



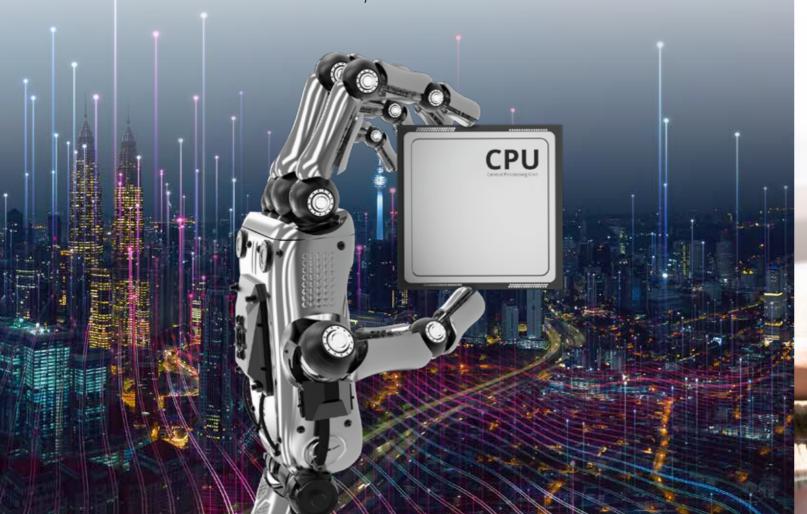
# INFORMATION TECHNOLOGY & COMPUTER SCIENCE

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 awardwinning, 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 STUDY INFORMATION TECHNOLOGY & COMPUTER SCIENCE AT MMU

#### **Cutting-Edge Curriculum**

Immerse yourself in a curriculum crafted to stay ahead of industry trends. Our courses are regularly updated to include the latest technologies and advancements in computer science.

World-Class Faculty Learn from industry experts and dedicated educators with a wealth of experience in computer science. Our faculty is committed to your success, providing mentorship and guidance throughout your academic journey.

#### **Industry Connections**

Benefit from our strong ties with leading tech companies. Our extensive network of industry partners offers internship opportunities, guest lectures, and networking events, paving the way for exciting career prospects.

## **Professional Certifications Integration**

Our Bachelor of Computer Science program is designed to seamlessly integrate professional certifications directly into the curriculum. By completing our program, you not only earn a valuable degree but are also exposed to industry-recognized certifications that employers highly value.

Hands-On Learning From day one, students engage in hands-on projects and real-world applications. Practical experience is integrated into every aspect of our program to prepare you for the challenges of the tech workforce.

#### **Innovation Hub Development**

Join a community that fosters creativity and innovation. Our dedicated innovation hub provides a collaborative space for students to work on cutting-edge projects, participate in hackathons, and bring their ideas to life.

#### **Customizable Specializations**

Tailor your degree to match your interests and career goals. Choose from a range of specializations, including data science, cybersecurity, software engineering, game development, information systems, and more.

### Integration of Professional Certification Modules into the

programme structure such as Cisco Certified Network Associate (CCNA), AWS Cloud Practitioner (Foundational) & AWS Cloud Architecture (Associate), EC-Council Certified Ethical Hacker (CEH), Huawei Certified ICT Associate - Artificial Intelligence (HCIA-AI), Google Data Analytics Professional Certificate



**Top 10** among private Malaysian universities in QS World Ranking University Rankings 2024, Top 400 in QS World Ranking by Subject (electrical and electronic) since 2015

Awarded Self-Accreditation Status, 2017 by Malaysian Qualification Agency

Top 10 among Malaysian Private Universities in Times Higher Education (THE) Asia University Rankings 2024.

