied by:
  - a. Implementation schedule
  - b. Software used
  - c. Lecturers/assistants involved in the activity.
  - d. List of activity participants
4. The Laboratory Assistant prepares the implementation schedule, facilities and infrastructure, and software needed and coordinates with the Head of the Laboratory / Coordinator of the activity concerned.
5. When the activity is carried out, the activity coordinator / laboratory must ensure that all stages of activities in the Laboratory must be in accordance with the SOP for the use of Laboratory facilities and infrastructure for practicum.
6. After all PPM / Training / Workshop activities are completed, the coordinating lecturer / student is expected to make a report to the Head of the Laboratory which contains a summary of activities which will later be used as supporting documentation of laboratory activities.

### D. LABORATORY MAINTENANCE AND REPAIR PROCEDURES

The laboratory maintenance procedures that apply in the *Mathematics and Data Science Computation Laboratory* are as follows:

1. Laboratory Assistants check all laboratory equipment monthly.
2. Laboratory Assistant fills in the laboratory equipment condition form.
3. Laboratory Assistants record damaged equipment and enter it on the damaged equipment form.
4. The Laboratory Assistant checks whether the equipment can be repaired by himself, if not then the assistant informs and asks the Head of the Laboratory for approval to repair outside or replace with a new one.
5. The Head of the Laboratory approves and signs the laboratory equipment submission letter addressed to the Head of the Department of Mathematics and Data Science FMIPA Andalas University.

#### E. HAZARDS THAT MAY OCCUR IN THE LABORATORY

##### 1. Fire Danger

A fire occurs when there are 3 elements together: oxygen, combustible materials, and heat.

Prevention:

- Fire-resistant building construction.
- Good storage system for flammable materials.
- Supervision of the possibility of fire.
- Fire signaling system
  - A manual that allows a person to declare danger immediately.
  - Automated that finds fires and alerts them automatically.
- There is a way to escape.
- Fire equipment and suppression.

The following are things that laboratory users should follow if a fire occurs:

- Don't panic.
- Turn off all electronic equipment and power sources to prevent the fire from spreading.
- Covering a wet cloth on the burning material.
- Extinguish the fire with fire extinguishers when the fire is still small.
- Call the nearest fire hazard rescue unit.

##### 2. Electrical Hazards

Accidents due to electrical hazards that often occur are electrocution. In addition, electrical short circuits are prone to occur in computer laboratories. Therefore, everything related to electricity needs to be monitored properly so as not to cause accidents.

Prevention:

- Pay attention and study the places of electricity sources (outlets and circuit breakers) and pay attention to how to turn them on and off. If you see any damage that could potentially cause danger, report it to the laboratory assistant.
- Avoid areas or objects that have the potential to cause accidental electrical hazards (electric shock/strum), e.g. stripped network cables, etc.
- Do nothing that could cause electrical harm to yourself or others.
- Dry wet parts of the body such as sweat or the remaining water from ablution.
- Always be aware of electrical hazards in every laboratory activity.

The following are things that laboratory users should follow if an accident occurs:

- Don't panic.

- Turn off all electronic equipment and power sources.
- Help electrocuted laboratory users to remove themselves from the power source.
- Notify and ask for help from a labor assistant or someone nearby about the occurrence of an accident due to electrical hazards.

### 3. Natural Disasters

One of the most prone natural disasters is earthquakes.

The following are things that laboratory users should follow if an earthquake occurs:

- Turn off all laboratory electrical installations.
- Stay away from tall furniture such as bookshelves and safes. Take cover under a table, protecting your head by keeping it in a low position.
- Do not go outside even if the earthquake subsides immediately. Large earthquakes are often followed by several aftershocks.
- Stay away from buildings and tall trees around the laboratory and find a vacant lot for temporary evacuation.
- Earthquakes sometimes cause fires. You should be prepared to take your valuables/essentials in case of an emergency.