



UNIVERSITI TEKNOLOGI MARA

BMS673: TOPICS IN MOLECULAR BIOLOGY

Course Name (English)	TOPICS IN MOLECULAR BIOLOGY APPROVED
Course Code	BMS673
MQF Credit	2
Course Description	This course is designed to allow students to use the knowledge and skills gained over the past semester to evaluate and analyse a scientific report, service or solution developed using molecular biology tools. The course is partly conducted on a distance learning mode, where students are required to do a series of intensive literature survey and critical reading, discuss with their assigned lecturers, submit reading reports and give an oral presentation.
Transferable Skills	Critical reading, Literature analysis, Report writing, Oral presentaion
Teaching Methodologies	Blended Learning, Discussion, Presentation, Self-directed Learning, Journal/Article Critique, Supervision
CLO	<p>CLO1 Extract and explain the core points from a scientific review article on a topic/ subject in molecular biology</p> <p>CLO2 Critically analyze selected scientific articles on the same subject matter, including pointing out limitations, suggesting possible improvements and appraising the impact of the scientific work and findings contained within the articles</p> <p>CLO3 Collate and critically analyze information on a given specific topic, orally present the analysis and response appropriately to questions raised</p>
Pre-Requisite Courses	No course recommendations
Topics	
1. Selection of topics 1.1) 1.1 Agricultural biotechnology 1.2) 1.2 Environmental biotechnology 1.3) 1.3 Industrial biotechnology 1.4) 1.4 Medical biotechnology 1.5) 1.5 Food biotechnology 1.6) 1.6 Other related biotechnology	
2. Extraction of relevant data 2.1) 2.1 Problem statement and hypothesis 2.2) 2.2 Objectives 2.3) 2.3 Methodology	
3. Summary of article 3.1) 3.1 Problem statement and hypothesis 3.2) 3.2 Objectives 3.3) 3.3 Methodology - appropriateness 3.4) 3.4 Data analysis - soundness 3.5) 3.5 Major findings	
4. Critical analysis 4.1) 4.1 Shortcomings/ Limitations 4.2) 4.2 Suggestions for improvement 4.3) 4.3 Impact of major findings	

5. Critique, presentation and response to queries

- 5.1) 5.1 Select article
- 5.2) 5.2 Critical analysis
- 5.3) 5.3 Discussion
- 5.4) 5.4 Oral presentation
- 5.5) 5.5 Response to questions

6. Critical analysis of selected literature

- 6.1) 6.1 Critical analysis of article
- 6.2) 6.2 Report writing

Assessment Breakdown	%
Continuous Assessment	70.00%
Final Assessment	30.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Journal/Article Critique	Article #1. Data extraction and summary of results.	5%	CLO1
	Journal/Article Critique	Article #2 Data extraction, summary of data analysis and major findings.	10%	CLO1 , CLO2
	Journal/Article Critique	Article #3. Data extraction, summary of data analysis and major findings. Discuss significance of findings.	15%	CLO1 , CLO2
	Presentation	Article #4. Sourced by student with the help of tutors. Critical analysis, oral presentation, response to questions.	40%	CLO1 , CLO2 , CLO3

Reading List	Recommended Text	<ul style="list-style-type: none"> • Brink-Budgen RVD 2010, <i>Critical Thinking for Students: Learn the Skills of Analysing, Evaluating and Producing Arguments</i>, 4 Ed., Oxford How To Books Ltd. • Cotrell S 2011, <i>Critical Thinking Skills: Developing Effective Analysis and Argument</i>, 1 Ed., Palgrave Macmillan Press
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	