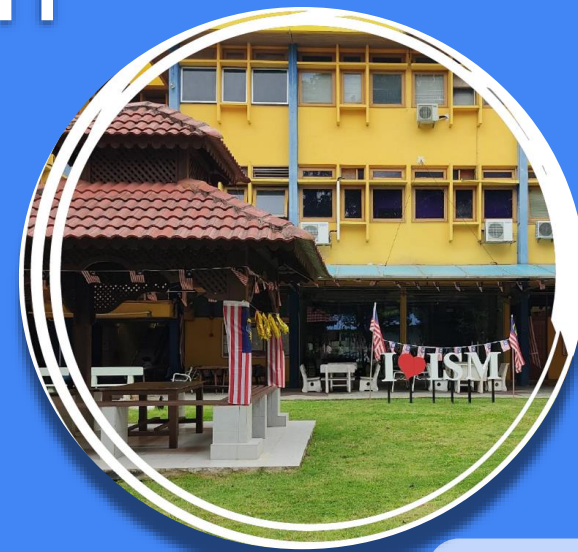# Bachelor of Science in Statistics

Institute of Mathematical Sciences, Faculty of Science

UNIVERSITI
MALAYA

Programme 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
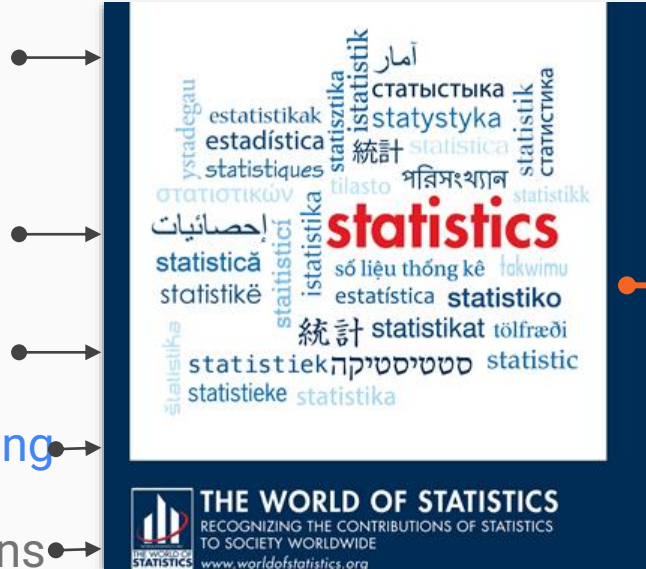
Introduction to Programme

Calculus and Linear Algebra

Probability Concepts and Distributions

Data Analytics

Statistical Programming

Real-World Applications

statistics

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Agriculture Manufacturing
Biology **Medicine**
Data Science Public Health
Ecology Safety
Economics Sports
Education Sociology
Epidemiology **Telecommu-**
Finance **nications**
Genetics Transportation
Health Science Zoology

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Programme Structure (134 credits)

12

University Courses
- Compulsory

76

Core Courses
- Compulsory

46

Elective Courses
- Student Holistic Empowerment (8 credits)
- Programme Elective Courses (38 credits)

University Courses (12 credits)

Course Code	Course Title	Credits
GIG1012 / GLT1017	Philosophy and Current Issues / Basic Malay Language*	2
GIG1013	Appreciation for Ethics and Civilisations	2
GIG1003	Basic Entrepreneurship Culture	2
GKA/GKI/GKK/ GKP/GKS/GKU	Co-curriculum	2
GLTˣˣˣˣ	English Courses (subject to MUET band/IELTS*/TOEFL*)	4
*Only for international students		
For more information on University courses, please refer to: https://citra.um.edu.my/		

Semester 1

Semester 2

Semester 3

Semester 5

Semester 1

Semester 2

B.Sc. in Statistics

Which English language courses to take?

