




**2023/2024  
SESSION**

# **UNDERGRADUATE KIT**

**BACHELOR OF COMPUTER SCIENCE  
(DATA SCIENCE)**



**FACULTY OF COMPUTER SCIENCE  
& INFORMATION TECHNOLOGY  
UNIVERSITI MALAYA**

**ACADEMIC CALENDAR SESSION 2023/2024**

<b>ACADEMIC CALENDAR 2023/2024 ACADEMIC SESSION (BACHELOR DEGREE LEVEL)</b>				
<b>SEMESTER I</b>				
Orientation ( <i>Week of Welcome</i> ) - WOW	1	week	01.10.2023	- 08.10.2023
Lectures	7	weeks*	09.10.2023	- 26.11.2023
Mid Semester I Break	1	week	27.11.2023	- 03.12.2023
Lectures	7	weeks*	04.12.2023	- 21.01.2024
Revision Week	1	week*	22.01.2024	- 28.01.2024
Semester I Final Examination	2	weeks*	29.01.2024	- 11.02.2024
Semester Break	3	weeks	12.02.2024	- 03.03.2024
	22	weeks		
<b>SEMESTER II</b>				
Lectures	5	weeks*	04.03.2024	- 07.04.2024
Mid Semester II Break	1	week	08.04.2024	- 14.04.2024
Lectures	9	weeks*	15.04.2024	- 16.06.2024
Revision Week	1	week*	17.06.2024	- 23.06.2024
Semester II Final Examination	2	weeks*	24.06.2024	- 07.07.2024
	18	weeks		
<b>SEMESTER BREAK</b>				
Break	9	weeks*	08.07.2024	- 08.09.2024
<b>SPECIAL SEMESTER</b>				
Lectures	7	weeks*	08.07.2024	- 25.08.2024
Special Semester Final Examination	1	week*	26.08.2024	- 01.09.2024
Break	1	week	02.09.2024	08.09.2024
	9	weeks		

**Note:**

(\*) The Academic Calendar has taken into account public and festive holidays and is subject to change:

Maulidur Rasul	28 September 2023	Eidul Fitri	10 & 11 April 2024
Deepavali	12 November 2023	Labour Day	01 May 2024
Christmas Day	25 December 2023	Wesak Day	22 May 2024
New Year	01 January 2024	His Majesty the King's Birthday	03 June 2024
Thaipusam	25 January 2024	Eidul Adha	17 June 2024
Federal Territory Day	01 February 2024	Awal Muharam	07 July 2024
Chinese New Year	10 & 11 February 2024	National Day	31 August 2024
Nuzul Al-Quran	28 March 2024	Malaysia Day	16 September 2024

**COURSE PLANNING FOR ACADEMIC SESSION 2023/2024**  
**BACHELOR OF COMPUTER SCIENCE (DATA SCIENCE)**

COURSE CODE	COURSE COMPONENT	CREDITS	SEMESTER
	UNIVERSITY COURSES		
GIG1012 / GLT1017	Philosophy and Current Issues <i>(for local student only)</i> / Basic Malay Language <i>(for international student)</i>	2	1
GIG1013	Appreciation of Ethics and Civilizations	2	2
GIG1003	Basic Entrepreneurship	2	2
GIG1004	Information Literacy	2	2
GIG1005	Social Engagement	2	2
GLTXXXX	English for Communication (1)	3	1
GLTXXXX	English for Communication (2)	3	2
	Co-Curriculum	2	1
	External Faculty Elective	2	1
	<b>Total</b>	<b>20</b>	
COURSE CODE	FACULTY CORE COURSES	CREDITS	SEMESTER
WIX1001	Computing Mathematics I	3	1
WIX1002	Fundamentals of Programming	5	1
WIX1003	Computer System and Organization	3	1
WIX2001	Thinking and Communication Skills	3	1
WIX2002	Project Management		
	<b>Total</b>	<b>17</b>	
COURSE CODE	PROGRAMME CORE COURSES	CREDITS	SEMESTER
WIE2003	Introduction to Data Science	3	2
WIA1001	Information Systems	3	1
WIA1002	Data Structure	5	2
WIA1003	Computer System Architecture	3	2
WIA1005	Network Technology Foundation	4	2
WIA2001	Database	3	1
WIA2002	Software Modelling	3	1
WIA2003	Probability and Statistics	3	1
WIA2004	Operating Systems	4	2
WID3006	Machine Learning	3	2
WIA3001	Industrial Training*	12	1
WIH3001	Data Science Project**	3	1
WIH3002	Data Science Industrial Training*	14	2
	<b>Total</b>	<b>63</b>	
COURSE CODE	FACULTY ELECTIVE COURSES (Choose only 2 courses)	CREDITS	SEMESTER
WIX3001	Soft Computing	3	1 atau 2
WIX3002	Social Informatics	3	1 atau 2
WIX3003	Information Security Management and Ethics	3	1 atau 2
WIC2004	Internet Technology	3	1 atau 2
	<b>Total</b>	<b>6</b>	
COURSE CODE	SPECIALIZATION ELECTIVE COURSES (Choose only 6 courses)	CREDITS	SEMESTER
WIH2001	Data Analytics	3	2
WID2001	Knowledge Representation and Reasoning	3	2
WID2002	Computing Mathematics II	3	2
WID3001	Functional and Logic Programming	3	2
WID3002	Natural Language Processing	3	2
WIE3007	Data Mining and Warehousing	3	1
WIE3008	Business Analytics and Intelligence	3	1
WIE3010	Data Visualization	3	1
WIH3003	Big Data Applications and Analytics	3	1
WIH3004	Trends in Data Science	3	2
	<b>Total</b>	<b>18</b>	
<b>TOTAL CREDITS FOR GRADUATION</b>		<b>124</b>	

