



XIAMEN UNIVERSITY MALAYSIA

廈門大學 馬來西亞分校

PROGRAMME HANDBOOK

BACHELOR OF ENGINEERING IN DIGITAL MEDIA TECHNOLOGY (HONOURS)

ACADEMIC SESSION: 2026/09



Academic Affairs Office

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1. UNIVERSITY VISION AND MISSION

Vision

- Xiamen University Malaysia aspires to become a university with a distinct global outlook, featuring first-class teaching and research, and embracing cultural diversity.

Mission

- To nurture young talents with dignity and wisdom, turning them into fine citizens of the region who will contribute to the prosperity of the people and social progress of Malaysia, China and Southeast Asia.

2. PROGRAMME AIMS

The aim of Bachelor of Engineering in Digital Media Technology (DMT) is to equip graduates with a comprehensive foundation that permits them to adapt to ever-changing DMT and industry, and to learn how to manage the industry chain related with DMT. This includes DMT core theories and practices for the analysis, evaluation, design, development, implementation and management of computer animation, computer games, and human computer interaction software.

3. PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

The PEOs are to produce graduates who are:

PEO1

Digital Media Technology practitioners who are technically competent in the digital media technology discipline and demonstrate ethical conduct and professional practices in line with the industry requirement.

PEO2

Digital Media Technology practitioners who possess communication skills and demonstrate leadership, interpersonal skills, and entrepreneurial skills.

PEO3

Digital Media Technology practitioners who engage in lifelong learning and career development.

4. PROGRAMME LEARNING OUTCOMES (PLO)

At the end of the programme, graduates will be able to:

PLO1	Knowledge and Understanding	Describe concepts and techniques, design tools, methodologies and demonstrate relevant skills in the field of digital media technology.
PLO2	Cognitive Skills	Apply theoretical knowledge, technical and problem solving skills to conceptualize, identify, analyze, evaluate, and solve digital media technology related problems.
PLO3	Practical Skills	Perform a range of digital media methods and procedures to solve a broad range of complex problems in digital media technology field.
PLO4	Interpersonal Skills	Demonstrate effective interaction when working together with diverse stakeholders.
PLO5	Communication Skills	Communicate effectively both orally and in written form with diverse stakeholders.
PLO6	Digital Skills	Use digital technology and application software to solve problems in the field of digital media technology.
PLO7	Numeracy Skills	Apply numerical skills for problem-solving in the field of digital media technology.
PLO8	Leadership, Autonomy and Responsibility	Demonstrate teamwork, decision making, accountabilities, and leadership in the field of digital media technology.
PLO9	Personal Skills	Exhibit self-development and self-learning capabilities for continuous improvement.
PLO10	Entrepreneurial Skills	Demonstrate entrepreneurial skills/mindset in delivering digital media technology solutions.
PLO11	Ethics and Professionalism	Demonstrate professionalism, social and ethical considerations within the practice of digital media technology field.

5. EXPECTED AREAS OF GRADUATE EMPLOYMENT

Digital media industry and related fields, such as Human Computer Interaction, Animation and Game companies.

6. CURRICULUM STRUCTURE

The minimum requirement for graduation will be **145** credits, with all the components meeting the minimum credit values specified in Table 1.

Table 1: Components of the Programme and its Value

	Course Classification	Credit Value	Percentage (%)
1	Compulsory courses/modules	12	8.3%
2	Core/Major(s)/Specialisation:		
	• Common Core	30	20.7%
	• Major Core	33	22.8%
	• Final Year Project	9	6.2%
3	Optional/elective courses:		
	• Major Elective	39	26.9%
	• General Elective	16	11.0%
4	Minor courses (if applicable)		
5	Industrial training/Practicum	6	4.1%
6	Others (specify):		
	Total Credit Value	145	100.0%

Compulsory Courses

Compulsory Courses refer to *Mata Pelajaran Pengajian Umum (MPU)*, or General Studies, which is a compulsory component of undergraduate education in Malaysia as mandated by the Ministry of Higher Education (MoHE), as shown in Table 2a below.