ENGLISH COMMUNICATION PROGRAMME (UNIVERSITY COURSE) FACULTY OF LANGUAGES AND LINGUISTICS LIST OF COURSES TO BE COMPLETED BY ALL STUDENTS			
PATH 1	**PATH 2**	**PATH 3**	**PATH 4**
• MUET BAND 2 • IELTS Band 4.0 • TOEFL Paper – Based Test (437 – 473) • TOEFL Computer – Based Test (123 – 150) • TOEFL Internet – Based Test (41 – 52) • PTE (Academic) – (10 – 28)	• MUET BAND 3 • IELTS Band 4.5 – 5.0 • TOEFL Paper – Based Test (477 – 510) • TOEFL Computer – Based Test (153 – 180) • TOEFL Internet – Based Test (53 – 64) • PTE (Academic) – (29 - 41)	• MUET BAND 4 • IELTS Band 5.5 – 6.0 • TOEFL Paper – Based Test (513 – 547) • TOEFL Computer – Based Test (183 – 210) • TOEFL Internet – Based Test (65-78) • PTE (Academic) – (42 – 57) • FCE (B & C) • GCE A Level (English) (Minimum C) • IGCSE/GCSE (English) (A, B & C)	• MUET BAND 5 & BAND 6 • IELTS Band 6.5 – 9.0 • TOEFL Paper – Based Test (550 – 677) • TOEFL Computer – Based Test (213 – 300) • TOEFL Internet – Based Test (79 – 120) • PTE (Academic) (58 – 90) • FCE (A) • GCE A Level (English) (B & A)

Which English language courses to take?

PATH 1	PATH 2	PATH 3	PATH 4
Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH	Students need to complete 2 courses (2 courses x 2 credits each) from this PATH
COMPULSORY ● GLT1018 – Proficiency in English I	**COMPULSORY** ● GLT1021 – Proficiency in English II	**COMPULSORY** ● GLT1024 – Proficiency in English III	● GLT1027– Advanced Oral Communication* ● GLT1028 – Advanced Business Writing* *(Students can only register for one course per semester)
** **CHOOSE ONE :** ● GLT1019 – Let's Speak ● GLT1020 – Fundamental Writing	** **CHOOSE ONE :** ● GLT1022 – Speak Up ● GLT1023 – Effective Workplace Writing	** **CHOOSE ONE :** ● GLT1025 – Effective Oral Communication ● GLT1026 – Writing at the Workplace	

** These courses have prerequisites and students can only register for them after obtaining a PASS in the compulsory course as stipulated in the respective PATH.

Core Courses (76 credits)

Course Code	Course Title	Pre-Requisite	Credits	
SIX1015	Science, Technology and Society	-	2	Semester 2
SIM1001	Basic Mathematics	-	4	Semester 1
SIM1002	Calculus I	-	4	Semester 1
SIM1003	Calculus II	SIM1002	4	Semester 2
SIT1001	Probability and Statistics I	SIM1002	4	Semester 2
SIT1002	Statistical Programming	-	4	Semester 1
SIT1003	Analysis of Data and Statistical Report Writing	-	4	Semester 2

B.Sc. in Statistics

Core Courses (76 credits)

Course Code	Course Title	Pre-Requisite	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

Semester 3

Semester 4

Semester 3

Core Courses (76 credits)

Course Code	Course Title	Pre-Requisite	Credits	
SIT3005	Time Series and Forecasting Methods	SIT2001	4	— Semester 5
SIT3015	Introduction to Multivariate Analysis	SIT2001	3	— Semester 4
SIT3016	Generalized Linear Models	SIT2001 and SIT2009	4	Semester 5
SIT3017	Statistical Learning and Data Mining	SIT2007	3	
SIT3021	Industrial Training	SIT3017	8	— Semester 6

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Elective Courses (46 credits)

Student Holistic Empowerment (SHE, 8 credits)		
Cluster	**Cluster Title**	**Credits**
1	Thinking Matters: Mind and Intellect	2
2	Emotional, Physical and Spiritual Intelligence: Heart, Body & Soul	2
3	Technology/Artificial Intelligence and Data Analytics: I-techie	2
4	Global Issues and Community Sustainability: Making the World a Better Place	2
For the information of courses under each cluster, please refer to: https://citra.um.edu.my/external-elective-courses		