# Pre-requisite.

\* Taken all Faculty and Programme Core Courses except Academic Project I and Academic Project II.

\*\* Pass all Faculty and Programme Core Courses except for Industrial Training and Academic Project

**COURSE PLANNING FOR BACHELOR OF COMPUTER SCIENCE (DATA SCIENCE)**  
**ACADEMIC SESSION 2023/2024**

YEAR	Course Code	Semester 1	Credits	Course Code	Semester 2	Credits
1	GIG1012 / GLT1017	Philosophy and Current Issues <i>(for local student only)</i> / Basic Malay Language <i>(for international student)</i>	2	GIG1013	Appreciation of Ethics and Civilizations	2
	WIX1001	Computing Mathematics I	3	GIG1004	Information Literacy	2
	WIX1002	Fundamentals of Programming	5	GIG1005	Social Engagement	2
	WIX1003	Computer System and Organization	3	WIA1002	Data Structure (#WIX1002)	5
	WIA1001	Information Systems	3	WIA1003	Computer System Architecture (#WIX1003)	3
				WID3006	Machine Learning	3
				WIE2003	Introduction to Data Science	3
		<b>Total</b>	<b>16</b>		<b>Total</b>	<b>20</b>
YEAR	Course Code	Semester 1	Credits	Course Code	Semester 2	Credits
2		English for Communication (1)	3		Co-Curriculum	2
	GIG1003	Basic Entrepreneurship Skills	2		English for Communication (2)	3
	WIX2001	Communication Thinking and Skills	3	WIA2004	Operating Systems	4
	WIX2002	Project Management	3	WIA1005	Network Technology Foundation	4
	WIA2001	Database	3		Specialization Elective (1)	3
	WIA2002	Software Modelling	3		Specialization Elective (2)	3
	WIA2003	Probability and Statistics	3		Faculty Elective (1)	3
			<b>Total</b>	<b>20</b>		<b>Total</b>
YEAR	Course Code	Semester 1	Credits	Course Code	Semester 2 (Industry)	Credits
3	WIH3001	Data Science Project	3	WIH3002	Data Science Industrial Training	14
		Specialization Elective (3)	3			
		Specialization Elective (4)	3			
		Specialization Elective (5)	3			
		Specialization Elective (6)	3			
		Faculty Elective (2)	3			
		External Faculty Elective	2			
		<b>Total</b>	<b>20</b>		<b>Total</b>	<b>14</b>
YEAR	Course Code	Semester 1 (Industry)	Credits	Credit Distribution		
4	WIA3001	Industrial Training	12	Course Component	Credits	
				University Courses	20	
				Faculty Core Courses	17	
				Faculty Elective Courses	6	
				Programme Core Courses	63	
				Specialization Elective Courses	18	
		<b>Total</b>	<b>12</b>	<b>TOTAL CREDITS FOR GRADUATION</b>		<b>124</b>