MPU aims to develop well-rounded graduates by complementing academic studies with broader knowledge, essential skills, ethical values, and social responsibility. Through courses that promote critical thinking, effective communication, integrity, and community engagement, MPU prepares students to become responsible citizens and lifelong learners in an increasingly interconnected world.

Table 2a: Components of the **Compulsory** Courses and its Value

No.	Name of Course	Course Code	Credit Value	International	Malaysian
U1 (3 courses @ 2 credits per course) Philosophy, Values & History Appreciation					
1	Bahasa Melayu Komunikasi 2	MPU1012	2	√	-
2	Integriti dan Antirasuah (Integrity and Anti-Corruption)	MPU1022	2	√	√
3	Aspirasi Negara Bangsa (Malaysian Nation-State Aspiration)	MPU1032	2	-	√
4	Falsafah dan Cabaran Semasa	MPU1042	2	-	√
5	Citra Malaysia (Malaysian Citra)	MPU1052	2	√	-
U2 (1 course @ 2 credits) Soft Skills					
6	Bahasa Kebangsaan A	MPU2012	2	-	1. Fail Bahasa Melayu SPM OR 2. Scored below C/ without credit in Bahasa Melayu SPM
7	Writing for Professional Purposes	MPU2022	2	√	1. Malaysian students with a credit in BM at SPM OR 2. Took and Passed Bahasa Kebangsaan A in diploma level MUST take Writing for Professional Purposes.
U3 (1 course @ 2 credits) Knowledge About Malaysia					
8	Artificial Intelligence and Malaysia's Digital Economy	MPU3012	2	√	√
U4 (1 course @ 2 credits) Practical Course (Community Service, Motivational, Co-curriculum)					
9	Community Service	MPU4012	2	√	√
Total Credit Value (Compulsory Courses)			12		

General Elective Courses

General Elective Courses refer to courses designed to give students options beyond their major-related courses in order to diversify their scope of knowledge.

Students in Science field can choose courses they are interested in from Group I (Arts), Group II (Business) and Group IV (Artificial Intelligence) as shown in Table 2b. Students in Digital Media Technology shall achieve at least a total of 16 credits with each group meets the minimum requirement of 1 course.

Table 2b: Components of the **General Elective** Courses and its Value

No.	Name of Course	Course Code	Credit Value	Remarks
Group I (Arts)				
	Group I comprises general elective courses in the field of Arts such as <i>Art Appreciation, Basic Korean Language, and Communication Skills for Job Search.</i>	G01XX/ G11XX		Minimum 1 course
Group II (Business)				
	Group II comprises general elective courses in the field of Business such as <i>Introduction to Finance, Entrepreneurship and Sustainable Development, and Introduction to International Business.</i>	G02XX		Minimum 1 course
Group IV (Artificial Intelligence)				
	Group IV comprises general elective courses in the field of Artificial Intelligence , comprising: • Discipline-based (Compulsory) • General (Optional)	G04XX		Minimum 1 course
Total Credit Value (General Elective Courses)			16	

*Note: The courses listed are provided as examples for reference only. The actual general elective courses offered may vary each semester. Students should refer to the **General Elective Course Library** for the list of general elective courses available in a particular semester.*

Common Core Courses

Common Core Courses refer to essential courses offered for students in different majors but in the same field according to disciplinary development rules.

Table 2c: Components of the **Common Core** Courses and its Value

No.	Name of Course	Course Code	Credit Value
1	Discrete Mathematics B	BSC136	3
2	Computer Fundamentals	SOF102	3
3	Principles of Information Systems	SOF104	2
4	Data Structure	SOF105	4
5	Introduction of Software Engineering	SOF107	3
6	Computer Architecture	SOF108	3
7	Operating Systems	SOF201	4
8	Fundamentals of Network Technology	SOF203	4
9	Software Architecture and Design Patterns	SOF204	4
Total Credit Value (Common Core Courses)			30

Major Core Courses

Major Core Courses refer to courses designed to meet the core educational objectives; each major has its own features.