Semester 1

Semester 3

Semester 4

Semester 5

Elective Courses (46 credits)

Programme Elective Courses (38 credits)			
Course Code	**Course Title**	**Pre-Requisite**	**Credits**
SIQ1001	Introduction to Accounting	-	3
SIQ2001	Microeconomy	-	3
SIQ2002	Macroeconomy	-	3
SIQ2003	Financial Mathematics and Derivatives	SIM1002	4
SIM2010	Numerical Computation	SIM1003	4
SIM2012	Basic Operations Research	SIM1001	4

Elective Courses (46 credits)

Programme Elective Courses (38 credits)			
Course Code	**Course Title**	**Pre-Requisite**	**Credits**
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

Elective Courses (46 credits)

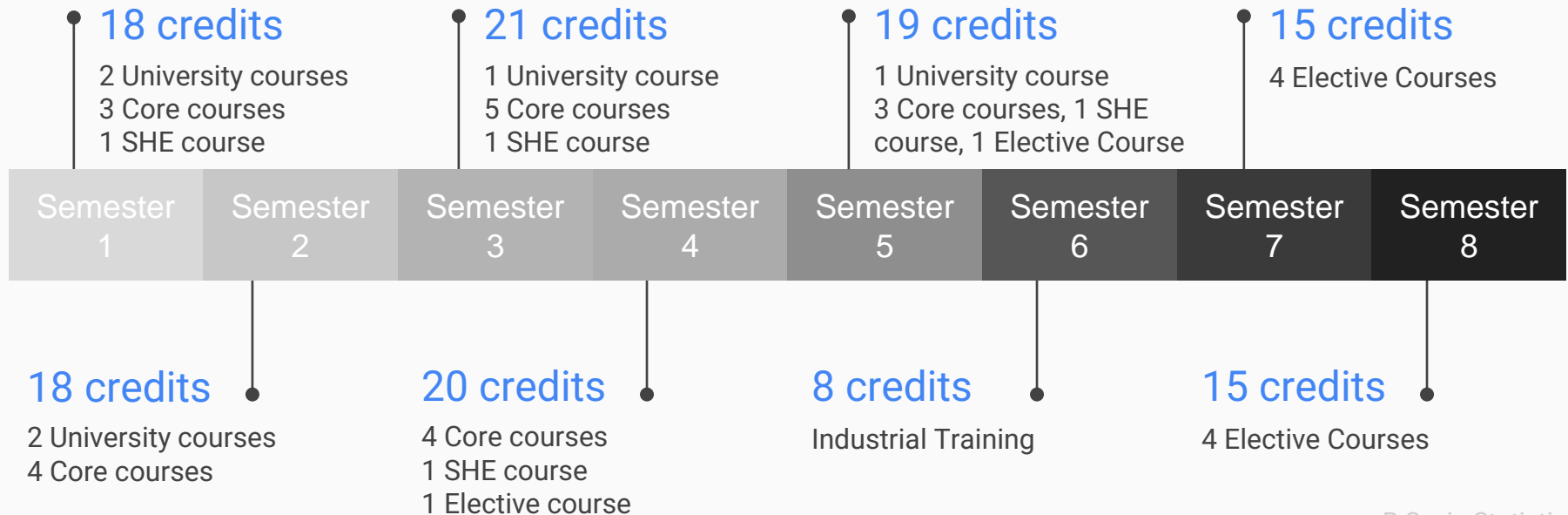| Programme Elective Courses (38 credits)			
Course Code	**Course Title**	**Pre-Requisite**	**Credits**
SIT3019	Introduction to Bayesian Statistics	SIT2001	4
SIT3020	Python for Data Science	SIT3017	4
SIT3022	Probability Theory	SIM2001 and SIT2008	4
SIT3023	Statistical Laboratory	SIT1002 and SIT2007	3
SIT3024	Statistical Consultancy and Data Analysis	SIT3021	3
SIT3025	Statistical Science Project	SIT1002 and SIT2007	4