**UNIVERSITY ENGLISH LANGUAGE COURSES**  
**FACULTY OF LANGUAGES AND LINGUISTICS**  
**LIST OF COURSES TO BE COMPLETED BY STUDENTS FROM DATA SCIENCE PROGRAMME ONLY**  
**2023/2024 ACADEMIC SESSION**

PATH 1	PATH 2	PATH 3	PATH 4
<ul style="list-style-type: none"> <li>● MUET BAND 2</li> <li># IELTS Band 4</li> <li># TOEFL Paper – Based Test (437 – 473) / Computer – Based Test (123 – 150) / Internet – Based Test (41 – 52)</li> </ul>	<ul style="list-style-type: none"> <li>● MUET BAND 3</li> <li># IELTS Band 4.5 – 5</li> <li># TOEFL Paper – Based Test (477 – 510) / Computer – Based Test (153 – 180) / Internet – Based Test (53 – 64)</li> </ul>	<ul style="list-style-type: none"> <li>● MUET BAND 4</li> <li># IELTS Band 5.5 – 6 ##</li> <li># TOEFL Paper – Based Test (513 – 547) / Computer – Based Test (183 – 210) / Internet – Based Test (65-78)</li> <li># A' Levels English (University of Cambridge, London) – Minimum C</li> </ul>	<ul style="list-style-type: none"> <li>● MUET BAND 5 &amp; BAND 6</li> <li># IELTS Band 6.5 – 9.0</li> <li># TOEFL Paper – Based Test (550 – 677) / Computer – Based Test (213 – 300) / Internet – Based Test (79 – 120)</li> <li># A' Levels English (University of Cambridge, London) – Minimum B or A</li> </ul>
<p><b><u>COMPULSORY -</u></b> (3 Courses x 2 Credit Hours)</p> <ul style="list-style-type: none"> <li>● GLT1002 - Mastering English I</li> <li>● GLT1003 - Mastering English II</li> <li>● GLT1004 - Mastering English III</li> </ul>	<p><b><u>COMPULSORY -</u></b> (2 Courses x 3 Credit Hours)</p> <ul style="list-style-type: none"> <li>● GLT1005 - Mastering English IV [Pre-requisite]</li> </ul> <p><b>** <u>PILIH SATU:</u></b></p> <ul style="list-style-type: none"> <li>● GLT1006 - Mastering English V</li> <li>● GLT1007 - Essential Writing Skills</li> <li>● GLT1008 - Effective Communication</li> </ul>	<p><b><u>COMPULSORY -</u></b> (2 Courses x 3 Credit Hours)</p> <ul style="list-style-type: none"> <li>● GLT1009 - Mastering English VI [Pre-requisite]</li> </ul> <p><b>** <u>PILIH SATU:</u></b></p> <ul style="list-style-type: none"> <li>● GLT1010 - Mastering English VII</li> <li>● GLT1011 - Technical Writing Skills in English</li> <li>● GLT1012 - Presentation Skills in English</li> <li>● GLT1013 - Reading Critically</li> </ul>	<p><b><u>COMPULSORY -</u></b> (2 Courses x 3 Credit Hours)</p> <ul style="list-style-type: none"> <li>● GLT1014 – Advanced Communication Skills</li> <li>● GLT1015 – Advanced Professional Writing</li> </ul>

*\*\* 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.*

# MANUAL FOR ENROLMENT PROCESS FLOW



## UMSItS ENROLMENT

Dear Students,

To ensure the registration process runs smoothly, it is advisable for students to complete the Module Registration first. You are encouraged to Generate Pre-Invoice during non peak hours followed by Enrolment Activation.



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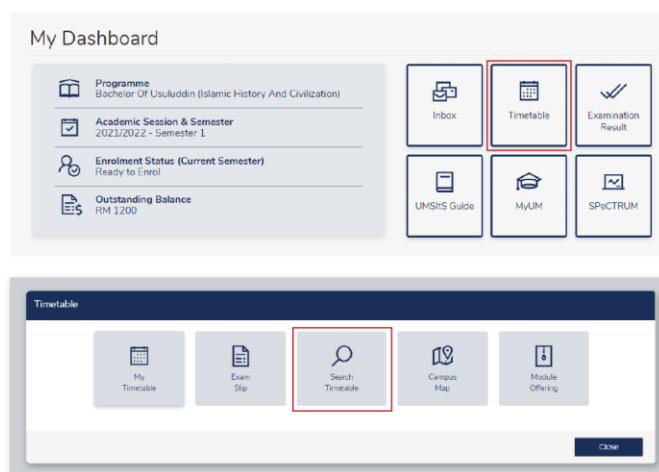
# MANUAL FOR MODULE REGISTRATION



## MAYA PORTAL

### MODULE REGISTRATION | UNDERGRADUATE & POSTGRADUATE SEMESTER SYSTEM

#### Step 1: Search Timetable



1. Click on the **Timetable** menu and choose **Search Timetable** to check details of the module i.e. location, lecturer's name, day and time.
2. Please check timetable prior to the module registration. This to ensure that the registration process runs smoothly without any clashes.

