

Course Syllabus
SCBM 371 Generic Skills in Science Research
1 credit (1-0-2)
Academic Year 1/2023
Tuesday: 13.00-16.00, Room P401

Course Goals

This course aims to provide students with fundamental yet important skills to be good scientists. Students will learn and discuss scientific thinking and process, how to search the literature and appraise scientific papers, and how to effectively communicate as scientists. Moreover, students will be made aware of other related important topics including common scientific misconducts, chemical safety, biosafety, ethics in human and animal research, and copyright and intellectual properties in scientific research. These knowledge and skills are essential bases for future student scientific activities and careers.

Course Objectives

Upon completion of this course, the students would

1. Comprehend scientific thinking and process required to perform good scientific research
2. Describe important chemical safety and biosafety measures in scientific research
3. Discuss ethical issues relating to scientific research
4. Understand various types of intellectual properties
5. Know how to search the scientific literature and appraise scientific papers
6. Demonstrate effective communication in science-related topics

Course-level Learning Outcomes (CLOs)

By the end of the course, students are able to

- CLO1 Demonstrate logical scientific thinking and process correctly
- CLO2 Explain major concerns in chemical safety and biosafety relating to scientific research correctly
- CLO3 Discuss ethical issues relating to scientific research appropriately
- CLO4 Describe various types of intellectual properties in scientific research correctly
- CLO5 Demonstrate competent scientific literature search and paper appraisal
- CLO6 Communicate science-related topics effectively

Duration: Every Tuesday from October 24th – November 21th, 2022, from 13.00 to 16.00

Scoring:

- Group Presentation 70%
- Final Examination 20% (MCQ with 4 choices)

- Peer-evaluation 10%

Grading:

Grade	Score (100)
A	>80
B+	75-79
B	70-74
C+	65-69
C	60-64
F	<60

Student Appeal:

Students may appeal following the rules and regulations of the Faculty of Science and Mahidol University.

Course Coordinator: Dr. Waradon Sungnak
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Course Schedule

Date	Time	Topics	Instructors
Tue 24 Oct	13.00 – 13.30	Course Orientation	WS, PA, TT
	13.30 – 16.00	Scientific Thinking and Process	PA
Tue 31 Oct	13.00 – 16.00	Scientific Communication	WS
Tue 7 Nov	13.00 – 14.00	Scientific Misconduct	WS
	14.00 – 16.00	Chemical Safety and Biosafety	TT
Tue 14 Nov	13.00 – 14.00	Ethics in animal and human research	TT
	14.00 – 16.00	Patents and Intellectual Properties in Life Science Researches	PP
Tue 21 Nov	13.00 – 16.00	Group Presentation	WS, PA, TT
TBA	10.00-11.00	Final Examination	WS

Instructors

WS	Waradon Sungnak, Ph.D.	waradon.sun@mahidol.edu
PA	Pakorn Aiewsakun, Ph.D.	pakorn.aie@mahidol.edu
TT	Tana Taechalertpaisarn, Ph.D.	tana.tac@mahidol.edu
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