BACHELOR OF SCIENCE IN MATHEMATICS ACADEMIC SESSION 2021/2022 (134 CREDITS)			
UNIVERSITY COURSES (12 CREDITS)			
COURSE CODE	**COURSE NAME**		**CREDITS**
GIG1012 / GLT1017*	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		2
GLTxxxx	English Course (subject to MUET bands)		4
CORE COURSES (79 CREDITS)			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
LEVEL 1 (30 Credits)			
SIX1015	Science, Technology and Society	-	2
SIX1016	Statistics	-	3
SIM1001	Basic Mathematics	-	4
SIM1002	Calculus I	-	4
SIM1003	Calculus II	SIM1002	4
SIM1004	Fundamentals of Computing	-	3
SIM1005	Fundamentals of Spreadsheets	-	2
SIM1006	Ordinary Differential Equations	SIM1002	4
SIT1001	Probability and Statistics I	SIM1002	4
LEVEL 2 (41 Credits)			
SIM2001	Advanced Calculus	SIM1003	4
SIM2002	Linear Algebra	SIM1001	4
SIM2007	Appreciation of Mathematics	SIM1003	2
SIM2010	Numerical Computation	SIM1003	4
SIM2011	Structured Programming	SIM1002	4
SIM2012	Basic Operations Research	SIM1001	4
SIM2013	Introduction to Combinatorics	SIM1001	3
SIM2014	Algebra I	SIM1001	3
SIM2015	Introduction to Analysis	SIM1003	3
SIM2016	Complex Variables	SIM1003	3
SIM2018	Partial Differential Equations	SIM1006	4
SIT2007	Foundations of Data Science	SIT1001	3
LEVEL 3 (8 Credits)			
SIM3020	Industrial Training	SIM2007	8

ELECTIVE COURSES (43 CREDITS)			
(I) PROGRAM ELECTIVE COURSES (at least 35 CREDITS)			
MATHEMATICAL SCIENCE			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
SIM2017	Geometry	SIM1001	3
SIM2019	Systems of Ordinary Differential Equations	SIM1006	4
SIM2021	Optimization Techniques	SIM2001	4
SIM3001	Graph Theory	SIM2013	4
SIM3002	Combinatorial Mathematics	SIM2013	4
SIM3003	Number Theory	SIM2002	4
SIM3004	Advanced Linear Algebra	SIM2002	4
SIM3005	Matrix Theory	SIM2002	4
SIM3006	Algebra II	SIM2014	4
SIM3007	Ring Theory	SIM2014	4
SIM3008	Group Theory	SIM2014	4
SIM3009	Differential Geometry	SIM2001	4
SIM3010	Topology	SIM2001	4
SIM3011	Complex Analysis	SIM2016	4
SIM3012	Real Analysis	SIM2015	4
SIM3021	Mathematical Science Project	SIM2011	4
SIM3022	Cryptography	SIT1001 and SIM2011	4
SIQ1001	Introduction to Accounting	-	3
SIQ2001	Microeconomics	-	3
SIQ2002	Macroeconomics	-	3
SIQ2003	Financial Mathematics and Derivatives	SIM1002	4
SIT2001	Probability and Statistics II	SIT1001	4
APPLIED MATHEMATICS			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
SIM2019	Systems of Ordinary Differential Equations	SIM1006	4
SIM2020	Management Mathematics	SIM1002	4
SIM2021	Optimization Techniques	SIM2001	4
SIM3021	Mathematical Science Project	SIM2011	4
SIM3022	Cryptography	SIT1001 and SIM2011	4
SIM3023	Numerical Methods and Analysis	SIM2010	4
SIM3024	Computational Geometry	SIM2011	4
SIM3025	Scientific Computing	SIM2011	4
SIM3026	Production and Inventory Control	SIM2012 and SIM2020	4
SIM3027	Mathematical Programming	SIM2012	4
SIM3028	Industrial Operations Research	SIM2012	4
SIM3029	Computational Fluid Dynamics	SIM2018	4
SIM3030	Dynamical Systems Theory	SIM2019	3
SIQ2001	Microeconomics	-	3

SIQ2002	Macroeconomics	-	3
SIT2001	Probability and Statistics II	SIT1001	4
SIT2010	Stochastic Processes	SIT2001	3
SIT3005	Times Series and Forecasting Methods	SIT2001	4

Students who wish to take SIM3020 are advised to have passed at least 90 credits of the listed courses in the program.

(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 MATHEMATICS

COMPONENT	YEAR 1				TOTAL CREDITS
	SEMESTER 1		SEMESTER 2		
	COURSE	CREDIT	COURSE	CREDIT	
University Courses	GLTˣˣˣˣ	2	GLTˣˣˣˣ	2	8
	GIG1012 / GLT1017*	2	GIG1013	2	
Core Courses	SIX1016	3	SIX1015	2	26
	SIM1001	4	SIT1001	4	
	SIM1002	4	SIM1003	4	
	SIM1004	3	SIM1005	2	
Elective Courses	Student Holistic Empowerment (SHE) Cluster 1	2	Student Holistic Empowerment (SHE) Cluster 2	2	4
TOTAL CREDITS		20		18	38

*only for international students

COMPONENT	YEAR 2				TOTAL CREDITS
	SEMESTER 1		SEMESTER 2		
	COURSE	CREDIT	COURSE	CREDIT	
University Courses	GIG1003	2			4
	GKA/GKI/GKK/ GKP/GKS/GKU	2			
Core Courses	SIM1006	4	SIT2007	3	31
	SIM2001	4	SIM2015	3	
	SIM2002	4	SIM2016	3	
	SIM2007	2	SIM2010	4	
			SIM2011	4	
Elective Courses	Student Holistic Empowerment (SHE) Cluster 3	2	Student Holistic Empowerment (SHE) Cluster 4	2	4
TOTAL CREDITS		20		19	39

COMPONENT	YEAR 3				TOTAL CREDITS
	SEMESTER 1		SEMESTER 2		
	COURSE	CREDIT	COURSE	CREDIT	
Core Courses	SIM2013	3			14
	SIM2014	3			
	SIM2012	4			
	SIM2018	4			
Elective Courses	Elective Course 1	4	Elective Course 2	4	20
			Elective Course 3	4	
			Elective Course 4	4	
			Elective Course 5	4	
TOTAL CREDITS		18		16	34

COMPONENT	YEAR 4				TOTAL CREDITS
	SEMESTER 1		SEMESTER 2		
	COURSE	CREDIT	COURSE	CREDIT	
Core Courses	SIM3020	8			8
Elective Courses			Elective Course 6	4	15
			Elective Course 7	4	
			Elective Course 8	4	
			Elective Course 9	3	
TOTAL CREDITS		8		15	23