MMU®
MULTIMEDIA UNIVERSITY

TOGETHER WE LEAD THE
DIGITAL FUTURE

Maavwin Ashokumar
MMU IT Student

INFORMATION TECHNOLOGY AND COMPUTER SCIENCE

A TM Company

A WHOLE NEW WORLD

“Welcome to MMU!”

Multimedia University is an institution that leads future digital leaders and you are welcome to be part of a dynamic and vibrant community. Get ready to embark into the intellectual adventure with us and we are providing an array of opportunities for you to learn, to grow, to discover who you are, and how you can make a difference in the world.

It is undeniable that education is a great tool to transform lives, where we can achieve our biggest dreams and empower us to become better person. At MMU, the ‘YOU’ element is vital where you will embrace the spirit of discovery and explore all the things that we have to offer. It is YOU who made us what we are and we are looking forward to the positive energy that YOU bring to our campus.

MMU is You! Join us to become future digital leaders and your success begins here!

Prof. Dato’ Dr. Mazliham Mohd Su’ud
CEO/President

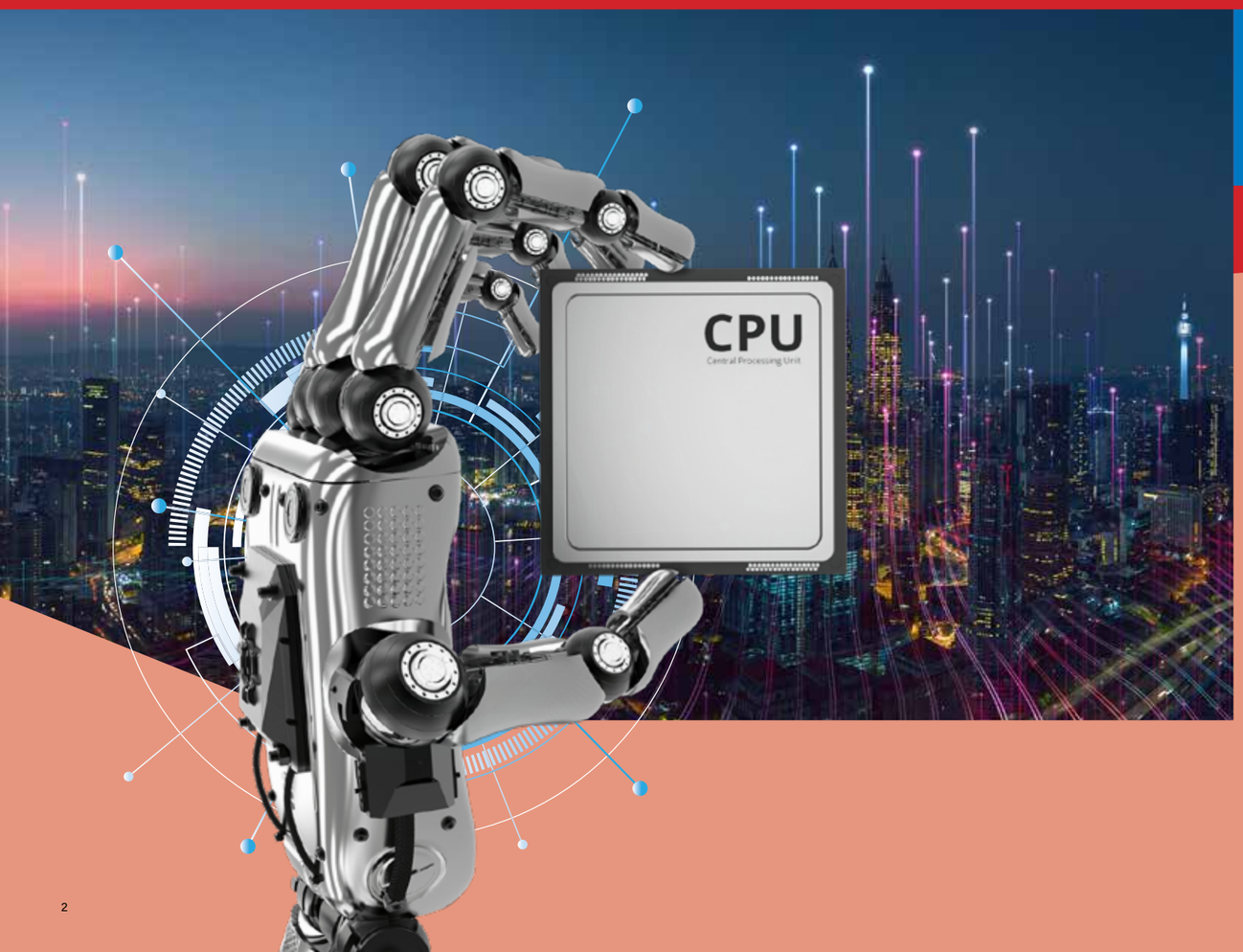
INFORMATION TECHNOLOGY & COMPUTER SCIENCE

If you have your passion on a career in information technology and computer science, MMU is the university for you. Listed in the Top 300 QS World University Rankings in Computer Science and Information Systems, 2017, MMU offers award-winning, practical and industry-ready degrees that will allow you to make a real and lasting impact as an ICT specialist.

Expertise and knowledge are what we seek to empower our students with. We are committed to offer programmes that will enhance your depth and perception as well as employability in the field of ICT.

Both our Faculty of Computing & Informatics and Faculty of Information Science & Technology incorporate industry-led curriculum so you will gain not only technical knowledge and skills, but also relevant soft and management skills. Many of your lecturers are professionals and specialists in their fields who will be able to impart real-life experience and solutions to your learning.

We also have strong collaborations with global industry leaders who are ready to share their knowledge of cutting-edge innovative technologies to keep you up-to-the-minute with current and future industry needs.



WHY INFORMATION TECHNOLOGY & COMPUTER SCIENCE AT MMU

Ranked World's Top 300 University for Computer Science & Information Systems

One of the best teaching labs in private universities, equipped with world-class research and teaching facilities such as SMART and Innov8 labs

Academically and professionally certified lecturers (CCNA, CCNP, MCP, MCTS, MTA and Java)

Strong collaborations with multi-national companies such as Cisco Networking Academy, Microsoft IT Academy, Oracle Workforce Development Program, Novell Academic Training Partner, Linux Professional Institute and EC-Council

ICT Knowledge Creation for fast growing industries

Forefront Curriculum Design and Industry Placement Opportunities to bridge academic studies with practical experience

AN AWARD-WINNING UNIVERSITY WITH A GLOBAL OUTLOOK

Create your success story here!