#### Important Notes:

1. Year = The first four digit of the Academic Session. i.e. 2019/2020= 2019
2. Slot: Semester System period slots are:
  - i. S1: Semester 1
  - ii. S2: Semester 2
  - iii. SS: Semester 3
  - iv. R1: Semester 1 Research Mode
  - v. R2: Semester 2 Research Mode
  - vi. E1: Semester 1 AEI
  - vii. E2: Semester 2 AEI
  - viii. ES: Semester 3 AEI

#### Important Notes:

1. Year = The first four digit of the Academic Session. i.e. 2019/2020= 2019
2. Slot: Semester System period slots are:
  - i. S1: Semester 1
  - ii. S2: Semester 2
  - iii. SS: Semester 3
  - iv. R1: Semester 1 Research Mode
  - v. R2: Semester 2 Research Mode
  - vi. E1: Semester 1 AEI
  - vii. E2: Semester 2 AEI
  - viii. ES: Semester 3 AEI

## MAYA PORTAL

### MODULE REGISTRATION | UNDERGRADUATE & POSTGRADUATE SEMESTER SYSTEM

#### Step 2: Select Module – Add module to cart

TAKE 12 CREDIT(S) FROM TF0: FACULTY CORE COURSE (KURSUS TERAS FAKULTI)

[View List](#)

AND

TAKE 27 CREDIT(S) FROM EP0: PROGRAM ELECTIVE COURSE (KURSUS ELEKTIF PROGRAM)

[Hide List](#)

Module Search

Module	Name	Sem	Occ	Add
IIK1002	ISLAMIC CIVILISATION IN AFRICA AND EUROPE	S2	1	<a href="#">Add</a>
IIK1003	ISLAMIC CIVILISATION DURING OTTOMAN PERIOD	S2	1	<a href="#">Add</a>
IIK2006	ISLAMIC HERITAGE IN NUSANTARA	S2	1	<a href="#">Add</a>

1. Click **View List** to view modules offered.
2. Search for your module.
3. Click **Add** to register module. Choose the correct occurrence/occ(Grouping).
4. Continue **Add** module if you have more than 1 module to register.

#### Important Notes:

1. Modules listed are based on the
  - i. DIET/programme structure; and
  - ii. Offer for that particular semester.
2. Refer to your faculty if modules in your DIET are not listed but are offered for that semester.
3. Please go to Request Enrolment Module to register Off DIET module (Module not in your programme structure). This will not contribute to your fulfillment but will be counted in your GPA/CGPA.



## MAYA PORTAL

### MODULE REGISTRATION | UNDERGRADUATE & POSTGRADUATE SEMESTER SYSTEM

#### Step 3: Module Selection – Save selection & check clashes

All Selections
Current Block Selections

Selected Modules

Module Code	Module Name	Semester	Occ	🗑️	✔️
GBA0021	APPRECIATING LITERATURE	S2	1	🗑️	✔️
GBC0004	PERSONAL FINANCE	S2	1	🗑️	✔️
GIG1012	PHILOSOPHY AND CURRENT ISSUES	S2	1	🗑️	✔️

Totals

Overall Progress	Required	Current	✔️
Current Session progress			
Credits in SEMESTER 1 or SEMESTER 2	1 - 22	6	✔️
Credits in SPECIAL SEMESTER	1 - 10	0	✔️

Add Selected Modules

1. Click submit selection to proceed with module registration after Add Selected Modules to check on clashes.

#### Important Notes:

1. At this stage, module is **only saved** and check **for clashes**.
2. It is **NOT** considered as registered modules.
3. System will display **Pop Message** if any of the selection modules has a clash.

