

BACHELOR OF SCIENCE IN ECOLOGY AND BIODIVERSITY ACADEMIC SESSION 2021/2022 (134 CREDITS)			
UNIVERSITY COURSES (14 CREDITS)			
Course Code	Course Name	Credits	
GIG1012 / GIG1017*	Philosophy and Current Issues (local students) / Basic Malay Language (*only for international students)	2	
GIG1013	Appreciation of Ethics and Civilisations	2	
GIG1003	Basic Entrepreneurship Enculturation	2	
GKA/GKI/GKK/ GKP/GKS/GKU	Co-curriculum	4	
GLTxxxx	English Course (subject to MUET bands)	4	
CORE COURSES (80 CREDITS)			
Course Code	Course Name	Pre-Requisites	Credits
LEVEL 1 (15 Credits)			
SIX1015	Science, Technology and Society		2
SIX1016	Statistics		3
SIE1002	Bioethics and Safety		2
SIE1003	Cell Biology		2
SIH1004	Environmental Sustainability		2
SIO1003	Bioinformatics Concepts		2
SIO1004	Introduction to Computer Programming in Bioinformatics		2
LEVEL 2 (30 Credits)			
SIE2001	Principles of Systematics		4
SIE2002	Plant Diversity		4
SIE2004	Mycology		3
SIE2005	Vertebrate Biology		4
SIE2006	Phycology		3
SIE2007	Population and Community Ecology		4
SIE2014	Protozoa and Invertebrate I		3
SIE2015	Invertebrate II		3
SIO2012	Bioinformatics Data Management	SIO1003	2
LEVEL 3 (35 Credits)			
SIE3004	Quantitative Ecology	SIX1016	3
SIE3005	Behavioural Ecology and Ethology	SIE2005 and SIE2015	3
SIE3017	Scientific Communication		2
SIE3018	Molecular Ecology and Applications	SIE1003 and SIE2001	4
SIE3019	Nature and Society		2

SIE3023	Research Project for Ecology and Biodiversity	SIX1016 and SIE2001	8
SIE3024	Industrial Training for Ecology and Biodiversity	SIE3025 and SIE3004	8
SIE3025	Biodiversity Governance and Conservation		3
SIO3016	Biological Data Analytics	SIO1004	2
ELECTIVE COURSES (40 CREDITS)			
(I) PROGRAMME ELECTIVE COURSES (32 CREDITS)			
Choose from all elective courses that are offered			
Course Code	Course Name	Pre-Requisites	Credits
SIE1004	Introductory Microbiology		2
SIE2010	Urban Zoology		3
SIE2011	Terrestrial Ecology		3
SIE2012	Aquatic Ecology		3
SIE2016	Plant Physiology		3
SIE2017	Animal Physiology		3
SIE3006	Economic Botany		3
SIE3007	Ecology and Management of Weeds		3
SIE3009	Plant Pathology	SIE2002	3
SIE3010	Horticulture and Landscaping	SIE2002	3
SIE3012	Parasitology		3
SIE3013	Economic Entomology	SIE2015	3
SIE3014	Integrated Pest Management		3
SIE3015	Ecotoxicology		3
SIE3016	Soil Ecology and Management		3
SIE3020	Fisheries Ecology and Management	SIX1016	3
SIE3021	Ecotourism		2
SIE3022	Bioimage Processing and Analysis	SIX1016	3
SIH2021	Key Issues in Climate Change		2
SIH2022	Ecosystem-based Management		2
SIH2025	Renewable Energy Transition and Society		2
SIH3009	Slope Eco-engineering Techniques		3
SIH3027	Green Agriculture		3
SIO3020	Aquaculture Biotechnology		2
SIO3026	Sustainable Food Systems		2
SIR2041	Population Genetics		3

(II) ELECTIVE UNIVERSITY COURSES (8 CREDITS)		
Student Holistic Empowerment [SHE]		
Choose one course from each cluster		
Cluster	Cluster Title	Credits
Cluster 1	Thinking Matters: Mind and Intellect	2
Cluster 2	Emotional, Physical and Spiritual Intelligence: Heart, Body and Soul	2
Cluster 3	Technology/Artificial Intelligence and Data Analytics: I-Techie	2
Cluster 4	Global Issues and Community Sustainability: Making The World A Better Place	2

**LIST OF COURSES ACCORDING TO SEMESTER
(PLANNING OF COURSES)
BACHELOR OF SCIENCE IN ECOLOGY AND BIODIVERSITY**

COMPONENT		YEAR 1				TOTAL CREDITS
		SEMESTER 1		SEMESTER 2		
		COURSE	CREDIT	COURSE	CREDIT	
University Courses		GLTxxx	2	GLTxxx	2	14
		GIG1013	2	GIG1012 / GLT1017*	2	
		GIG1003	2	GKA1001/ GKI1001/ GKK1001/ GKP1001/ GKS1001/ GKU1001	2	
		GKA1001/ GKI1001/ GKK1001/ GKP1001/ GKS1001/ GKU1001	2			
Core Courses		SIX1015	2	SIX1016	3	15
		SIE1003	2	SIE1002	2	
		SIO1004	2	SIH1004	2	
				SIO1003	2	
Elective Courses	Student Holistic Empowerment (SHE)	SHE Cluster 1	2	SHE Cluster 3	2	8
		SHE Cluster 2	2	SHE Cluster 4	2	
TOTAL CREDITS			18		19	37

*only for international students

COMPONENT		YEAR 2				TOTAL CREDITS
		SEMESTER 1		SEMESTER 2		
		COURSE	CREDIT	COURSE	CREDIT	
Core Courses		SIE2002	4	SIE2001	4	26
		SIE2005	4	SIE2004	3	
		SIE2006	3	SIE2015	3	
		SIE2014	3	SIO2012	2	
Elective Courses	Program (EP)	SIE1004/ SIE2010/ SIE2012/ SIE2017/ SIH2021/ SIH2022	6	SIE2011/ SIE2016/ SIH2025/ SIH3027/ SIO3026	6	12
TOTAL CREDITS			20		18	38

COMPONENT		YEAR 3				TOTAL CREDITS
		SEMESTER 1		SEMESTER 2		
		COURSE	CREDIT	COURSE	CREDIT	
Core Courses		SIE3023	4	SIE3023	4	26
		SIE2007	4	SIE3004	3	
		SIE3017	2	SIE3005	3	
		SIO3016	2	SIE3018	4	
Elective Courses	Program (EP)	SIE3007/ SIE3010/ SIE3014/ SIE3015/ SIO3020	6	SIE3006/ SIE3009/ SIE3012/ SIE3013/ SIE3016/ SIH3009	6	12
TOTAL CREDITS			18		20	38

COMPONENT		YEAR 4				TOTAL CREDITS
		SEMESTER 1		SEMESTER 2		
		COURSE	CREDIT	COURSE	CREDIT	
Core Courses		SIE3025	3	SIE3024	8	13
		SIE3019	2			
Elective Courses	Program (EP)	SIE3020/ SIE3021/ SIE3022/ SIR2041	8			8
TOTAL CREDITS			13		8	21

MINIMUM CREDITS FOR GRADUATION: 134