Multimedia University (MMU) is a leading university in Malaysia and we are also listed in global rankings namely QS World University Rankings 2023 and Times Higher Education (THE) World University Rankings 2023. At MMU, our diversity is what makes us unique where you will study alongside with approximately 1,200 international students from 65 countries.

Not only that, you will also experience the best and latest technologies from our collaborations with major ICT players such as ZTE, Huawei, Nokia, Intel, Microsoft, Cisco, Motorola and others. Expand your study experience through our international linkages with abroad universities such as Northumbria University, Western Sydney University, University of Southern Queensland, Auckland University of Technology, Hull University, Manchester Metropolitan University, University of Essex and many more.

Top 20 among Malaysian universities in QS Asia University Rankings 2023

Awarded **Self-Accreditation Status**, 2017 by Malaysian Qualification Agency

Top 10 among Malaysian Private Universities in Times Higher Education (THE) Asia University Rankings 2023. Top 400 in QS World Ranking by Subject (electrical and electronic) since 2015

Awarded the **5-Star Rating in the SETARA** by Ministry of Higher Education (MOHE)

Awarded **CXP Best Customer Experience Awards 2021 & 2022**

Awarded **Gold Medal** under the Education and Learning at **Putra Brand Awards 2022**

MMU's IT graduates are the most preferred by Malaysian firms- Frost& Sullivan Asia Pacific (MDEC's Malaysian Digital Talent Study 2017 Final Findings)

Awarded **Premier Digital Tech Institution (PDTI) Status** since 2017 by Ministry of Higher Education (MoHE) and Malaysia Digital Economy Corporation (MDEC)

Employers' Preferred University by Talent Bank 2022

In this constantly evolving digital world, Information and Communication Technology is more important than ever. As ICT continues to transform the way people communicate, learn, work and play, the career prospects for IT graduates are both diverse and rewarding. Whether it's Artificial Intelligence, Data Science, Security Technology or Software Engineering, a degree from MMU will definitely hold you in good stead for the future.

AN ENTREPRENEURIAL UNIVERSITY WITH INDUSTRY-READY PROGRAMMES

Well-rounded Education
Be empowered with the fundamentals of your field of study that also incorporate entrepreneurial skills and expertise which are relevant to your respective industries and job markets.

Industry on Campus
Be connected and gain benefit from our state-of the-art labs established by our industry collaboration with ZTE, HUAWEI, Microsoft, Intel and many more.

Ready for Industry
Be enthused with Start-up Schemes from the Entrepreneurship Development Centre (EDC) and nurture your entrepreneurship mindset.

A UNIVERSITY THAT IS AN INDUSTRY TRENDSETTER

- We offer programmes which are tailored to the industry's needs.
- We produce graduates who are setting new standards in Malaysia's industries. Among our successful alumni are Mohd Nizam Abd Razak (the creator of BoBoiBoy, who has boosted the animation industry in Malaysia), Muhammad Usamah Zaid Yasin (Founder & Executive Director of Wau Animation that produces Ejen Ali), Tan Aik Keong (Dirwector of Agmo Studio, a multi-award winning mobile app development company), Ko Chuan Zhen (CEO and co-founder of Plus Xnergy, a multi-award winning clean energy company in Malaysia) and many more.

RESEARCH-LED AND INDUSTRY-DRIVEN UNIVERSITY

Due to its unique niche as a research-led industry-driven university (RIU), MMU currently has the privilege of serving as one of the nation's leading talent incubators. The university takes immense pride in nurturing and growing students in the digital talent pipeline into competent and responsible members of the workforce, who collectively support both TM's and the nation's growth areas.

The 10 growth areas are Fixed Mobile Convergence (FMC)/Mobile Content Play, New Convergence growth, SME Digital Ecosystem, Cyber-Security, Smart Services Cloud, Submarine Cables, Content Delivery Network (CDN) dan Data Centre.

Preparing Graduates to be Industry Ready and Versatile

GAINING INDUSTRIAL EXPERIENCE VIA I-CADET

The i-Cadet Programme is an initiative of MMU's Industry-University Partnership Programme, which aims to groom students into industry-ready graduates as soon as possible, from the moment they began their degree programmes.

Through this initiative, MMU students would be groomed into industry-ready graduates tailored for their industries of choice. The programme would match students with suitable companies, and then, via a series of meetings and projects, would provide them with the actual working environment within their chosen company.

DEVELOPING WELL BALANCED GRADUATES THROUGH PERMATA DUNIA PERSONA

MMU is deeply involved with the proper development and realization of human capital potential, as this would enable the university to satisfy the needs of the industries for capable manpower.

Our goal is to produce well-balanced graduates of good character that possess desirable qualities, such as having empathy, sensitivity, creativity, readiness, and resilience, on top of having sufficient technical competence. Such graduates from MMU are referred to as our Permata Dunia, and we are confident that such personages would become capable future leaders for their nation as well as their communities.

We contend that MMU is the best place for student development as we continually strive to bring out the best within each student; we imbue in them with deep knowledge of their respective fields of expertise via lectures, co-curricular activities, development initiatives, and lifestyle choices. MMU is fully committed to making every student's time in the university the best time of their lives.

EXPANDING HORIZON WITH BYOC

Build Your Own Curriculum (BYOC) is a concept to enable students to imbue additional value into their graduation qualifications so that, upon completion of their studies, they would have better chances of having a career path that is not just financially rewarding, but also fulfilling.

The key to BYOC is allowing students to build curriculum in a guided and yet flexible way. Students may stack up courses based on the free elective slots they have, or by choosing a collective minor package offered by the faculties.

A VIBRANT AND CONDUCIVE CAMPUS LIFE

- Convenient and comfortable accommodation – on-campus and off-campus.
- Intelligent and high-tech labs.
- Digital libraries.
- Set studio and post-production suite.
- Over 100 clubs and societies.
- Extensive infrastructure – campus-wide Wi-Fi, health clinics, mosques, 24-hour security, food & beverage outlets and more.
- Comprehensive Sports Centre – track & field, indoor sports arena, gym as well as an olympic-sized swimming pool.