For more details and information about the programme courses, please refer to the undergraduate handbook available at:

https://ism.um.edu.my/undergraduate-info

Programme Course Plan

4 years (8 normal semesters) - 134 credits

18 credits
2 University courses
3 Core courses
1 SHE course

21 credits
1 University course
5 Core courses
1 SHE course

19 credits
1 University course
3 Core courses, 1 SHE
course, 1 Elective Course

15 credits
4 Elective Courses

| Semester 1 | Semester 2 | Semester 3 | Semester 4 | Semester 5 | Semester 6 | Semester 7 | Semester 8 |

18 credits
2 University courses
4 Core courses

20 credits
4 Core courses
1 SHE course
1 Elective course

8 credits
Industrial Training

15 credits
4 Elective Courses

B.Sc. in Statistics

Planning of Courses

Component	Year 1, Semester 1		
	Code	**Title**	**Credits**
University Course	GLTˣˣˣˣ	English Course	2
	GIG1012 / GLT1017*	Philosophy and Current Issues / Basic Malay Language*	2
Core Course	SIM1001	Basic Mathematics	4
	SIM1002	Calculus I	4
	SIT1002	Statistical Programming	4
Elective Course		*Student Holistic Empowerment (SHE) Cluster 1: Thinking Matters: Mind & Intellect*	2
Total Credits			18

*Only offered to international students

Planning of Courses

Component	Year 1, Semester 2		
	Code	Title	Credits
University Course	GLTˣˣˣˣ	English Course	2
	GIG1013	Appreciation of Ethics and Civilisations	2
Core Course	SIM1003	Calculus II	4
	SIT1001	Probability and Statistics I	4
	SIT1003	Analysis of Data and Statistical Report Writing	4
	SIX1015	Science, Technology and Society	2
Total Credits			18

Planning of Courses

- ➔ Maximum 22 credits per semester
- ➔ Maximum number of semesters for study is 12 normal semesters
- ➔ Earliest completion of study is in 7 normal semesters

For a complete planning of courses, please refer to the handbook available at:
ISM Undergraduate Handbook 2021/2022

Lecture timetables for courses of Institute of Mathematical Sciences (ISM) are available at:
Semester 1, Session 2021/2022
Semester 2, Sesion 2021/2022

For tutorial hours, please refer to the lecturer of the course.

How to Register for Courses?

http://maya.um.edu.my/

Click
https://youtu.be/7X9tlvz_4Cc
or
https://umsitsguide.um.edu.my/student_lecturer_staff/guides_stu-lec-stf/guides_enrolment_0002_stu-lec-stf.php
for a video guiding you through MAYA.

For other Quick Guides to Maya:
https://umsitsguide.um.edu.my/student_lecturer_staff/guides_main_stu-lec-stf.php

Academic Calendar 2021/2022

SEMESTER I				
Course Registration (Module) *(Refer Registration Schedule at https://umsitsguide.um.edu.my/)*	2 weeks	24.09.2021	-	08.10.2021
Orientation *(Week of Welcome) - WOW*	1 week	10.10.2021	-	17.10.2021
Lectures	7 weeks*	18.10.2021	-	05.12.2021
Mid-Semester I Break	1 week	06.12.2021	-	12.12.2021
Lectures	7 weeks*	13.12.2021	-	30.01.2022
Revision Week	1 week*	31.01.2022	-	06.02.2022
Semester I Final Examination	2 weeks	07.02.2022	-	20.02.2022
Semester Break	3 weeks	21.02.2022	-	13.03.2022
	24 weeks			

SEMESTER II				
Course Registration (Module) *(Refer Registration Schedule at https://umsitsguide.um.edu.my/)*	2 weeks	18.02.2022	-	04.03.2022
Lectures	7 weeks*	14.03.2022	-	01.05.2022
Mid-Semester II Break	1 week*	02.05.2022	-	08.05.2022
Lectures	7 weeks*	09.05.2022	-	26.06.2022
Revision Week	1 week	27.06.2022	-	03.07.2022
Semester II Final Examination	2 weeks*	04.07.2022	-	17.07.2022
	20 weeks			