## MAYA PORTAL

### MODULE REGISTRATION

### UNDERGRADUATE & POSTGRADUATE SEMESTER SYSTEM

#### Step 4: Module Selection Verification

**Module(s) to Verify**

Selected a total of 3 module(s) which total 6 credit(s)

Academic Session	Semester	Module Code	Module Name	Credits	Occurrence	Selection Status
2021	S2	GBA0021	APPRECIATING LITERATURE	2.00	1	ELO
2021	S2	GBC0004	PERSONAL FINANCE	2.00	1	ELO
2021	S2	GIG1012	PHILOSOPHY AND CURRENT ISSUES	2.00	1	KUO

1. Click **Verify Module Selection** to proceed with registration and to **book** for the module selection.

#### Important Notes:

1. At this stage, the module is considered as Pre-Registration **BUT** it is **NOT** considered as **CONFIRMED REGISTRATION**.
2. Student can continue to Add/Drop module.

#### Step 5: Return to 2.1 Module Selection – Add/drop modules after verification

**Module(s) to Submit**

Selected a total of 3 module(s) which total 6 credit(s)

Academic Session	Semester	Module Code	Module Name	Credit	Occurrence	Selection Status
2021	S2	GIG1012	PHILOSOPHY AND CURRENT ISSUES	2.00	1	KUO
2021	S2	GBA0021	APPRECIATING LITERATURE	2.00	1	ELO
2021	S2	GBC0004	PERSONAL FINANCE	2.00	1	ELO

1. Click Return to 2.1 Module Selection if you wish to Add/Drop module selection.

#### Important Note:

1. You may add/drop modules after the selection made at the **Module Selection Submission** stage.

**OR**

#### Step 5: Submit Module Selection – Continue Registration

**Module(s) to Submit**

Selected a total of 3 module(s) which total 6 credit(s)

Academic Session	Semester	Module Code	Module Name	Credit	Occurrence	Selection Status
2021	S2	GIG1012	PHILOSOPHY AND CURRENT ISSUES	2.00	1	KUO
2021	S2	GBA0021	APPRECIATING LITERATURE	2.00	1	ELO
2021	S2	GBC0004	PERSONAL FINANCE	2.00	1	ELO

1. Click Next to continue with registration, if there is no amendment to the module selected.

#### Important Note:

1. This will proceed with Generate Pre-Invoice.

## MAYA PORTAL

### MODULE REGISTRATION

### UNDERGRADUATE & POSTGRADUATE SEMESTER SYSTEM

#### 3.1 Pre-Invoice

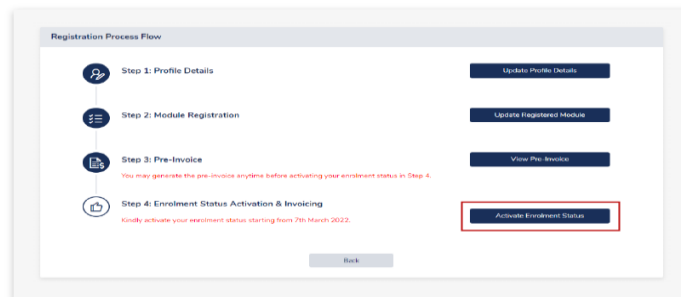
Below is the estimated fee for current semester. Actual invoice will be raised in Step 4: Enrolment Status Activation & Invoicing.

##### Fees Charge Estimation

No.	Description	Amount (RM)
1	HEALTH	20.00
2	ICT SERVICE FEE	100.00
3	INSURANCE UNDERGRADUATE	6.00
4	LIBRARY	100.00
5	SPORT AND RECREATION	10.00
6	WELFARE FEES	5.00
7	JOURNAL - USULUDDIN	7.50
8	TUITION FEES	901.50
Total		1,150.00

[Back](#)

### Step 6: Enrolment Status Activation & Invoicing – Confirm Module Registration And Ready to Receive Invoice



1. Click on the **Activate Enrolment Status** button at Step 4: Enrolment Status Activation & Invoicing section to confirm on the modules that have been submitted for selection.

#### Important Notes:

1. Confirm the registration after you are satisfied with all the modules selected.
2. At this stage you have finalized the selected modules to register for the semester.
3. Do not confirm registration if you are not sure what module to enrol for that semester. But this must be done **before end of module registration period**.
4. Invoice will be generated after confirming the registration.
5. Changes to the module enrolment are **NOT ALLOWED** after registration confirmation. (No more Add/Drop)
6. Changes to the module enrolment after confirmation can be done after Week 2. The implication is that Fees is **NOT** Refundable.

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