PERMATA DUNIA TAKES ON THE WORLD

The ambience and culture cultivated in MMU had shaped me to become as Head of Big Data Analytics in Fusionex, a multi-award-winning organization specialising Big Data, Machine Learning and Artificial Intelligence. MMU collaborates with many big industry players such as Microsoft, IBM, Oracle etc and organise many workshops allowing students like me to have the opportunity to be exposed and learn of new technology during the school days, which allowing me to be equipped with new skill sets on top of the solid computing foundation the university is shaping us at.

Gan Chun Yee
Bachelor of Information Technology (Honours) (Software Engineering) (2003)

Head of Big Data Analytics, Fusionex

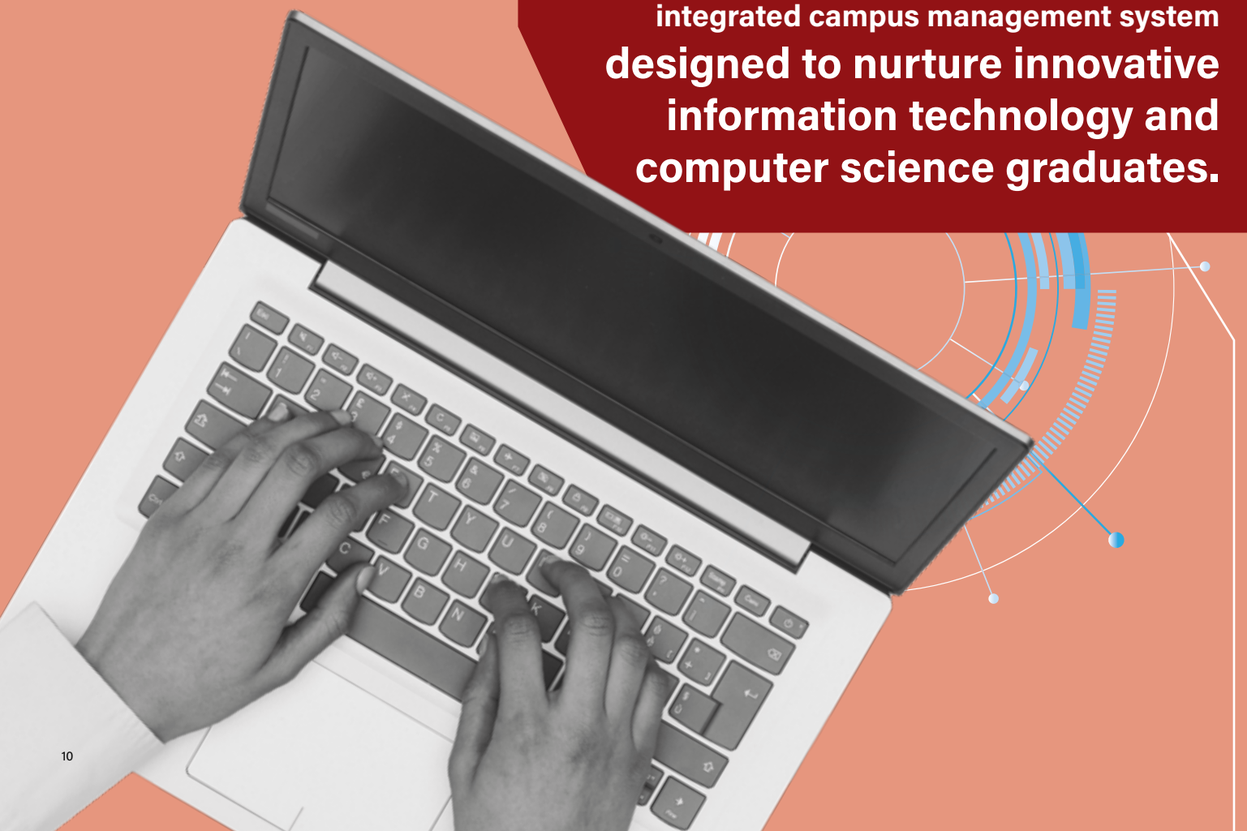
Navigating the complexity of today's corporate world requires not only technical capabilities but also interpersonal and leadership skills. MMU provided me the much needed early exposure through its academic programs as well as the platform for me to lead and participate beyond my studies. I am grateful for the experience gained during this critical foundation period. MMU is the best choice for students to further their studies as it has proven itself by producing many high quality graduates that are now contributing to the country and society.

Iskandar Shah Zulkarnain
Bachelor of Information Technology (Honours) (Information Systems Engineering) (2004)

Chief Human Resources Officer
Bank Islam Malaysia

FACULTY OF COMPUTING AND INFORMATICS
Cyberjaya Campus

Located within Cyberjaya and built on an 80-hectare plot of land, MMU Cyberjaya is equipped with various intelligent features such as multimedia learning facilities, intelligent building systems, a digital library, and an integrated campus management system designed to nurture innovative information technology and computer science graduates.



FOUNDATION IN INFORMATION TECHNOLOGY
(R2/010/3/0088) 12/22 (A8670)

In an ever-changing, technologically-dependent world, our one-year Foundation in Information Technology programme aims to produce students who are well-equipped with computer skills as well as mathematical and problem solving skills. The Foundation in Information Technology programme is delivered through engaging lectures and laboratory work which serve to build knowledge and help develop practical skills. After completion of the foundation programme, you can opt for a degree programme from either the Faculty of Computing and Informatics (FCI) or Faculty of Information Science and Technology (FIST).

PROGRAMME STRUCTURE

Trimester 1
- Introduction to Business Management
- Introduction to Computing Technologies
- Communicative English
- Mathematics I
- Problem Solving and Program Design

Trimester 2
- Critical Thinking
- Introduction to Digital Systems
- Essential English
- Multimedia Fundamentals
- Mathematics II
- Principles of Physics

Trimester 3
- Academic English
- Mathematics III
- Mini IT Project

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

DIPLOMA IN INFORMATION TECHNOLOGY
(R3/481/4/0229) 12/27 (A8553)

The programme provides students with computing knowledge in planning, implementation, configuration and maintenance of an organisation's computing infrastructure. Students will be exposed to various programming languages and web technologies with which they would be able to configure, integrate and deploy systems as well as provide technical support within an organisation.

