

Course Syllabus
SCBM 372
Laboratory Exploration
Academic Year 2023

Course Title: Laboratory Exploration
Course Code: SCBM 372
Total Credit: 1(1-0-2)
Pre-Requisite: SCBM 225 Laboratory in Biochemistry
SCBM 233 Laboratory in Microbiology and Immunology
Duration: First semester

Course Homepage:

https://biochemistry.sc.mahidol.ac.th/?page_id=527

Course Description:

An introduction to research experimentations in biomedical science: guidance and demonstration in scientific laboratories including molecular and cell biology, biochemistry, proteomics, genetics, microbiology, pathology, and related fields

Course Objectives:

At the end of this course, the students will be able to

1. explain the basic principles of how to conduct research in biomedical field
2. know how to gain basic backgrounds for research
3. know and understand scientific methodology
4. demonstrate the ability to conduct research in biomedical field

Course Outlines:

See schedule on page

Teaching Methods

Lecture (Online)

Teaching Media

- CAI, VDO, PowerPoint

Evaluation of Student Achievement

Grading system from midterm and final examination

• Assignment	60%
• Attendance and Participation	25%
• Final written examination	15%
Total	100%

Students who get a total grade more than **50%** are considered successful for this course.

Course Evaluation

Questionnaire about contents, teaching processes, examinations and instructor performance.

Required Textbook

- Pendarvis, M. P., & Crawley, J. L. (2011). Exploring biology in the laboratory. Englewood, Colo: Morton Publishing.

Other References

- Relevant textbooks in biomedical field

Instructors

1. Prof. Tavan Janvilisri, Ph.D.
Department of Biochemistry, Faculty of Science, Mahidol University
2. Utid Suriya, Ph.D.
Department of Biochemistry, Faculty of Science, Mahidol University

Teaching assistants

1. Thanyapit Thita, Ph.D. candidate
Graduate Program in Molecular Medicine, Faculty of Science, Mahidol University
2. Pongphol Prattapong, Ph.D. candidate
Graduate Program in Molecular Medicine, Faculty of Science, Mahidol University

Course Coordinators

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SCBM 372 Laboratory Exploration 1 (1/0/2) credit
Schedule for the First Semester, Year 2023
Student Group SCBM 3rd Year
Venue: TBA
Tuesday 1pm - 4pm

Date	Venue	Content (assignment/attendance)	Instructor
Tue 22 Aug 2023	TBA	Introduction to research experimentations (12%/5%)	TJ/US/TAs
Tue 29 Aug 2023	TBA	Laboratory safety (12%/5%)	TJ/US/TAs
Tue 5 Sep 2023	TBA	Calculations in laboratory (12%/5%)	TJ/US/TAs
Tue 12 Sep 2023	TBA	From bench to market (12%/5%)	TJ/US/TAs
Tue 19 Sep 2023	TBA	Critical appraisal (12%/5%)	TJ/US/TAs
Tue 26 Sep 2023	TBA	Examination (15%)	TJ/US/TAs