Table 2d: Components of the **Major Core** Courses and its Value

No.	Name of Course	Course Code	Credit Value
1	Computer Graphics	DMT201	4
2	Introduction to Game Design	DMT202	4
3	Fundamentals of Computer Animation	DMT203	4
4	3D Modeling	DMT301	4
5	Human Computer Interaction	DMT212	3
6	Mobile Application System Design	DMT321	3
7	C and C++Programming	SOF103	4
8	Principles of Artificial Intelligence	SOF106	3
9	Database	SOF202	4
Total Credit Value (Major Core Courses)			33

Table 2e: Components of the Research Academic Project and its Value

No.	Name of Course	Course Code	Credit Value
1	Fundamental Research in Academic Project	DMT401	3
2	Digital Media Technology Academic Project	DMT402	6
Total Credit Value (Research Academic Project)			9

Table 2f: Components of the **Industrial Training** and its Value

No.	Name of Course	Course Code	Credit Value
1	Industrial Training	DMT403	6
Total Credit Value (Industrial Training)			6

Major Elective Courses

Major Elective Courses refer to courses designed to help students to identify their interested field or direction within the major, which enable them to be better prepared for their career's pathways.

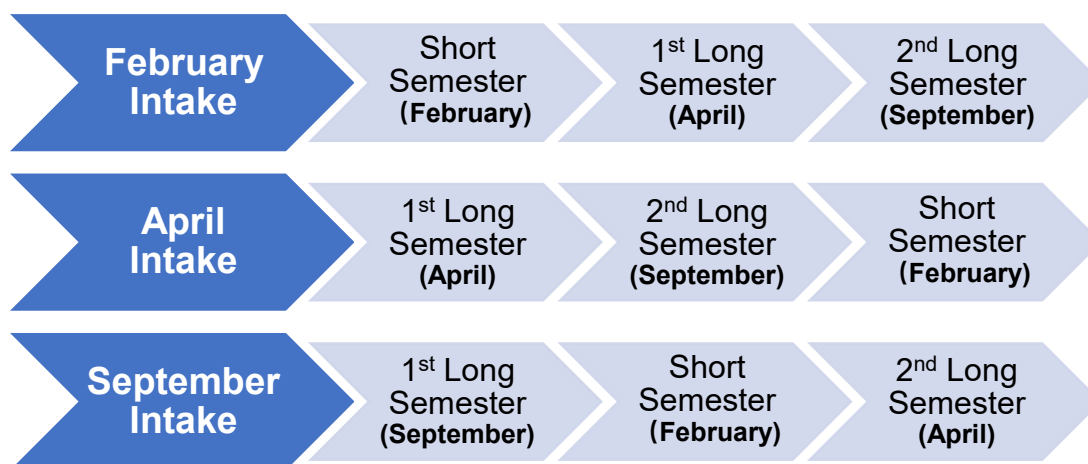
For major elective courses, students are required to choose designated courses based on table below:

Table 2g: Components of the **Major Elective** Courses and its Value

No.	Name of Course	Course Code	Credit Value	Remarks
	<u>Group 1</u>			
1	Algorithm Analysis and Design	DMT211	3	Students are to choose two (2) courses (6 credits)
2	Audio-visual Language	DMT213	3	
3	Game Development	DMT312	3	
	<u>Group 2</u>			
4	Non-linear Editing	DMT311	3	Students are to choose four (4) courses (12-13 credits)
5	XML Design Technology	DMT313	3	
6	Virtual Reality	DMT314	3	
7	Software Project Management	DMT315	4	
8	Embedded Game Design and Development	DMT319	3	
	<u>Group 3</u>			
9	3D Animation	DMT316	3	Students are to choose four (4) courses (12 credits)
10	Digital Synthesis Technology	DMT317	3	
11	Online Game Development	DMT318	3	
12	Digital Audio Technology	DMT320	3	
13	Information Visualization	DMT322	3	
	<u>Group 4</u>			
12	Information Security	SWE308	3	Students are to choose three (3) courses (9 credits)
13	Augmented Reality Technology and Design	DMT412	3	
14	Big Data Analytics	DMT413	3	
15	Game Engine Design	DMT414	3	
Total Credit Value (Major Elective Courses)			39	