The curriculum covers areas such as programming, database, software design, operating systems, data communication & networking, as well as mathematics. Apart from the technical subjects, students will also be exposed to soft skills such as writing and presentation skills to help enhance their interaction and communication and prepare them for real-life working environment.

After completion of the diploma programme, you can opt for a related degree programme from either FCI or FIST.

PROGRAMME STRUCTURE

Year 1

Trimester 1
- Computer Concepts & Applications
- Program Design
- University Learning Skills
- Mathematical Techniques 1
- U1
- U2

Trimester 2
- Database Systems
- Computer Architecture & Organization
- Mathematical Techniques 2
- Object Oriented Programming
- English

Trimester 3
- System Analysis & Design
- Elective 1
- Elective 2

Year 2

Trimester 1
- Discrete Structures
- Data Communications & Networking
- Internet & Web Publishing
- Data Structure & Algorithms
- Business Communication in the Digital Age

Trimester 2
- Introduction to Probability & Statistics
- Operating Systems
- Elective 3
- Final Year Project
- U3
- U4

Trimester 3
- Industrial Training

ELECTIVE SUBJECTS	**• E-Commerce • Multimedia Applications • Management Information Systems • Mobile Application Development**
UNIVERSITY SUBJECTS	**U1 - 1. MPU2163 Pengajian Malaysia (for local student)** **2. MPU2133 Bahasa Melayu Komunikasi 1 (For international student)** **U2 - 1. (for student who get exemption subject BM in SPM & international student) Subject code starts with MPU22XX** **2. (for student who have no credit for BM in SPM) MPU3201 Bahasa Kebangsaan A** **U3 - Subject code starts with MPU23XX** **U4 - Subject code starts with MPU24XX**

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF COMPUTER SCIENCE (HONS.)

(R2/481/6/0531) 02/25 (A5830)

This three-year programme equips students with fundamental computing knowledge and the latest technology. In year 1, all students learn common subjects before specialising in one of the following areas – Software Engineering, Game Development, Data Science or Cybersecurity - in the second year. Each designed specialisation prepares students with specific skills. Students will also complete a final year project and undergo industrial training to acquire practical industry experience.

Career Prospects: Researcher, Programmer, Software Development, Project Manager, System Analyst, Database Administrator, IS/SE Consultant, Game Producer, Game Artist & Visualiser, Data Analyst, Data Scientist, Data Engineer, Cyber Risk Analyst, Security Penetration Tester, Incident Responder, Digital Forensic Specialist, Security Architect, Security Engineer, Software Tester.

PROGRAMME STRUCTURE

CORE

Year 1

- Calculus
- Programming Fundamentals
- Discrete Structures & Probability
- Professional Development
- Computational Methods
- Object Oriented Programming & Data Structures
- Computer Architecture & Organisations
- Database Fundamentals
- Research Methodology in Computer Science
- U2
- U4

Year 2

- Software Engineering Fundamentals
- Operating Systems
- Computer Networks
- Object Oriented Analysis & Design
- Algorithm Design & Analysis
- Elective 1
- Industrial Training
- U3

Specialisation: Software Engineering
- Software Requirements Engineering
- Software Design

Specialisation: Game Development
- Computer Graphics Fundamentals
- Game Design Fundamentals

Specialisation: Data Science
- Data Science Fundamentals
- Statistical Data Analysis

Specialisation: Cybersecurity
- Cybersecurity Fundamentals
- Network Security

Year 3

- Final Year Project
- Elective 2
- Elective 3
- U1
- U1
- Workplace Communication

Specialisation: Software Engineering
- Software Reliability & Quality Assurance
- Software Verification & Validation
- Specialisation Elective 1
- Specialisation Elective 2

Specialisation: Game Development
- Game Algorithms
- 3D Game Programming
- Specialisation Elective 1
- Specialisation Elective 2

Specialisation: Data Science
- Data Mining
- Data Visualisation
- Specialisation Elective 1
- Specialisation Elective 2

Specialisation: Cybersecurity
- Cryptography and Data Security
- Ethical Hacking and Penetration Testing
- Specialisation Elective 1
- Specialisation Elective 2

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

Specialisations:

- **Software Engineering:** Focuses on designing and developing software systems with innovative methodologies and sophisticated tools. Students are exposed to various techniques of analysing user requirements and specifications, as well as the design, implementation and verification of software systems.
- **Game Development:** Integrates fundamental concepts of software engineering with both technical and creative aspects of game design and development. Students are exposed to various types of game production - from 2D to 3D, and from virtual to augmented reality game projects.
- **Data Science:** Focuses on designing and developing solutions to draw useful insights from the availability of large volumes of data, known as Big Data. Students will receive fundamental training in computer science theories and learn techniques on the processing of Big Data for analytics that can be impactful to business.
- **Cybersecurity:** Built on the technical foundation of computer science, the specialization focuses on the array of sophisticated techniques and innovative approaches used to protect data and information systems. Students are exposed to both offensive and defensive security methodologies such as ethical hacking, digital forensics and network security, as well as policies and ethical issues of cybersecurity.

SPECIALISATION ELECTIVE SUBJECTS

Two (2) subjects should be taken from the following based on specialisation:

Software Engineering
- Theory of Computation
- Programming Language Translation
- Introduction to Formal Methods
- Software Evolution & Maintenance

Game Development
- Game Production
- Game Physics

Data Science
- Machine Learning
- Visual Information Processing
- Social Media Computing

Cybersecurity
- Digital and Computer Forensics
- Database and Cloud Security
- Blockchain and Smart Contracts

ELECTIVE SUBJECTS

Three (3) subjects should be taken from the following:

- Systems Analysis & Design
- Programming Language Translation
- Theory of Computation
- Artificial Intelligence
- Parallel Processing
- Database and Cloud Security
- Computer Graphics Fundemental
- Enterprise Application Integration
- Web Application Development
- Cyber Security: Theory and Practice
- Software Evolution & Maintenance
- Game Physics
- Game Design Fundamentals
- Decision Support System
- Human Computer Interaction
- Web Application Development
- Data Science Fundementals
- Visual Information Processing
- Machine Learning
- Data Mining
- Social Media Computing
- Advanced Database
- Mobile Applications Development
- System Application Integration
- Enterprise Information Systems
- Cybersecurity Fundamentals
- Cryptography and Data Security
- Ethical Hacking and Penetration Testing
- Blockchain and Smart Contracts
- Tends in IS
- Information Systems Planning and Development
- IT Project Management
- IT Auditing