SEMESTER BREAK				
Break	9 weeks*	18.07.2022	-	18.09.2022

Grading Scheme

Marks	Grade	Grade Point	Achievement
90.00 - 100.00	A+	4.0	High Distinction
80.00 - 89.99	A	4.0	Distinction
75.00 - 79.99	A-	3.7	Distinction
70.00 - 74.99	B+	3.3	Good
65.00 - 69.99	B	3.0	Good
60.00 - 64.99	B-	2.7	Good
55.00 - 59.99	C+	2.3	Pass
50.00 - 54.99	C	2.0	Pass
45.00 - 49.99	C-	1.7	Fail
40.00 - 44.99	D+	1.3	Fail
35.00 - 39.99	D	1.0	Fail
00.00 - 34.99	F	0.0	Fail

For more information, please refer to University of Malaya (Bachelor's Degree) Regulations 2019.

An Example of GPA and CGPA Calculation				
Semester 1				
Course	**Grade**	**Grade Point**	**Credit**	**Credit × Grade Point**
Course 1	A+	4.0	4	4×4.0 = 16.0
Course 2	C+	2.3	3	3×2.3 = 6.9
Course 3	C-	1.7	3	3×1.7 = 5.1
Course 4	C	2.0	3	3×2.0 = 6.0
Total			13	34.0
Credit counted: 13 Total credits accumulated: 13		Total grade point: 34.0 Total grade point obtained: 34.0		
GPA = 34.0/13 = 2.62				
Semester 2				
Course	**Grade**	**Grade Point**	**Credit**	**Credit × Grade Point**
Course 5	B+	3.3	3	3×3.3 = 9.9
Course 6	B	3.0	3	3×3.0 = 9.0
Course 7	C	2.0	3	3×2.0 = 6.0
Total			9	24.9
Credit counted: 9 Total credits accumulated: 22		Total grade point: 24.9 Total grade point obtained: 58.9		
GPA = 24.9/9 = 2.77		**CPGA = 58.9/22 = 2.68**		

Academic Advisors

An academic advisor

- *assists students in selecting courses and the number of credits prior to the commencement of the semester, and*
- *provides guidance to students in overcoming problems related to learning, if any, based on the students' academic performance.*

Refer to University of Malaya (Bachelor's Degree) Rules 2019 available at https://umsitsguide.um.edu.my/.

Session 2021/2022

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B.Sc. in Statistics

Buddy System

Connect through this system to

- *create and share experiences,*
- *talk about and solve problems together, and*
- *many more.*

Buddy group assignment and more information may be found at https://ism.um.edu.my/buddy-system.

Related Matters

Kaedah-kaedah Universiti Malaya (Ijazah Sarjana Muda) 2019
University of Malaya (Bachelor's Degree) Rules 2019

Peraturan-peraturan Universiti Malaya (Ijazah Sarjana Muda) 2019
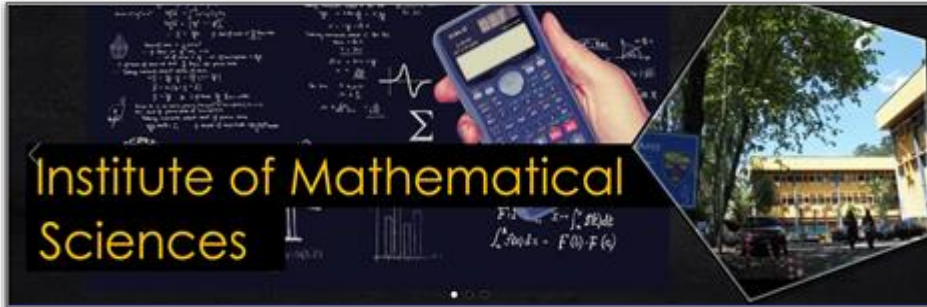*University of Malaya (Bachelor's Degree) Regulations 2019*

