

CURRICULUM STRUCTURE

Students are required to complete a minimum of 120 credits to graduate with a Bachelor of Computer Science (Artificial Intelligence) with Honours. The programme components as follows:

BACHELOR'S DEGREE (COMPUTER SCIENCE) Minimum Graduating Credits – 120		
Component	Code	Credits
Mata Pelajaran Umum (MPU) Modules	W	14
Core Modules	P	45
Specialisation	K	30
Final Year Project	P	6
Industrial Training	P	12
Free Modules	E	13
Total		120

MATA PELAJARAN UMUM (MPU) MODULES (14 credits)

- BTMW 4012 Technology Entrepreneurship (Keusahawanan Teknologi)
- *BLHW 1702 Islamic and Asian Civilizations (Tamadun Islam dan Tamadun Asia – TITAS)
- **BLHW 2712 Ethnic Relations (Hubungan Etnik)
- BLHW 1442 English for Academic Purposes (Bahasa Inggeris untuk Tujuan Akademik)
- BLHW 2452 Academic Writing (Penulisan Akademik)
- BLHW 3462 English for Professional Interaction (Bahasa Inggeris untuk Interaksi Profesional)
- BKK* - - - - Co-Curriculum I (Kokurikulum I)
- BKK* - - - - Co-Curriculum II (Kokurikulum II)
- *BLHW 1942 Malaysia Studies (International)
- **BLHW 2752 Malaysian Culture (International)

CORE MODULES (45 credits)

- BITI 1213 Linear Algebra and Discrete Mathematics (Aljabar Linear dan Matematik Diskrit)
- BITI 1223 Calculus and Numerical Methods (Kalkulus dan Kaedah Berangka)
- BITI 2233 Statistics and Probability (Statistik dan Kebarangkalian)
- BITP 1113 Programming Technique (Teknik Pengaturcaraan)
- BITP 1123 Data Structure and Algorithm (Struktur Data dan Algorithma)
- BITM 2313 Human-Computer Interaction (Interaksi Komputer-Manusia)
- BITP 1323 Database (Pangkalan Data)
- BITP 3113 Object Oriented Programming (Pengaturcaraan Berorientasikan Objek)
- BITP 2213 Software Engineering (Kejuruteraan Perisian)
- BITS 1123 Computer Organization and Architecture (Organisasi dan Senibina Komputer)
- BITS 1213 Operating System (Sistem Pengoperasian)
- BITS 1313 Data Communication and Networking (Komunikasi Data dan Rangkaian)
- BITM 1113 Multimedia System (Sistem Multimedia)
- BITI 1113 Artificial Intelligence (Kepintaran Buatan)
- BITU 2913 Workshop I (Bengkel I)

SPECIALISATION MODULES (30 credits)

BITI 2213	Knowledge Based System (Sistem Berasaskan Pengetahuan)
BITI 2223	Machine Learning (Pembelajaran Mesin)
BITI 3123	Fuzzy Logic (Logik Kabur)
BITI 3133	Neural Network (Rangkaian Neural)
BITI 3143	Evolutionary Computing (Pengkomputeran Evolusi)
BITI 3413	Natural Language Processing (Pemprosesan Bahasa Tabii)
BITI 3523	Artificial Intelligence in Robotics & Automation (Kepintaran Buatan dalam Robotik & Automasi)
BITI 3533	Artificial Intelligence Project Management (Pengurusan Projek Kepintaran Buatan)
BITS 3423	Information Technology Security (Keselamatan Teknologi Maklumat)
BITU 3923	Workshop II (Bengkel II)

FINAL YEAR PROJECT (6 credits)

BITU 3973	Final Year Project I (Projek Sarjana Muda I)
BITU 3983	Final Year Project II (Projek Sarjana Muda II)

INDUSTRIAL TRAINING (12 credits)

BITU 3926	Industrial Training (Latihan Industri)
BITU 3946	Industrial Training Report (Laporan Latihan Industri)

FREE MODULES (13 credits)

BITI 3113	Intelligent Agent (Agen Pintar)
BITI 2113	Logic Programming (Pengaturcaraan Logik)
BITI 2513	Introduction to Data Science (Pengenalan kepada Sains Data)
BITI 3213	Decision Support Systems (Sistem Bantuan Keputusan)
BITI 3313	Image Processing & Pattern Recognition (Pemprosesan Imej dan Pengecaman Corak)
BITI 3513	Artificial Intelligence in Manufacturing (Kepintaran Buatan dalam Pembuatan)
BITM 2113	Web Application Development (Pembangunan Aplikasi Web)
BITM 3133	Computer Games Development (Pembangunan Permainan Komputer)
BITS 2513	Internet Technology (Teknologi Internet)
BITP 3253	Software Validation and Verification (Validasi dan Verifikasi Perisian)
BITP 3453	Mobile Application Development (Pembangunan Aplikasi Mudah Alih)
BITP 3473	Formal Methods (Kaedah Formal)
BTMT 3313	Industry 4.0 Business Management (Pengurusan Perniagaan Industri 4.0)
BENT 4733	Digital Signal Processing (Pemprosesan Signal Digital)
BLHC 4032	Critical and Creative Thinking (Pemikiran Kritis dan Kreatif)
***BLHL - - - 2	Third Language (Bahasa Ketiga)
***BLHL 1012	Bahasa Melayu Komunikasi (International)
BLHH 1032	Industrial Psychology and Organization (Psikologi Industri dan Organisasi)
BLHC 4012	Organizational Communication (Komunikasi Organisasi)
BLHC 4022	Negotiation Skills (Kemahiran Perundingan)