UNIVERSITY SUBJECTS

U1 – TITAS (Local) or BM Komunikasi II (International)
U2 – Bahasa Kebangsaan A or Foreign Language Beginners
U4 – Co-Curriculum

U1 – Hubungan Etnik (Local) or Pengajian Malaysia III (International)
U3 – Introduction to Multicultural Studies in Malaysia or Introduction to Malaysian Economy

BACHELOR OF INFORMATION TECHNOLOGY (HONS) (INFORMATION SYSTEMS)

(R2/481/6/0388) 06/24 (A5216)

In this information-driven 21st century, computerised information systems play key roles to the success of organisations. Hence, there is an increasing demand for information systems graduates that are capable to design, develop and implement effective digital solutions to meet the needs for information and decision support of organisations.

This three-year programme prepares students with a strong foundation in applications development of information systems as well as current and emerging technologies related to information systems. The knowledge and skills are essential not only in using information systems effectively, but also to contribute significantly in planning, designing, implementing and maintaining information systems solutions for critical business problems. Graduates of this programme will take the leading roles in shaping our information-driven future.

Career Prospects: Application Developer, Database Administrator, Business Analyst, IT Consultant, Information Systems Manager.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3
CORE		
• Introduction to Discrete Mathematics and Linear Algebra • Calculus and Statistics Fundemental • Programming Fundamentals • Professional Development • Management • Object Oriented Programming and Data Structures • Computer Architecture and Organization • Database Fundamentals • Workplace Communication • U2 • U4	• Software Engineering Fundamentals • Operating Systems • Computer Networks • Object Oriented Analysis & Design • IT Project Management • Information Systems Planning and Development • Web Application Development • Advanced Database • Industrial Training • U3	• System Administration • Enterprise Application Integration • Enterprise Information Systems • Computer Security • Final Year Project • Elective 1 • Elective 2 • Elective 3 • U1 • U1

ELECTIVE SUBJECTS	*Three (3) subjects should be taken from the following:* **• Human Computer Interaction • Mobile Applications Development • Software Requirements Engineering** **• Software Reliability and Quality Assurance • Business Analytics • IT Auditing • Trends in Information Systems** **• Decision Support System • Cyber Security Fundemental • Cryptography and Data Security** **• Ethical Hacking and Penetration Testing • Digital and Computer Forensics • Database and Cloud Security** **• Blockchain and Smart Contracts • Data SCience Fundementals • Data Mining • Data Visualisation** **• Social Media Computing • Game Design Fundementals • Game Production**
UNIVERSITY SUBJECTS	**U2 – Bahasa Kebangsaan A or Foreign Language Beginners** **U3 - Introduction to Multicultural Studies in Malaysia or Introduction to Malaysian Economy** **U1 – Hubungan Etnik (Local) or Pengajian Malaysia III (International)** **U4 – Co-Curriculum** **U1 – TITAS (Local) or BM Komunikasi II (International)**

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

FACULTY OF INFORMATION SCIENCE AND TECHNOLOGY

Melaka Campus

Since 1997, the Faculty has been a trendsetter in ICT education and research, with a rigorous academic approach designed to produce innovative graduates who are well equipped to enact positive changes in society.

FOUNDATION IN INFORMATION TECHNOLOGY

(R2/481/3/0140) 02/22 (A7858)

Modern lifestyle has progressed rapidly with the evolution of current technology. Technological solutions derived from Information Technology are implemented to retrieve information and solve problems or tasks in our daily routines. Therefore, our Foundation in Information Technology programme aims to equip students with essential knowledge and skills for them to pursue their respective degree programmes successfully.

After completion of the Foundation in Information Technology programme, students are able to further their studies either majoring in Information Technology, Computer Science or Science domain. Students have the options to pursue the programmes offered either by the Faculty of Information Science and Technology (FIST) or the Faculty of Computing and Informatics (FCI).

PROGRAMME STRUCTURE

Trimester 1	Trimester 2	Trimester 3
• Communicative English • Critical Thinking • Algebra* • Trigonometry • Computer Applications • S1	• Essential English • Fundamentals of Business Management • Introduction to Probability and Statistics • Problem Solving and Programming • S2 • S3	• Academic English • Calculus • Mini IT Projects

SPECIALISATION SUBJECTS	**S1 - Introduction to Computer Architecture and Operating System or Cell and Organic Chemistry** **S2 - Introduction to Physics or General Chemistry** **S3 - Introduction to Multimedia Technology or Cellular Reproduction and Genetics**

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF INFORMATION TECHNOLOGY (HONS.) (DATA COMMUNICATIONS AND NETWORKING)

(R2/481/6/0440) 08/24 (A5313)

Data Communications and Networking graduates are expected to possess the knowledge and skills necessary to design, build, maintain and manage network and communication systems in any organisation. Therefore, this three-year programme will educate them on the core components of communication, such as Internet Computing, TCP/IP Programming, High-Speed Networks, Cloud Computing and Real-Time Systems.

Our Data Communications and Networking graduates would be able to branch into any area of communications and apply the knowledge they have acquired in network technology and telecommunications.

Career Prospects: System Programmer, Network Engineer, Network Administrator.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3
• Mathematical Techniques • Computer Programming • Database Systems • Operating Systems • Discrete Mathematics and Probability • Computer Architecture and Organisation • Data Communications and Networking • Ethics and Professional Conducts • U2/U3 • U4 • Character Building • Character Development • Integrity and Leadership	• Data Structures and Algorithms • Object Oriented Programming • System Analysis and Design • Computer Networks • System Administration and Maintenance • Technopreneur Venture • Human Computer Interaction • Information Assurance and Security • Web Techniques and Application • System Integration and Architecture • Routing and Switching • Industrial Training • Elective 1	• Project • TCP/IP Programming • Network Security and Management • Cloud Computing • Integrative Programming and Technologies • High Speed Networks • Mobile and Wireless Communications • Real-Time System • Elective 2 • Elective 3 • Elective 4 • U1

ELECTIVE SUBJECTS

• Internet of Things (IoT) Fundamentals • Data Mining and Machine Learning • Management of Information Security • Data Analytics Fundamentals

UNIVERSITY SUBJECTS

U1
Local students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)
International students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3142 Bahasa Melayu Komunikasi 2

U2/U3
Local students without credit in BM at SPM Level:
i. MPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**
ii. MPU3306 Integrity and Leadership
Local students who obtained credit in BM at SPM Level:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***
International student:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU34XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF INFORMATION TECHNOLOGY (HONS.) (BUSINESS INTELLIGENCE AND ANALYTICS)

(R2/481/6/0079) 11/21 (A7498)

Today, large quantity of information is produced from various sources rapidly everyday. This poses a challenge to corporations because without the accurate information, effective decisions cannot be made. Businesses are interested in the big data as they provide new acumen in different areas for instance customers, sales and marketing.

