



UNIVERSITI TEKNOLOGI MARA

BMS665: Biodiversity and conservation

Course Name (English)	Biodiversity and conservation APPROVED
Course Code	BMS665
MQF Credit	3
Course Description	The course provides an introduction to various aspects of biodiversity and conservation for sustainable development. Students will be introduced to history, elements and measuring biodiversity, biodiversity changes over time and space and understanding biodiversity in animals, plants and microorganisms. Further, students will learned on the importance of biodiversity, factors contributing to biodiversity loss and maintaining biodiversity through various conservation actions. A special topic on some molecular techniques in biodiversity and conservation study will be discussed at the end of the course.
Transferable Skills	Display practical skills in using laboratory equipments and conduct experiments. Display social skills and responsibilities. Lead and collaborate with diverse team members through effective communication. Demonstrate scientific skills in solving problems related to biotechnology and bio-based industries.
Teaching Methodologies	Lectures, Lab Work, Field Trip
CLO	CLO1 Describe the history, concepts and importance of biodiversity and conservation, factors contributing to biodiversity in plants, animals and microorganisms. CLO2 Explain the objectives and strategies for conservation and modern method to study biodiversity and conservation. CLO3 Perform laboratory or ecological experiments in plant/animal biodiversity and conservation CLO4 Demonstrate social communication skills in field work/ visit on a biodiversity conservation effort by public/private sector
Pre-Requisite Courses	No course recommendations
Topics	
1. Introduction to biodiversity 1.1) Definition, types & history of biodiversity 1.2) Measuring biodiversity 1.3) Speciation and extinction	
2. Species diversity 2.1) Microbial diversity 2.2) Protist diversity 2.3) Fungal diversity 2.4) Plant diversity 2.5) Animal diversity (invertebrates) 2.6) Animal diversity (vertebrates)	
3. Diversity loss and its causes 3.1) Development and degradation 3.2) Exploitation of species 3.3) Anthropogenic impacts	
4. Conservation on biodiversity 4.1) Biodiversity and conservation act 4.2) Conservation efforts including in situ, ex-situ and new approach using molecular technique	

Assessment Breakdown	%
Continuous Assessment	50.00%
Final Assessment	50.00%

Details of Continuous Assessment	Assessment Type	Assessment Description	% of Total Mark	CLO
	Case Study	Written assignment on biodiversity loss and its causes (Chapter 3)	20%	CLO4
	Lab Exercise	Lab report on how to measure biodiversity (Chapter 1)	10%	CLO3
	Visual Assessment	Video presentation for topic laws regarding biodiversity and conservation (Chapter 4)	20%	CLO2

Reading List	Recommended Text	<ul style="list-style-type: none"> • Krishnamurthy, K.V 2018, <i>An Advanced Textbook On Biodiversity: Principles And Practice</i>, Oxford and IBH Publishing [ISBN: 9788120416062] • Richard, B. Primack and Anna, S. 2016, <i>An Introduction to Conservation Biology</i>, Oxford University Press USA [ISBN: 978160535473]
	Reference Book Resources	<ul style="list-style-type: none"> • Fitzgerald, J 2017, <i>Biodiversity An Introduction</i>, Larsen & Keller Education New York, USA [ISBN: 97816354904] • Boenigk, J., Wodniok, S. and Glucksman,E 2015, <i>Biodiversity and Earth History</i>, Verlag Berlin, Germany [ISBN: 978366246394] • Richard B. Primack 2014, <i>Essentials of Conservation Biology</i>, 6th Ed., Sinauer Associates Incorporated [ISBN: 9781605352893] • Peter M. Kareiva,Michelle Marvier 2014, <i>Conservation Science</i>, Roberts & Company [ISBN: 9781936221493]
Article/Paper List	This Course does not have any article/paper resources	
Other References	This Course does not have any other resources	