7. LIST OF COURSES OFFERED FOR EACH ACADEMIC YEAR

There are three (3) semesters in each academic year: two (2) long semesters and one (1) short semester. The sequence of course registration varies according to the intake:



Students should be aware that the total number of credits shall not exceed **20** for long semester and **7** for a short semester.

It is important to note that the arrangement of courses for each academic year listed below is subject to change based on programme needs or institutional requirements.

Year	Semester	Course Name	Course Code	Classification	Credit
Year 1	1 st Long Semester	Discrete Mathematics B	BSC136	Common Core	3
		Computer Fundamentals	SOF102	Common Core	3
		C and C++ Programming	SOF103	Major Core	4
		Principles of Information Systems	SOF104	Common Core	2
		Bahasa Melayu Komunikasi 2	MPU1012	Compulsory	2
		Aspirasi Negara Bangsa (Malaysian Nation-State Aspiration)	MPU1032	Compulsory	
		Citra Malaysia (Malaysian Citra)	MPU1052	Compulsory	2
		Falsafah dan Cabaran Semasa	MPU1042	Compulsory	
		Integriti dan Antirasuah (Integrity and Anti-Corruption)	MPU1022	Compulsory	2
		Total Credit Value			18
	2 nd Long Semester	Data Structure	SOF105	Common Core	4
		Introduction of Software Engineering	SOF107	Common Core	3
		Computer Architecture	SOF108	Common Core	3
		Fundamentals of Network Technology	SOF203	Common Core	4
		Bahasa Kebangsaan A	MPU2012	Compulsory	2
		Writing for Professional Purposes	MPU2022	Compulsory	

Year	Semester	Course Name	Course Code	Classification	Credit
Year 2		Artificial Intelligence and Malaysia's Digital Economy	MPU3012	Compulsory	2
		Total Credit Value			18
	Short Semester	General Elective Course Select from Table 2b	Gxxxx	General Elective	6
		Total Credit Value			6
	1 st Long Semester	Principles of Artificial Intelligence	SOF106	Major Core	3
		Operating Systems	SOF201	Common Core	4
		Database	SOF202	Major Core	4
		Software Architecture and Design Patterns	SOF204	Common Core	4
		Introduction to Game Design	DMT202	Major Core	4
		Total Credit Value			19
	2 nd Long Semester	Computer Graphics	DMT201	Major Core	4
		Fundamentals of Computer Animation	DMT203	Major Core	4
		Human Computer Interaction	DMT212	Major Core	3
		*Student to choose 2 courses (6 credits):			
		Algorithm Analysis and Design	DMT211	Major Elective	3
		Audio-visual Language	DMT213	Major Elective	3
		Game Development	DMT312	Major Elective	3
		Total Credit Value			17
	Short Semester	General Elective Course Select from Table 2b	Gxxxx	General Elective	2
		Community Service	MPU4012	Compulsory	2
		Total Credit Value			4
		3D Modeling	DMT301	Major Core	4
		*Student to choose 4 courses (12-13 credits):			
		Non-linear Editing	DMT311	Major Elective	3
		XML Design Technology	DMT313	Major Elective	3
		Virtual Reality	DMT314	Major Elective	3
		Software Project Management	DMT315	Major Elective	4
		Embedded Game Design and Development	DMT319	Major Elective	3
		Total Credit Value			16
	2 nd Long Semester	Fundamental Research in Academic Project	DMT401	Academic Research Projects	3
		Mobile Application System Design	DMT321	Major Core	3
		*Student to choose 4 courses (12 credits):			
		3D Animation	DMT316	Major Elective	3
		Digital Synthesis Technology	DMT317	Major Elective	3
		Online Game Development	DMT318	Major Elective	3
		Digital Audio Technology	DMT320	Major Elective	3
		Information Visualization	DMT322	Major Elective	3
		Total Credit Value			18