This three-year programme equips students with business intelligence and analytical skills to offer insights and improved decision making to corporations in achieving business agility. The objective is to produce graduates who are knowledgeable in the components of information technology and data analytics, capable to plan, design, visualise, analyse and interpret business statistical data.

Career Prospects: SAP Specialist, Data Scientist, Computer Scientist, Knowledge Engineer, Business Intelligence Consultant, IT Business Analyst and Web Analyst.

PROGRAMME STRUCTURE

Year 1	Year 2	Year 3
	CORE	
• Mathematical Techniques • Computer Programming • Database Systems • Operating Systems • Discrete Mathematics and Probability • Computer Architecture and Organisation • Data Communications and Networking • Ethics and Professional Conducts • U2/U3 • U4 • Character Building • Character Development • Integrity and Leadership	• Data Structures and Algorithms • Object-Oriented Programming • System Analysis and Design • Financial Accounting for Managers • Computer Networks • Technopreneur Venture • Human Computer Interaction • Organisational Behaviour • Software Engineering Fundamentals • Web Techniques and Application • Business Statistical Analysis • Industrial Training • Elective 1	• Project • Information Systems Audit • Business Intelligence • Technology Transfer • Data Storytelling • Enterprise Resource Planning • Internet Marketing • Project Management for Business Analysts • Elective 2 • Elective 3 • Elective 4 • U1

ELECTIVE SUBJECTS

• Information Assurance and Security • AI Fundamentals • Internet of Things (IOT) Fundamental • Data Analytics Fundamentals

UNIVERSITY SUBJECTS

U1
Local students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)
International students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3142 Bahasa Melayu Komunikasi 2

U2/U3
Local students without credit in BM at SPM Level:
i. MPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**
ii. MPU3306 Integrity and Leadership
Local students who obtained credit in BM at SPM Level:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***
International student:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU34XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF COMPUTER SCIENCE (HONS.) (ARTIFICIAL INTELLIGENCE)

(R2/481/6/0786) 08/23 (A4187)

As computer systems increase their complexity and sophistication, the demand for intelligent advanced applications also increases in proportion. It is now common practice to incorporate intelligent capabilities in the design of any computer application, from web-based intelligent search engines to standalone intelligent applications.

The objective of this three-year degree programme is to equip students with the necessary knowledge and skills required to be successful in building the much-needed intelligent computer systems.

Career Prospects: Data Scientist, Intelligent Software Developer, AI Consultant, Knowledge Engineer, Machine Learning Engineer, Computer Vision Engineer and Big Data Architect.

PROGRAMME STRUCTURE

Year 1

- Mathematical Techniques
- Computer Programming
- Database Systems
- Operating Systems
- Discrete Mathematics and Probability
- Computer Architecture and Organisation
- Data Communications and Networking
- Ethics and Professional Conducts
- U2/U3
- U4
- Character Building
- Character Development
- Integrity and Leadership

Year 2

- Data Structures and Algorithms
- Object Oriented Programming
- System Analysis and Design
- Technopreneur Venture
- Human Computer Interaction
- Machine Learning
- Software Engineering Fundamentals
- Web Techniques and Application
- Pattern Recognition
- Industrial Training
- Programming Language Concept
- Artificial Intelligence Fundamentals
- Elective 1

Year 3

- Project
- Computational Intelligence
- Computer Networks
- Expert Systems
- Computer Vision
- Natural Language Processing
- Algorithm Design and Analysis
- Semantic Web Technology
- Elective 2
- Elective 3
- Elective 4
- U1

ELECTIVE SUBJECTS | • Project Management for Business Analyst • Cloud Computing • Business Statistical Analysis • Data Wrangling and Visualization

UNIVERSITY SUBJECTS

U1
Local students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)
International students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3142 Bahasa Melayu Komunikasi 2

U2/U3
Local students without credit in BM at SPM Level:
i. MPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**
ii. MPU3306 Integrity and Leadership
Local students who obtained credit in BM at SPM Level:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***
International student:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU34XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF INFORMATION TECHNOLOGY (HONS.) (SECURITY TECHNOLOGY)

(R2/481/6/0439) 08/24 (A5470)

The Security Technology programme is designed to develop knowledge and skills in the security management and technologies necessary for employment in areas such as government and corporate security, strategic facilities security, private sector and retail security, financial institutions and major security organisations.
The course emphasises the functions and management of security technology in the protection of assets and is supported by appropriate studies in cyber law and ethics. Graduates of this course will be equipped for a career in the security industry.

Career Prospects : Security Auditor, Security Penetration Tester, Computer Forensic Investigator, Software Engineer, Systems Analyst, Security Analyst and Security Specialist.

PROGRAMME STRUCTURE

Year 1

- Mathematical Techniques
- Computer Programming
- Database Systems
- Operating Systems
- Discrete Mathematics and Probability
- Computer Architecture and Organisation
- Data Communications and Networking
- Ethics and Professional Conducts
- U2/U3
- U4
- Character Building
- Character Development
- Integrity and Leadership

Year 2

- Data Structures and Algorithms
- Object Oriented Programming
- System Analysis and Design
- Computer Networks
- System Administration and Maintenance
- Technopreneur Venture
- Human Computer Interaction
- Information Assurance and Security
- Web Techniques and Application
- System Integration and Architecture
- Computer Security
- Industrial Training
- Elective 1

Year 3

- Project
- Applied Cryptography
- Information Theory
- Password Authentication and Biometrics
- Integrative Programming and Technologies
- Python for Security
- Malware and Intrusion Detection
- Digital Forensics
- Elective 2
- Elective 3
- Elective 4
- U1

ELECTIVE SUBJECTS | • Ethical Hacking and Security Assessment • Cyber Law • Management of Information Security • Security Analysis & Vulnerability Assessment

UNIVERSITY SUBJECTS

U1
Local students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)
International students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3142 Bahasa Melayu Komunikasi 2

U2/U3
Local students without credit in BM at SPM Level:
i. MPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**
ii. MPU3306 Integrity and Leadership
Local students who obtained credit in BM at SPM Level:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***
International student:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU34XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

BACHELOR OF SCIENCE (HONS.) (BIOINFORMATICS)

(R/481/6/0708) 02/21 (A6684)

Bioinformatics is dynamic and evolving, representing one of the most rapidly growing and challenging areas in science and technology today.

