

<b>BACHELOR OF SCIENCE (STATISTICS) SESSION 2015/2016</b>			
<b>127 CREDITS</b>			
<b>1. UNIVERSITY COURSES (20 CREDITS)</b>			
<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>PRE-REQUISITE</b>	<b>CREDITS</b>
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
<b>2. CORE COURSES (72 CREDITS)</b>			
<b>(1) FACULTY CORE COURSES (8 CREDITS)</b>			
<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>PRE-REQUISITE</b>	<b>CREDITS</b>
SIX1001	Introduction to Science and Technology Studies	-	3
SIX1002	Ethics and Safety	-	3
SIX1004	Statistics	-	2
<b>(2) PROGRAM CORE COURSES (62 CREDITS)</b>			
<b>COURSE CODE</b>	<b>COURSE NAME</b>	<b>PRE-REQUISITE</b>	<b>CREDITS</b>
<b>LEVEL 1 (24 Credits)</b>			
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
<b>LEVEL 2 (36 Credits)</b>			
SIM2001	Advanced Calculus	SIM1003	4
SIM2002	Linear Algebra	SIM1001	4
SIN2001	Mathematical Methods II	SIN1230	4
SIN2002	Structured Programming	SIM1002	4
SIT2001	Probability and Statistics II	SIT1001	4
SIT2002	Further Mathematical Statistics	SIT2001	4
SIT2003	Stochastic Processes	SIT2001	4
SIT2004	Regression Analysis	SIT1001	4
SIT2005	Data Analysis I	SIT1001	4
<b>LEVEL 3 (4 Credits)</b>			
SIT3001	Introduction to Probability Theory	SIM2001 and SIT2002	4
<b>3. ELECTIVE COURSES (36CREDITS) )</b>			
<b>(1) FACULTY ELECTIVE COURSES (7 CREDITS) [EF]</b>			
* 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			
<b>(2) PROGRAM ELECTIVE COURSES (at least 28CREDITS) [EJ]</b>			
SIT2006	Non-parametric Statistics	SIT1001	4
SIN3014	Industrial Training	SIM2002	5
SIN3015	Mathematical Science Project		4
SIT3002	Introduction to Multivariate Analysis	SIT2001	4
SIT3003	Computer Intensive Methods in Statistics	SIT2001	4
SIT3004	Applied Stochastic Processes	SIT2003	4
SIT3005	Time Series and Forecasting Methods	SIT2001	4
SIT3006	Further Topics in Regression Analysis	SIT2001 and SIT2004	4
SIT3007	Data Analysis II	SIT2001 and SIT2005	4
SIT3008	Introduction to Survey Sampling	SIT2001	4
SIT3009	Statistical Process Control	SIT2001	4
SIT3010	Introduction to Data Mining	SIT2001	4
SIT3011	Bioinformatics	SIT2001	4
SIT3012	Design and Analysis of Experiments	SIT1001 and SIT2004	4
SIT3013	Analysis of Failure and Survival Data	SIT2001	4
SIT3014	Introduction to Bayesian Statistics	SIT2001	4
SIT3015	Java Methods for Statistics and Actuarial Science	SIT1001 and SIN2002	4

The exact number of elective courses of department offered in each year may be different, depending on the availability of manpower. Core courses in B.Sc. (Mathematics), B.Sc. (Computational and Industrial Mathematics) and B.Sc. (Actuarial and Financial Mathematics) can also be taken as elective courses of department for this program. Please refer to the respective programs.

**Attention:** Students who wish to specialize in B.Sc. (Statistics) must take at least 20 credits from courses with codes SIT3\*\*\* (not including SIN3014) listed in this program. Students who wish to take SIN3014 or SIN3015 must pass at least 80 course credits listed in this program.

### **PROGRAM GOAL**

To produce graduates with (sound) knowledge of statistics, capable of critical thinking and problem solving; who can adapt to diverse environment and contribute significantly in various professions.

### **PROGRAM LEARNING OUTCOMES**

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

1. Explain the principles and concepts of mathematics and statistics;
2. Apply the mathematical and statistical principles in solving real world problems;
3. Conduct professional activities with good social skill and demonstrate a sense of responsibility;
4. Practice characteristics associated with professionalism and ethical responsibility in analyzing real life phenomena;
5. Communicate using critical thinking with effective, accurate and relevant concepts, and exhibit team work and leadership skills;
6. Convert problems into mathematical and statistical models, and develop scientific strategies to obtain solutions;
7. Engage in life-long learning to advance knowledge and applications of mathematics and statistics;
8. Apply managerial and entrepreneurial skills to manage resources needed to complete a task.