Course Syllabus

MBMG 601

Academic year 2023

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

Course coordinator: Asst. Prof. Dr.Duangrudee Tanramluk

Instructors:

1. Professor Duncan R. Smith
2. Associate Professor Dr.Apinunt Udomkit
3. Associate Professor Dr.Chalermporn Ongvarrasopone
4. Associate Professor Dr.Chartchai Krittanai
5. Associate Professor Dr.Panadda Boonserm
6. Associate Professor Dr.Sarin Chimnaronk
7. Assistant Professor Dr.Chalongrat Noree
8. Assistant Professor Dr.Duangrudee Tanramluk
9. Assistant Professor Dr.Poochit Nonejuie
10. Lect. Dr. Ittipat Meewan

Credits: 2

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 teaching 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; ethics in the molecular biology research

Expected learning outcomes:

After finishing the course, students should be able to:

1) Demonstrate a detailed understanding of the principles of research ethics (PLO4)
2) Analyze scientific literature based on molecular biology principles and theories (PLO2)
3) Summarize scientific literature in an interactive manner. (PLO3) (PLO5)

Alignment of teaching and assessment methods to course learning outcome:

Course learning outcome	Pedagogical approach	Learning activities	Assessment methods
1. Demonstrate a detailed understanding of the principles of research ethics	Combination of active learning, project-based learning, and mastery learning	(1) Lecture (2) Case studies with learned experience (3) Group assignment and presentation (4) Emphasis on scientific integrity and misconduct	(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
PLO4 Demonstrate proficiency in scientific integrity including ethical responsibilities and safety practices as appropriate
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 every Wednesday between 9.00 − 12.00 pm.

Week	Date	Week	Topic	Teaching Staff
1	23 August 2023	9.00 − 10.00 am	Course Orientation	Duangrudee
1	23 August 2023	10.00 − 12.00 pm	Research Ethics	Apinunt
2	30 August 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Chartchai
3	6 September 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Duangrudee
4	13 September 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Duangrudee
5	20 September 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Panadda
6	27 September 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Chalongrat
7	4 October 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Ittipat
8	11 October 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Duncan
9	18 October 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Poochit
10	25 October 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Sarin
11	1 November 2023	9.00 − 12.00 pm	Paper Discussion & Presentation	Chalermporn

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: 25 June 2023

Current Topics in Molecular Biology Rubrics

	Rating				Weight
	4	**3**	**2**	**1**	
PREPARATION					
QUIZ	100−80%	79−60%	59−40%	< 39%	
REPORT ASSIGNMENT					
Theme	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.	
Content	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.	
References	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.	
DISCUSSION					
Q & A	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.	
PRESENTATION					
Content	Well organized and well presented	Good to average organization and presentation	Weak	Poor	
PERFORMANCE <90%>					
QUALITY OF INTERACTION/ PARTICIPATION <10%>	Highly engaged (10%)	Sufficiently engaged (7.5%)	Minimally engaged (5%)	Not engaged (2.5%)	
TOTAL					
From 100%					