The MMU Bioinformatics programme is a balance of IT and Life Science plus training in specific applications. A significant component of our programme is practical laboratory experience and problem-based learning, alongside student presentations and lectures in small classes. Projects and Industry experience add another dimension to the knowledge gained in lectures.

Career Prospects: Bioinformatician, Biology Researcher in the Health Care, Biomedical, Pharmaceutical, Biotechnology and Agricultural Industry, Data Scientist, IT Programmer, Software Developer

PROGRAMME STRUCTURE

Year 1

- Mathematical Techniques
- Computer Programming
- Database Systems
- Cell Biology
- Biochemistry I
- Discrete Mathematics and Probability
- Computer Architecture and Organisation
- Data Communications and Networking
- Bioinformatics Programming I
- Biochemistry II
- U2/U3
- U4
- Character Building
- Character Development
- Integrity and Leadership

Year 2

- Data Structures and Algorithms
- Operating Systems
- System Analysis and Design
- Bioinformatics Programming II
- Human Anatomy and Physiology
- Bioinformatics Algorithms I
- Parallel Computing
- Basic Human Genetics
- Basic Microbiology
- Elective 1
- Elective 2
- U1

Year 3

- Project
- Bioinformatics Algorithms II
- Introduction to Molecular Biology
- Introductory Course in Pharmacology
- Legal, Moral and Ethical Issues in Life Sciences
- Industrial Training
- Artificial Intelligence Fundamentals
- Pattern Recognition
- Elective 3
- Elective 4

ELECTIVE SUBJECTS | **▪ Project Management for Business Analyst ▪ Data Wrangling and Visualization ▪ Cloud Computing ▪ Business Statistical Analysis**

UNIVERSITY SUBJECTS

U1
Local students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3182 Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)
International students: MPU3192 Falsafah dan Isu Semasa (Philosophy and Current Issues) and MPU3142 Bahasa Melayu Komunikasi 2

U2/U3
Local students without credit in BM at SPM Level:
i. MPU3212 Bahasa Kebangsaan A. If the student has taken this course before, he/she must take any other courses in the U2 or U3 category**
ii. MPU3306 Integrity and Leadership
Local students who obtained credit in BM at SPM Level:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***
International student:
i. MPU3306 Integrity and Leadership
ii. Any other courses in the U2 or U3 category***

*** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU34XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

DIPLOMA IN INFORMATION TECHNOLOGY

(R2/481/4/0229) 12/22 (A7461)

This programme equips students with relevant ICT knowledge and skills to meet the technological needs of an organisation. Through the 2-year programme, students will acquire essential technical skills and hands-on experience in systems analysis and design, programming, web design and development, database design, operating systems, data communications and networking.

Students will also learn about professional ethics and develop communication, presentation and teamwork skills that are deemed critical for success in today's workforce. Both the technical and soft skills will prepare them for their degree studies, as well as for future employment.

Upon completion of the diploma programme, students can opt for a related degree programme offered by the Faculty of Information Science and Technology (FIST) or Faculty of Computing and Informatics (FCI).

Career Prospects: Security Auditor, Security Penetration Tester, Computer Forensic Investigator, Software Engineer, Systems Analyst, Security Analyst and Security Specialist.

PROGRAMME STRUCTURE

Year 1

Trimester 1
- Computer Concepts & Applications
- Ethics and Cybertechnology
- Mathematical & Statistical Techniques
- English
- U1
- Character Building

Trimester 2
- Program Design
- Discrete Structures & Probability
- Computer Architecture
- Data Communications & Networking
- Character Development

Trimester 3
- Operating Systems
- Database Systems
- Systems Analysis & Design

Year 2

Trimester 1
- Business Communication in the Digital Age
- Internet & Web Publishing
- Object Oriented Programming
- Elective 1
- Elective 2
- U2 / U3

Trimester 2
- Fundamentals of Networking
- Final Year Project
- Programming in Java
- Data Structure & Algorithms
- Elective 3
- U4

Trimester 3
- Industrial Training

Security Technology	Data Comm & Networking	Artificial Intelligence	Business Intelligence & Analytics
▪ **Introduction to Computer Security** ▪ **Introduction to Information Assurance and Security** ▪ **System Integration Architecture**	▪ **Introduction to Real-Time Systems** ▪ **Introduction to Cloud Computing** ▪ **Wireless and Mobile Technology**	▪ **Introduction to Artificial Intelligence** ▪ **Fundamentals of Programming Language** ▪ **Fundamentals of Algorithm Design**	▪ **E-Marketing** ▪ **Statistical Data Analysis** ▪ **Human Machine Interaction**

UNIVERSITY SUBJECTS

U1
Local students: MPU2192 Falsafah dan Isu Semasa (Philosophy and Current Issues)
International students: MPU2132 Bahasa Melayu Komunikasi 1

U2/U3
Local students without credit in BM at SPM Level: MPU3212 Bahasa Kebangsaan A
Local students who obtained credit in BM at SPM Level: Any other courses in the U2 or U3 category**
International students: Choose one course in the U2/U3 category, Course code MPU22XX or MPU23XX**

** Should the student choose to take foreign language, he/she must choose one which he/she has no formal education in.*

U4
MPU24XX - choose one from the list offered

Note: The above programme structure serves as a guide. Courses may differ according to intakes.