CURRICULUM STRUCTURE PER SEMESTER

Year One (Semester I)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BLHW 1442	English for Academic Purposes <i>Bahasa Inggeris untuk Tujuan Akademik</i>	W	2	0	2	
BLHW 1702	Islamic and Asian Civilizations* <i>Tamadun Islam dan Tamadun Asia*</i>	W	2	0	2	
BLHW 2712	Ethnic Relations** <i>Hubungan Etnik**</i>	W	2	0	2	
BITI 1213	Linear Algebra and Discrete Mathematics <i>Aljabar Linear dan Matematik Diskrit</i>	P	2	2	3	
BITP 1113	Programming Technique <i>Teknik Pengaturcaraan</i>	P	2	2	3	
BITM 1113	Multimedia System <i>Sistem Multimedia</i>	P	2	2	3	
BITS 1123	Computer Organization and Architecture <i>Organisasi dan Senibina Komputer</i>	P	2	2	3	
Total					18	

Note: International Student Only. *BLHW 1942 Malaysian Studies and **BLHW 2752 Malaysian Culture

Year One (Semester II)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BITI 1113	Artificial Intelligence <i>Kepintaran Buatan</i>	P	2	2	3	
BITI 1223	Calculus and Numerical Methods <i>Kalkulus dan Kaedah Berangka</i>	P	2	2	3	
BITP 1123	Data Structure and Algorithm <i>Struktur Data dan Algoritma</i>	P	2	2	3	BITP 1113
BITS 1213	Operating System <i>Sistem Pengoperasian</i>	P	2	2	3	
BITP 1323	Database <i>Pangkalan Data</i>	P	2	2	3	
BITS 1313	Data Communication and Networking <i>Komunikasi Data dan Rangkaian</i>	P	2	2	3	
Total					18	

Year Two (Semester I)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BLHW 2452	Academic Writing <i>Penulisan Akademik</i>	W	2	0	2	BLHW 1442
BKK- ---1	Co-Curriculum I* <i>Ko-kurikulum I*</i>	W	0	3	1	
BITU 2913	Workshop 1 <i>Bengkel 1</i>	P	1**		3	BITP 1113
BITI 2233	Statistics and Probability <i>Statistik dan Kebarangkalian</i>	P	2	2	3	
BITP 3113	Object Oriented Programming <i>Pengaturcaraan Berorientasi Objek</i>	P	2	2	3	
BITI 2213	Knowledge Based System <i>Sistem Berasaskan Pengetahuan</i>	K	2	2	3	BITI 1113
BITI 2223	Machine Learning <i>Pembelajaran Mesin</i>	K	2	2	3	BITI 1113
Total					18	

* This course can be taken in any semester. Please refer to Co-curriculum unit before register

** Average official contact hours per week

Year Two (Semester II)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BITM 2313	Human Computer Interaction <i>Interaksi Komputer-Manusia</i>	P	2	2	3	
BITP 2213	Software Engineering <i>Kejuruteraan Perisian</i>	P	2	2	3	
BITI 3123	Fuzzy Logic <i>Logik Kabur</i>	K	2	2	3	BITI 1113
BITI 3133	Neural Network <i>Rangkaian Neural</i>	K	2	2	3	BITI 1113
BITI 3143	Evolutionary Computing <i>Pengkomputeran Evolusi</i>	K	2	2	3	BITI 1113
B--- ---3	Elective I <i>Elektif I</i>	E	2	2	3	
Total					18	

Year Three (Semester I)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BLHW 3462	English for Professional Interaction <i>Bahasa Inggeris untuk Interaksi Profesional</i>	W	2	0	2	BLHW 2452
BKK- ---1	Co-Curriculum II* <i>Ko-kurikulum II*</i>	W	0	3	1	
BITU 3923	Workshop II <i>Bengkel II</i>	K	1**		3	BITU 2913
BITI 3533	Artificial Intelligence Project Management <i>Pengurusan Projek Kepintaran Buatan</i>	K	2	2	3	
BITI 3413	Natural Language Processing <i>Pemprosesan Bahasa Tabii</i>	K	2	2	3	BITI 1113
BITI 3523	Artificial Intelligence in Robotics & Automation <i>Kepintaran Buatan dalam Robotik & Automasi</i>	K	2	2	3	
B--- ---3	Elective II <i>Elektif II</i>	E	2	2	3	
Total					18	

