

## Course Syllabus

MBMG 601

Academic year 2024

**Course ID and Name:** MBMG601: Current Topics in Molecular Biology

**Course coordinator:** Asst. Prof. Dr.Duangrudee Tanramluk

**Instructors:**

1. Professor Dr.Duncan R. Smith
2. Professor Dr.Panadda Boonserm
3. Professor Dr.Chanan Angsuthanasombat
4. Professor Dr.Chalernporn Ongvarrasopone
5. Associate Professor Dr.Chartchai Krittanai
6. Associate Professor Dr.Kanokporn Triwitayakorn
7. Associate Professor Dr.Sarin Chimnaronk
8. Associate Professor Dr.Chalongrat Noree
9. Assistant Professor Dr.Kusol Pootanakit
10. Assistant Professor Dr.Duangrudee Tanramluk
11. Assistant Professor Dr.Poochit Nonejuie
12. Lect. Dr. Ittipat Meewan

**Credits:** 2 (2-0-4)

**Curriculum:** Master of Science Program in Molecular Genetics and Genetic Engineering  
(required course)

Doctor of Philosophy Program in Molecular Genetics and Genetic  
Engineering (required course for students from B.Sc.)

**Teaching methods:** On-site at Room A401

**Semester offering:** First semester

**Pre-requisites:** None

**Course description:**

The frontier research, interpretations, critical reviews and discussions of recent publications related to the cutting-edge knowledge and technology in molecular biology.

**Expected learning outcomes:**

After finishing the course, students should be able to:

- 1) Demonstrate a detailed understanding of the principles of molecular biology (PLO3)
- 2) Analyze scientific literature based on molecular biology principles and theories (PLO2)
- 3) Summarize scientific literature in an interactive manner. (PLO5)

**Alignment of teaching and assessment methods to course learning outcome:**

<b>Course learning outcome</b>	<b>Pedagogical approach</b>	<b>Learning activities</b>	<b>Assessment methods</b>
1. Demonstrate a detailed understanding of the principles of molecular biology	Combination of active learning, project-based learning, and mastery learning	(1) Lecture (2) Case studies with learned experience (3) Group assignment and presentation	(1) Reports (2) Presentations (3) In-class interaction and participation
2. Analyze scientific literature based on molecular biology principles and theories		(1) Lecture (2) Brainstorming (3) Group discussion (4) Individual assignment	(1) Reports/assignment (2) Presentation (3) Discussion participation (4) Q & A
3. Summarize scientific literature in an interactive manner		(1) Group activities during class	(1) Presentation (2) In-class interaction and participation

**Fulfillment of PLOs for AUNQA 2023**

PLO2 Integrate advanced theoretical insights in Molecular Genetics and Genetic Engineering and conduct systematic research to broaden knowledge landscape of the field

PLO3 Disseminate novel concepts and/or innovative ideas in Molecular Genetics and Genetic Engineering using effective information and communication technology, numerical and statistical methods to global community

PLO5 Develop effective professional and interpersonal skills for apparent coherence among academic and non-academic communities.

**Course schedule:**

Unless specified otherwise, the course is on Wednesdays between 9.00 – 12.00 pm (Room A401)

<b>Week</b>	<b>Date</b>	<b>Week/Room</b>	<b>Topic</b>	<b>Teaching Staff</b>
1	4 September 2024	11.00 – 12.00 pm	Orientation	Duangrudee
2	11 September 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Ittipat
3	18 September 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Panadda
4	25 September 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Kusol
5	2 October 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Sarin
6	9 October 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Chanan
7	16 October 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Chartchai
8	30 October 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Chalongrat
9	6 November 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Duncan
10	13 November 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Poochit
11	20 November 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Kanokporn
12	27 November 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Chalernporn
13	4 December 2024	9.00 – 12.00 pm	Paper Discussion & Presentation	Duangrudee

Student's achievement will be graded using symbols: A, B+, B, C+, C based on the distribution of students' scores from the whole course.

**Paper Criteria:** Published within 5 years

**Date revised:** 23 July 2024

## Current Topics in Molecular Biology Rubrics

	Rating				Weight
	4	3	2	1	
<b>PREPARATION</b>					
<b>QUIZ</b>	100–80%	79–60%	59–40%	< 39%	
<b>REPORT ASSIGNMENT</b>					
<b>Theme</b>	Well organized, demonstrates logical sequencing and structure.	Well organized, but demonstrates illogical sequence or structure.	Weakly organized with no logical sequence or structure.	No organization, sequencing, or structure.	
<b>Content</b>	Clearly states aim and scope; concisely summarizes major points. Rationales are explained.	Aim and scope are stated adequately, major points are summarized. Rationale is stated but not explained.	Aim and scope are not stated. Major points are missing. Rationale is not mentioned. Reveal few knowledge on the subject.	Few points are mentioned as contents but without the line of reasoning.	
<b>References</b>	Information is cited properly and in acceptable format (e.g. Vancouver or EMBO).	Information is cited in a non-widely used format with minor errors.	Information is cited, but has major errors.	Information is not cited or is cited incorrectly.	
<b>DISCUSSION</b>					
<b>Q &amp; A</b>	Question and answer(s) are good and clearly stated.	Question and answer(s) are average.	Question and answer(s) were not significant.	Question and answer(s) were irrelevant.	
<b>PRESENTATION</b>					
<b>Content</b>	Well organized and well presented	Good to average organization and presentation	Weak	Poor	
<b>PERFORMANCE</b> <90%>					
<b>QUALITY OF INTERACTION/ PARTICIPATION</b> <10%>	Highly engaged (10%)	Sufficiently engaged (7.5%)	Minimally engaged (5%)	Not engaged (2.5%)	
<b>TOTAL</b>					
From 100%					