BACHELOR OF SCIENCE (MATHEMATICS) SESSION 2015/2016 125 CREDITS			
1. UNIVERSITY COURSES (20 CREDITS)			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
GLT	Communication in English	-	6
GKN/GKR/GKV	Co-curriculum	-	2
GIG1001	Islamic and Asian Civilization (TITAS)	-	2
GIG1002/ GIG1006	Ethnic Relations/ Introduction to Malaysia	-	2
GIG1003	Basic Entrepreneurship Culture	-	2
GIG1004	Information Skills	-	2
GIG1005	Social Engagement	-	2
GIX	External Faculty Electives Course	-	2
2. CORE COURSES (70 CREDITS)			
(1) FACULTY CORE COURSES (8 CREDITS)			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
SIX1001	Introduction to Science and Technology Studies	-	3
SIX1002	Ethics and Safety	-	3
SIX1004	Statistics	-	2
(2) PROGRAM CORE COURSES (62 CREDITS)			
COURSE CODE	**COURSE NAME**	**PRE-REQUISITE**	**CREDITS**
LEVEL 1 (24 Credits)			
SIM1001	Basic Mathematics	-	4
SIM1002	Calculus I	-	4
SIM1003	Calculus II	SIM1002	4
SIN1001	Introduction to Computing	-	2
SIN1002	Introduction to Worksheet	-	2
SIN1003	Mathematical Methods I	SIM1002	4
SIT1001	Probability and Statistics I	SIM1002	4
LEVEL 2 (34 Credits)			
SIM2001	Advanced Calculus	SIM1003	4
SIM2002	Linear Algebra	SIM1001	4
SIM2003	Introduction to Combinatorics	SIM1001	4
SIM2004	Algebra I	SIM1001	4
SIM2005	Introduction to Analysis	SIM1003	4
SIM2006	Complex Variables	SIM1003	4
SIM2007	Appreciation of Mathematics	SIM1003	2
SIN2001	Mathematical Methods II	SIN1003	4
SIN2002	Structured Programming	SIM1002	4
LEVEL 3 (4 Credits)			
SIN3015	Mathematical Science Project	SIM2002	4
3. ELECTIVE COURSES (35 CREDITS))			

(1) FACULTY ELECTIVE COURSES (7 CREDITS) [EF]
    * Courses Offered by Other Institute/Department within the Faculty of Science
    * Refer to the Faculty Elective Courses lists other than from the Institute of Mathematical Sciences but within the Faculty of Science			

(2) PROGRAM ELECTIVE COURSES (at least 28 CREDITS) [EJ]			
SIM2008	Theory of Differential Equations	SIN1003 and SIM2002	4
SIM2009	Geometry	SIM1001	4
SIM3001	Graph Theory	SIM2003	4
SIM3002	Combinatorial Mathematics	SIM2003	4
SIM3003	Number Theory	SIM2002	4
SIM3004	Advanced Linear Algebra	SIM2002	4
SIM3005	Matrix Theory	SIM2002	4
SIM3006	Algebra II	SIM2004	4
SIM3007	Ring Theory	SIM2004	4
SIM3008	Group Theory	SIM2004	4
SIM3009	Differential Geometry	SIM2001	4
SIM3010	Topology	SIM2001	4
SIM3011	Complex Analysis	SIM2006	4
SIM3012	Real Analysis	SIM2005	4
SIM3013	Probabilistic Methods in Combinatorics	SIM2003 and SIT1001	4
SIN3014	Industrial Training	SIM2002	5

The exact number of elective courses offered in each year may differ. Core courses, from the Bachelor of Science (Computational and Industrial Mathematics), Bachelor of Science (Statistics) or Bachelor of Science (Actuarial and Financial Mathematics) programs may be taken as elective courses. Please refer to the respective programs.

Attention:
1. Students who wish to specialize in B.Sc. (Mathematics) must take at least 24 credits from courses with codes SIM3***/SIN3***/SIT3***/SIQ3***(except SIN3014) of which at least 12 credits must be from SIM3***.
2. Students who wish to take SIN3014 or SIN3015 must pass at least 80 credits of the listed mathematics courses.

PROGRAM GOAL

To produce graduates with a sound knowledge of mathematics, capable of analysing and solving problems and thinking critically, able to adapt to diverse environment and contribute significantly in various professions.

PROGRAM EDUCATIONAL OBJECTIVES

1. Give opportunity to students to acquire the fundamental knowledge of mathematics. (PO1,2,6)
2. Prepare students with necessary mathematical and practical skills to assist them in their employment and research work.(PO1,2,6,7,8)
3. Guide and train students to communicate effectively and to be able to work independently as well as in teams. (PO3,4,5)

PROGRAM LEARNING OUTCOMES

At the end of the program, graduates with B.Sc. (Mathematics) are able to:

1. Explain mathematical theory (pure, applied and statistics) which includes mathematical arguments, proofs and abstract concepts.
2. Perform mathematical computation, apply mathematical software and formulate real problems as mathematical models.
3. Conduct professional activities with good social skills, and demonstrate sense of responsibility in society.
4. Practice characteristics associated with professionalism and ethical responsibility in the field of mathematics.
5. Communicate relevant concepts effectively and accurately.
6. Analyse and assess problems, and develop strategies to obtain solutions.
7. Engage in life-long learning to advance knowledge and applications of mathematics.
8. Apply managerial and entrepreneurial skills to manage resources needed to complete a task.