University	Programme	Minimum Entry Requirements
CYBERJAYA MELAKA	**Diploma** ▪ **Diploma in Information Technology**	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least three (3) subjects inclusive of Mathematics and a Pass in English; OR II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics and a Pass in English; OR III. Pass STPM or its equivalent with a minimum of Grade C (GP 2.00) in one (1) subject AND a Credit in Mathematics at SPM Level or its equivalent; OR IV. Pass STAM with a minimum grade of Maqbul (Pass) AND a Credit in Mathematics at SPM Level or its equivalent; OR V. Pass in SKM Level 3 or any qualifications equivalent to Certificate (Level 3, MQF) AND a Credit in Mathematics at SPM Level or its equivalent.* *Note :* **SKM (and equivalent) candidates without a Credit in Mathematics at SPM Level or its equivalent may be admitted if the Certificate programme contains subjects in Mathematics that are equivalent to Mathematics at SPM Level.*
CYBERJAYA MELAKA	**Foundation** ▪ **Foundation in Information Technology**	I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least five (5) subjects inclusive of Mathematics and English; OR II. Pass UEC with a minimum of Grade B in at least three (3) subjects inclusive of Mathematics and English. **Additional Requirement to pursue Bachelor of Computer Science (Honours):** (a) A Credit in Additional Mathematics at SPM Level or its equivalent; OR (b) A Credit in Mathematics AND one Science/Technology /Engineering subject at SPM Level or its equivalent. *Note:* *Candidate (b) is required to pass the reinforcement of Mathematics subject prior to pursuing to degree programme. However, the reinforcement of Mathematics subject can be exempted if the Foundation / Matriculation studies contain subjects in Mathematics and the achievement is higher or equivalent to the requirement of the Additional Mathematics at SPM level or its equivalent.*
MELAKA	**Bachelor** ▪ **Bachelor of Science (Hons) Bioinformatics**	I. Pass Foundation / Matriculation studies from a recognised institution, and a Credit in Mathematics at SPM Level or its equivalent; OR II. Pass STPM or its equivalent with a minimum Grade C (GP 2.00) in any 2 subjects AND a Credit in Mathematics in SPM or Grade C in STPM or its equivalent; OR III. Pass A-Level with a minimum of Grade D in any 2 Subjects AND a Credit in Mathematics in SPM or Grade D in A Level or its equivalent; OR IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and English; OR V. Diploma in Computer Science OR Software Engineering OR Information Technology OR Information Systems or equivalent with a minimum CGPA of 2.50 AND a Credit in Mathematics at SPM Level or its equivalent;* OR VI. Any other Diploma in Science and Technology or Business Studies with a minimum CGPA of 2.50 may be admitted, subject to a rigorous internal assessment process AND a Credit in Mathematics at SPM Level or its equivalent; OR VII. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 MUST have at least two (2) years of work experience in the related field.** *Note:* *Candidates without a Credit in Mathematics at SPM Level or its equivalent may be admitted if the qualification contains subject Mathematics and the achievement is higher or equivalent to the requirement of the subject at SPM Level or its equivalent* **Candidates with CGPA below 2.50 may be admitted subject to a rigorous internal assessment process.* ***DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*

University	Programme	Minimum Entry Requirements
CYBERJAYA	**Bachelor** **Bachelor of Computer Science (Hons) Specialization in** ▪ **Software Engineering** ▪ **Game Development** ▪ **Data Science** ▪ **Cybersecurity**	I. Pass Foundation/Matriculation studies from a recognised institution, AND (a) a Credit in Additional Mathematics at SPM Level or its equivalent; OR (b) A Credit in Mathematics AND one Science/Technology /Engineering subject at SPM Level or its equivalent.* OR II. Pass STPM in Science Stream or its equivalent with a minimum of Grade C (GP 2.00) inclusive of Mathematics and one Science / ICT subject; OR III. Pass A-Level with a minimum of Grade D in Mathematics and one Science / ICT subject; OR IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics, English and one Science / ICT subject; OR V. Diploma in Computer Science OR Software Engineering OR Information Technology OR Information Systems OR equivalent and any Diploma in Science and Technology from recognised institution with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 may be admitted subject to a rigorous internal assessment process; OR VI. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 MUST have at least two (2) years of work experience in the related field.** *Note:* **Candidate (b) is required to pass the reinforcement of Mathematics subject prior to pursuing to degree programme. However, the reinforcement of Mathematics subject can be exempted if the Foundation/Matriculation studies contain subjects in Mathematics and the achievement is higher or equivalent to the requirement of the Additional Mathematics at SPM level or its equivalent* ***DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*
MELAKA	▪ **Bachelor of Computer Science (Hons) Artificial Intelligence**	
CYBERJAYA	**Bachelor** ▪ **Bachelor of Information Technology (Hons) Information System**	I. Pass Foundation / Matriculation studies from a recognised institution and a Credit in Mathematics at SPM Level or its equivalent; OR II. Pass STPM or its equivalent with a minimum Grade C (GP 2.00) in any 2 subjects a AND a Credit in Mathematics at SPM Level or its equivalent; OR III. Pass A-Level with a minimum of Grade D in any 2 subjects AND a Credit in Mathematics at SPM Level or its equivalent; OR IV. Pass UEC with a minimum of Grade B in at least five (5) subjects inclusive of Mathematics and English; OR V. Diploma in Computer Science OR Software Engineering OR Information Technology OR Information Systems or equivalent with a minimum CGPA of 2.50 AND a Credit in Mathematics at SPM Level or its equivalent. Candidates with CGPA below 2.50 may be admitted subject to a rigorous internal assessment process; OR VI. Any other Diploma in Science and Technology or Business Studies with a minimum CGPA of 2.50 may be admitted, subject to a rigorous internal assessment process AND a Credit in Mathematics at SPM Level or its equivalent;* OR VII. Pass DKM /DLKM/DVM with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 MUST have at least two (2) years of work experience in the related field.** *Note:* **Candidates without a Credit in Mathematics at SPM Level or its equivalent may be admitted if the qualification contains subjects in Mathematics and the achievement is higher or equivalent to the requirement of the subject at SPM Level or its equivalent.* ***DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.*
MELAKA	▪ **Bachelor of Information Technology (Hons) Data Communications and Networking** ▪ **Bachelor of Information Technology (Hons) Security Technology** ▪ **Bachelor of Information Technology (Hons) Business Intelligence and Analytics**	

TOGETHER, WE LEAD THE

DIGITAL FUTURE

Faculty of

COMPUTING AND INFORMATICS

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