

Course Syllabus
SCBM 372
Laboratory Exploration
Academic Year 2022

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. Lect. Matthew Phanchana, Ph.D.
Department of Molecular Tropical Medicine and Genetics, Faculty of Tropical Medicine, Mahidol University
3. Lect. Methinee Pipatthana, Ph.D.
Department of Microbiology, Faculty of Public Health, Mahidol University

Course Coordinators

Prof. Tavan Janvilisri, Ph.D.
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SCBM 372 Laboratory Exploration 1 (1/0/2) credit
Schedule for the First Semester, Year 2022
Student Group SCBM 3rd Year
Venue: TBA
Tuesday 1.30pm - 4.30pm

Date	Venue	Content (assignment/attendance)	Instructor
Tue 30 Aug 2022	TBA	Introduction to research experimentations (12%/5%)	TJ/MaP
Tue 6 Sep 2022	TBA	Laboratory safety (12%/5%)	TJ/MaP
Tue 13 Sep 2022	TBA	Calculations in laboratory (12%/5%)	TJ/MaP/MeP
Tue 20 Sep 2022	TBA	From bench to market (12%/5%)	TJ/MaP/MeP
Tue 27 Sep 2022	TBA	Critical appraisal (12%/5%)	TJ/MaP/MeP
Tue 4 Oct 2022	TBA	Examination (15%)	TJ/MaP/