Course Syllabus

SCIN105/SCIN305

"Essential Skills for Scientific Research"

Faculty of Science, Mahidol University

Credit (lecture - lab – self-study): 1(1-0-2)

Course Description: This course allows students to gain appropriate skills necessary for scientific research such as laboratory safety (biological, chemical, and electrical), academic integrity, plagiarism, ethics, and copyright.

Prerequisite: N/A

Grade: O-S-U

Day/Location: Monday 13.30-16.30 onsite/online
Faculty of Science, Mahidol University Salaya

Office hour: By appointment

Course Objective: At the completion of the course, students should be able to

1. Learn how to effectively collect research data
2. Design experiment, utilize proper statistical analysis
3. Gain basic knowledge on R programming for scientific research
4. Aware of and adhere to an appropriate laboratory safety
5. Understand academic integrity, plagiarism, ethics, and copy right
6. Obtain necessary skills in communication and presentation

Course schedule:

Date	Topic	Day-Hour
		Monday
W0	Course introduction	-
W1	Data Collection & Lab Notebook	1.30-4.30 PM
W2	Research Ethics	1.30-4.30 PM
W3	Academic honesty & Copyright	1.30-4.30 PM
W4	Biosafety, chemical and electrical safety	1.30-4.30 PM
W5	Special talk	1.30-4.30 PM
	Total	**15**

Teaching method: Onsite/Online lecture (Zoom/Google Classroom) and self-study.

Teaching Media: PowerPoint presentation, handout and demonstration.

Attendance: Students are expected to attend all lectures and activities on time with all assignments completed. Make-up lecture will not be given. If you have to miss a class, let me know ahead of time. 3 absences will result in U.

Measurement and Evaluation of Students Achievement

1. In-class discussion 20%
2. Assignments x3 60%
3. Attendance 20%

Course Evaluation

1. Students gain knowledge according to the course objectives.
2. Students participate in class at least 80% of total hours.
3. Grading scale O-S-U

   (U = below 49, S = 50-79%, O = 80-100%)

Instructors

1. Teera Chantarojsiri, PhD, Department of Chemistry, Mahidol University
2. Udom Sae-Ueng, PhD, BIOTEC, NSTDA
3. Usawadee Chaiprom PhD, National Biobank of Thailand
4. Tatpong Tulyananda, PhD, Bioinnovation, Mahidol University

Course coordinator: Dr. Tatpong Tulyananda

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