Year	Semester	Course Name	Course Code	Classification	Credit
	Short Semester	General Elective Course Select from Table 2b	Gxxxx	General Elective	4
		Total Credit Value			4
Year 4	1 st Long Semester	Digital Media Technology Academic Project	DMT402	Academic Research Projects	6
		*Student to choose 3 courses (9 credits):			
		Information Security	SWE308	Major Elective	3
		Augmented Reality Technology and Design	DMT412	Major Elective	3
		Big Data Analytics	DMT413	Major Elective	3
		Game Engine Design	DMT414	Major Elective	3
		Total Credit Value			15
	2 nd Long Semester	Industrial Training	DMT403	Industrial Training	6
		Total Credit Value			6
	Short Semester	AI Applications in Science, Technology, and Business	G0402	General Elective	2
		General Elective Course Select from Table 2b	Gxxxx	General Elective	2
		Total Credit Value			4
Grand Total					145

8. PREREQUISITE COURSES

A prerequisite is a course that must be completed before taking a more advanced course.

Course Code	Course Name	Prerequisites
SOF105	Data Structure	SOF103 C and C++ Programming
SOF106	Principles of Artificial Intelligence	SOF103 C and C++ Programming SOF105 Data Structure
SOF108	Computer Architecture	SOF102 Computer Fundamentals
SOF201	Operating Systems	SOF108 Computer Architecture
SOF202	Database	SOF105 Data Structure
SOF203	Fundamentals of Network Technology	SOF103 C and C++ Programming
SOF204	Software Architecture and Design Patterns	SOF103 C and C++ Programming SOF105 Data Structure
DMT211	Algorithm Analysis and Design	SOF105 Data Structure
DMT212	Human Computer Interaction	SOF103 C and C++ Programming
DMT311	Non-linear Editing	DMT213 Audio-visual Language
DMT312	Game Development	SOF103 C and C++ Programming
DMT313	XML Design Technology	SOF103 C and C++ Programming SOF202 Database
DMT315	Software Project Management	SOF107 Introduction of Software Engineering
DMT316	3D Animation	DMT301 3D Modeling
DMT318	Online Game Development	SOF103 C and C++ Programming DMT202 Introduction to Game Design SOF203 Fundamentals of Network Technology
DMT319	Embedded Game Design and Development	SOF103 C and C++ Programming
DMT321	Mobile Application System Design	SOF103 C and C++ Programming SOF107 Introduction of Software Engineering
DMT322	Information Visualization	DMT201 Computer Graphics
DMT403	Industrial Training	Obtained at least 60% of total credit hours (CCE: 87) & CGPA: > 2.00
DMT412	Augmented Reality Technology and Design	DMT314 Virtual Reality
DMT413	Big Data Analytics	SOF108 Computer Architecture SOF201 Operating Systems
DMT414	Game Engine Design	SOF103 C and C++ Programming SOF107 Introduction of Software Engineering DMT202 Introduction to Game Design DMT312 Game Development
SWE308	Information Security	SOF201 Operating Systems SOF203 Fundamentals of Network Technology

9. IMPORTANT NOTE

Threshold Requirement

A grade threshold refers to the minimum number of marks that a student needs to obtain in a particular component of the course.

Digital Media Technology students must obtain a threshold mark of 40 in all assessment components, including the final examination, and an overall mark of 55 or above to pass a core / major / elective course.

Note: The above information is subject to change as new information becomes available in accordance with the guiding standards and requirements set by relevant authorities.