* This course can be taken in any semester. Please refer to Co-curriculum unit before register

** Average official contact hours per week

Note for Professional Certification: BITI 3910 Preparation for RapidMiner Analyst Professional Certificate
(*Persediaan Sijil Profesional RapidMiner Analyst*)

Year Three (Semester II)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BTMW 4012	Technology Entrepreneurship <i>Keusahawanan Teknologi</i>	W	2	0	2	
BITU 3973	Final Year Project I <i>Projek Sarjana Muda I</i>	P	1**		3	BITU 3923
BITS 3423	Information Technology Security <i>Keselamatan Teknologi Maklumat</i>	K	2	2	3	
B--- ---3	Elective III <i>Elektif III</i>	E	2	2	3	
BLH- ---2	Elective IV <i>Elektif IV</i>	E	2	0	2	
BLH- ---2	Elective V* <i>Elektif V*</i>	E	2	0	2	
Total					15	

Note: International Student Only. * BLHL 1012 Bahasa Melayu Komunikasi

** Average official contact hours per week

Year Three (Special Semester)

Course Code	Course Name	Component Modules	Contact Hours		Credit	Pre-requisite
			Lecture	Lab		
BITU 3983	Final Year Project II <i>Projek Sarjana Muda II</i>	P	1**		3	BITU 3973
Total					3	

** Average official contact hours per week

Year Four (Semester I)

Course Code	Course Name	Component Modules	Duration (weeks)	Credit	Pre-requisite
BITU3926	Industrial Training <i>Latihan Industri</i>	P	24	6	BITU 3983
BITU3946	Industrial Training Report <i>Laporan Latihan Industri</i>	P	24	6	BITU 3983
Total				12	

Note: pre-requisite (completed all subjects)

Free Modules

Below is the list of elective courses that can be selected as part of the curriculum. Students need to choose a minimum of THREE (3) courses with THREE (3) credits AND TWO (2) courses with TWO (2) credits, to complete at least 13 credits.

List of elective courses offered can be changed from time to time in accordance with industry needs.

Course Code	Course Name	Contact Hours		Credit	Pre-requisite
		Lecture	Lab		
BITI 3113	Intelligent Agent <i>Agen Pintar</i>	2	2	3	BITP 3113
BITI 2113	Logic Programming <i>Pengaturcaraan Logik</i>	2	2	3	
BITI 2513	Introduction to Data Science <i>Pengenalan kepada Sains Data</i>	2	2	3	
BITI 3213	Decision Support Systems <i>Sistem Bantuan Keputusan</i>	2	2	3	
BITI 3313	Image Processing & Pattern Recognition <i>Pemprosesan Imej dan Pengecaman Corak</i>	2	2	3	BITI 1113
BITI 3513	Artificial Intelligence in Manufacturing <i>Kepintaran Buatan dalam Pembuatan</i>	2	2	3	BITI 1113
BITM 2113	Web Application Development <i>Pembangunan Aplikasi Web</i>	2	2	3	
BITM 3133	Computer Games Development <i>Pembangunan Permainan Komputer</i>	2	2	3	
BITS 2513	Internet Technology <i>Teknologi Internet</i>	2	2	3	

BITP 3253	Software Validation and Verification <i>Validasi dan Verifikasi Perisian</i>	2	2	3	BITP 2213
BITP 3453	Mobile Application Development <i>Pembangunan Aplikasi Mudah Alih</i>	2	2	3	
BITP 3473	Formal Methods <i>Kaedah Formal</i>	2	2	3	
BTMT 3313	Industry 4.0 Business Management <i>Pengurusan Perniagaan Industri 4.0</i>	2	2	3	
BENT 4733	Digital Signal Processing <i>Pemprosesan Signal Digital</i>	2	2	3	
BLHC 4032	Critical and Creative Thinking* <i>Pemikiran Kritis dan Kreatif*</i>	2	0	2	
BLHL ---2	Third Language** <i>Bahasa Ketiga**</i>	1	2	2	
BLHH 1032	Industrial Psychology and Organization <i>Psikologi Industri dan Organisasi</i>	2	0	2	
BLHC 4012	Organizational Communication <i>Komunikasi Organisasi</i>	2	0	2	
BLHC 4022	Negotiation Skills <i>Kemahiran Perundingan</i>	2	0	2	

*For International Students, replaced with BLHL 1012 Malay Language

**Third Language Courses

Code	Course Name	Contact Hours		Credit
		Lecture	Lab	
BLHL 1112	Arabic I	1	2	2
BLHL 1212	Mandarin I	1	2	2
BLHL 1312	Japanese I	1	2	2
BLHL 1412	Germany I	1	2	2
BLHL 1512	France I	1	2	2
BLHL 1612	Korean	1	2	2
BLHL 1712	Turkey	1	2	2