

BACHELOR OF SCIENCE IN STATISTICS ACADEMIC SESSION 2021/2022 (134 CREDITS)			
1. UNIVERSITY COURSES (12 CREDITS)			
COURSE CODE	COURSE NAME	PRE-REQUISITE	CREDITS
GLT ^{xxxx}	English Courses (subject to MUET bands)	-	4
GKA/GKI/GKK/ GKP/GKS/GKU	Co-curriculum	-	2
GIG1012 / GLT1017	Philosophy and Current Issues / Basic Malay Language (only for international students)	-	2
GIG1013	Appreciation of Ethics and Civilisations	-	2
GIG1003	Basic Entrepreneurship Culture	-	2
2. CORE COURSES (76 CREDITS)			
COURSE CODE	COURSE NAME	PRE-REQUISITE	CREDITS
LEVEL 1 (26 Credits)			
SIX1015	Science, Technology and Society	-	2
SIM1001	Basic Mathematics	-	4
SIM1002	Calculus I	-	4
SIM1003	Calculus II	SIM1002	4
SIT1001	Probability and Statistics I	SIM1002	4
SIT1002	Statistical Programming	-	4
SIT1003	Analysis of Data and Statistical Report Writing	-	4
LEVEL 2 (28 Credits)			
SIM2001	Advanced Calculus	SIM1003	4
SIM2002	Linear Algebra	SIM1001	4
SIT2001	Probability and Statistics II	SIT1001	4
SIT2007	Foundations of Data Science	SIT1001	3
SIT2008	Further Mathematical Statistics	SIT2001	4
SIT2009	Regression Analysis	SIT1001	4
SIT2010	Stochastic Processes	SIT2001	3
SIT2011	Statistics and Community	SIT1003	2
LEVEL 3 (22 Credits)			
SIT3005	Time Series and Forecasting Methods	SIT2001	4
SIT3015	Introduction to Multivariate Analysis	SIT2001	3
SIT3016	Generalized Linear Models	SIT2001 and SIT2009	4
SIT3017	Statistical Learning and Data Mining	SIT2007	3
SIT3021	Industrial Training	SIT3017	8
3. ELECTIVE COURSES (46 CREDITS)			
(I) STUDENT HOLISTIC EMPOWERMENT (8 CREDITS)			
‡ ONE COMPULSORY course is taken from each cluster.			
CLUSTER			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
(II) PROGRAM ELECTIVE COURSES (at least 38 CREDITS)			
COURSE CODE	COURSE NAME	PRE-REQUISITE	CREDITS
SIM2010	Numerical Computation	SIM1003	4
SIM2012	Basic Operations Research	SIM1001	4
SIQ1001	Introduction to Accounting	-	3
SIQ2001	Microeconomics	-	3
SIQ2002	Macroeconomics	-	3
SIQ2003	Financial Mathematics and Derivatives	SIM1002	4
SIT3003	Computer Intensive Methods in Statistics	SIT2001	4
SIT3004	Applied Stochastic Processes	SIT2010	4
SIT3008	Introduction to Survey Sampling	SIT2001	4
SIT3009	Statistical Process Control	SIT2001	4
SIT3012	Design and Analysis of Experiments	SIT1001 and SIT2009	4
SIT3013	Analysis of Failure and Survival Data	SIT2001	4
SIT3018	Non-Parametric Statistics	SIT1001	4
SIT3019	Introduction to Bayesian Statistics	SIT2001	4
SIT3020	Python for Data Science	SIT3017	4
SIT3022	Probability Theory	SIM2001 and SIT2008	4

SIT3023	Statistical Laboratory	SIT1002 and SIT2007	3
SIT3024	Statistical Consultancy and Data Analysis	SIT3021	3
SIT3025	Statistical Science Project	SIT1002 and SIT2007	4

The exact number of program elective courses offered in each year may differ.

PROGRAM GOAL

To produce graduates who have sound knowledge in statistics and mathematics, strong problem-solving skills and capability to adapt to diverse environment, with life-long learning habits.

PROGRAM EDUCATIONAL OBJECTIVES

To produce:

1. Graduates who work in a profession directly related to statistics or any other related field;
2. Graduates who are involved in continuous learning in statistics or other related fields;
3. Graduates who are able to communicate statistical concepts and methods effectively and ethically.

PROGRAM LEARNING OUTCOMES

At the end of the program, graduates with Bachelor of Science in Statistics are able to:

1. Explain the principles and concepts of statistics and mathematics as the foundation for data-driven decision-making;
2. Demonstrate the ability to apply statistical and mathematical knowledge critically and analytically to complete a task;
3. Apply the principles of statistics and mathematics in solving real world problems;
4. Communicate statistical and mathematical concepts effectively, accurately and coherently in written and oral forms;
5. Access, manage and process data effectively and efficiently using suitable graphical and computational strategies;
6. Work in teams, and demonstrate leadership quality and sense of responsibility in achieving goals and outcomes;
7. Engage in life-long learning to advance knowledge and applications of statistics and mathematics;
8. Act professionally and ethically in the course of analysis and decision-making to solve problems.