Course Syllabus
MBMB 605 Ph.D. Seminar in Molecular and Integrative Biosciences
Academic Year 2025

Course ID and Name: MBMB 605 Ph.D. Seminar in Molecular and Integrative Biosciences
Course Coordinator: Ittipat Meewan, Ph.D.
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Instructors:
1. All staff

Supporting Staff:
1. XX

Credits: 2 (2-0-4)
Curriculum: Doctor of Philosophy Program in Molecular and Integrative Biosciences (required course)
Semester offering: First semester.
Pre-requisites: None
Course learning outcomes (CLOs):

By the end of this course, students are able to:	**PLO1**	**PLO2**	**PLO3**	**PLO4**
Demonstrate essential academic skills in reading, interpreting, and analyzing current research topics in Molecular and Integrative Biosciences and related disciplines.	✔			
Implement best practices for designing, developing, and delivering high-quality scientific presentations on current research topics in Molecular and Integrative Biosciences and related disciplines, as well as thesis research.	✔	✔		✔
Analyze, construct, create, evaluate, summarize, and integrate knowledge in Molecular and Integrative Biosciences to systematically discuss and critique the information presented in scientific journals.	✔		✔	✔

Course description
Scientific research article; literature reviews; academic writing; critical analysis; peer review; databases search; academic presentation; communicating science; question and answers in science; current research in molecular and cellular biosciences.

Alignment of teaching and assessment methods to course learning outcome:

Course learning outcome	Teaching method	Assessment method
1. Demonstrate essential academic skills in reading, interpreting, and analyzing current research topics in Molecular and Integrative Biosciences and related disciplines.	(1) Oral presentation (2) In-class discussion (3) Assignment	(1) Oral presentation (2) In-class discussion (3) Q&A (4) Assignment
2. Implement best practices for designing, developing, and delivering high-quality scientific presentations on current	(1) Oral presentation (2) In-class discussion (3) Assignment	(1) Oral presentation (2) In-class discussion (3) Q&A (4) Assignment

Course learning outcome	Teaching method	Assessment method
research topics in Molecular and Integrative Biosciences and related disciplines, as well as thesis research.		
3. Analyze, construct, create, evaluate, summarize, and integrate knowledge in Molecular and Integrative Biosciences to systematically discuss and critique the information presented in scientific journals.	(1) Oral presentation (2) In-class discussion (3) Assignment	(1) Oral presentation (2) In-class discussion (3) Q&A (4) Assignment

Format:

1. Students who register for the PhD Seminar will present at least two current research articles from peer-reviewed international journals together with student's thesis that will be used as the main integrated research concepts.
2. Students will give a presentation for 35-40 minutes, followed by 15-20 minutes of answering questions from the audience.
3. Students should discuss the topic of the presentation with their thesis advisor and send the title of the presentation, along with the information of the two selected publications, to the course coordinator at least 2 weeks before the scheduled presentation date.
4. Students are required to submit the abstract (200-250 words) of the presentation topic to the course coordinator 1 week before the scheduled presentation date.

Assessment Criteria:

Assessment method	Performance criteria	Scoring rubric
Participation	Class attendance and asking questions (20%)	Active engage (4) Fairly active (2-3) Inactive (1)
Presentation	Abstract (20%)	Excellent (4) Good (3) Fair (2) Underperform (1)
	Seminar content and organization of the talk (20%)	Excellent (4) Good (3) Fair (2) Underperform (1)
	Quality of the presentation (20%): slide quality, ability to communicate in English, etc.	Excellent (4) Good (3) Fair (2) Underperform (1)
	Answering questions (20%)	Excellent (4) Good (3) Fair (2) Underperform (1)

Student's achievement will be graded using symbols: A, B+, B, C+, C, D+, D, and F, based on the criteria as follows:

Percentage	Grade	Description
80–100	A	Excellent
75–79	B+	Very Good
70–74	B	Good
65–69	C+	Fairly Good
60–64	C	Fair
55–59	D+	Poor
50–54	D	Very Poor
0–49	F	Fail

Date of Revision: 13 February 2024