Available at the **Download** section of:
https://umsitsguide.um.edu.my/

Faculty of Science, Universiti Malaya

https://fs.um.edu.my/

Institute of Mathematical Sciences

https://ism.um.edu.my/

WhatsApp Group for Statistics Students Enrolling in Session 2021/2022

https://chat.whatsapp.com/CxF8q9eknBRFIgicQksp3g

	MAYA
UNIVERSITI MALAYA — Academic Portal MAYA	http://maya.um.edu.my/
SPeCTRUM — Student Powered e-Collaboration Transforming UM — Bringing Learning to You... Whenever, Wherever	**SPeCTRUM**
	https://spectrum.um.edu.my/
THE NUCLEUS OF KNOWLEDGE — Search UM Library Resources — All / E-Journal / E-Book — Search all — Search — Advanced Search	**Library Resources**
	https://umlib.um.edu.my/
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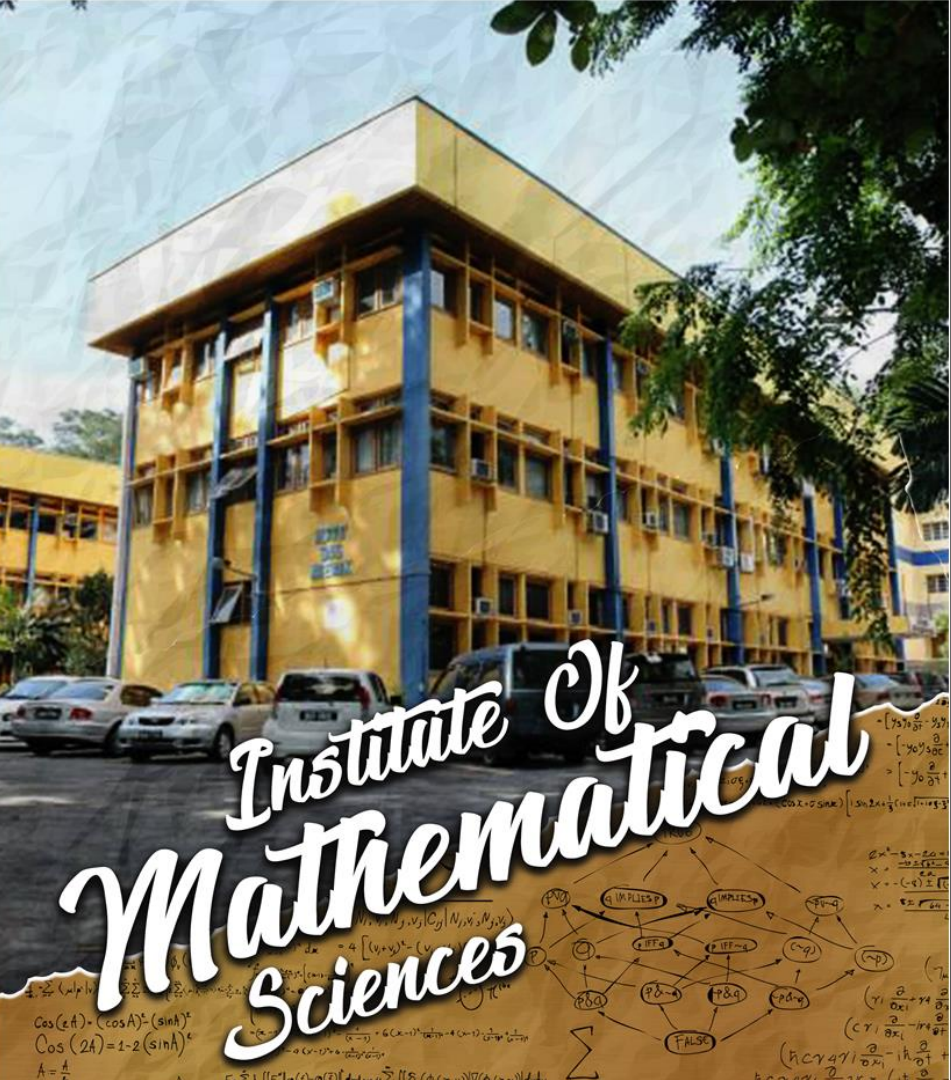
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