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

Awarded CXP Best Customer Experience Awards 2021, 2022 & Awarded Platinum Award under the Education and Learning at Putra Brand Awards 2023

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)

**Employer's Preferred** University awarded by the Talentbank for three consecutive years from 2022, 2023 & 2024 (6 star in Communication and Broadcasting)

Awarded Best Institution Award at the Anugerah Keusahawanan KPT 2023

#### 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 2024 and Times Higher Education (THE) World University Rankings 2024. At MMU, our diversity is what makes us unique where you will study alongside with approximately 1,400 international students from 70 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.



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.

# RESEARCH-LED 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.

#### **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.

## 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 (Director 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.



# 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 from the moment they began their degree programmes.

Through this initiative, MMU students would be groomed into industryready graduates tailored for their industries of choice. The programme will 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, as well as 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 in 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.

## Fostering Future Entrepreneurs through eCadet

Our university is dedicated to nurturing dynamic and resilient student entrepreneurs, empowering them to become founders of high-value startups. Through the eCadet initiative, students will receive early exposure and invaluable insights into the realities of the business world and its ecosystem.

They will have the opportunity to cultivate professional networks, receive expert guidance, and enhance their startup skills by connecting with startups, companies, agencies, and accelerators.

# 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

"Information Technology (IT) shapes the digital world for Infineon's success. IT delivers state-of-theart digital services and continuously increases the efficiency of the business processes."

#### Mr. Tang Chee Chiang

Director in Information Technology, Infineon Technologies

Alumnus FIST Class of 2000

"I will forever cherish MMU's tightly-knit academic community, which has been there for me during the ups and the downs. I am extremely grateful for all my lecturers who have gone out of their way to teach and foster an exceptionally supportive space. MMU's strong research environment, coupled with passionate professors, is an excellent starting point for a budding computer scientist."

#### **Sidharrth Nagappan**

Data Engineer at MoneyLion Bachelor of Computer Science (Hons.) (Data Science).



# Programme Offered at FACULTY OF COMPUTING AND INFORMATICS Cyberlaya 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 COMPUTING**

(R3/0610/3/0007) 12/27 (A8670)

In an ever-changing, technologically-dependent world, our one-year Foundation in Computing programme aims to produce students who are well-equipped with computer skills as well as mathematical and problem solving skills. The Foundation in Computing 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	Trimester 2	Trimester 3
Introduction to Business Management     Introduction to Computing Technologies     Communicative English     Mathematics I     Problem Solving and Program Design	<ul> <li>Critical Thinking</li> <li>Introduction to Digital Systems</li> <li>Essential English</li> <li>Multimedia Fundamentals</li> <li>Mathematics II</li> <li>Principles of Physics</li> </ul>	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		Year 2
Trimester 1 Computer Concepts & Applicate Program Design University Learning Skills Mathematical Techniques 1 English Sustainable Society U1  Trimester 2 Database Systems Computer Architecture & Organe Mathematical Techniques 2 Object Oriented Programming Character Building  Trimester 3 System Analysis & Design Elective 1 Elective 2		Trimester 1 Discrete Structures Data Communications & Networking Internet & Web Publishing Data Structures & Algorithms Business Communication in the Digital Age  Trimester 2 Introduction to Probability & Statistics Operating Systems Final Year Project Elective 3 U2/U3 U4  Trimester 3 Industrial Training
ELECTIVE SUBJECTS	E-Commerce • Multimedia Applications • Mana     Introduction to Cloud Computing	gement Information Systems • Mobile Application Development
UNIVERSITY SUBJECTS	2. LMPU2132 Bahasa Melayu K U2 / U3 - 1. LMPU3212 Bahasa Kebangs Any other courses in the U2 LMPU2222 Basic Academic LMPU2212 Grooming and Pr LMPU2322 Family and Socie	rofessional Etiquette ety in Malaysia choose one course in the U2/U3 category below:

LMPU2212 Grooming and Professional Etiquet
LMPU2322 Family and Society in Malaysia

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

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#### **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.

#### DDOCDAMME STRUCTURE

PROGRAMME STRUCTURE		
Year 1	Year 2	Year 3
<ul> <li>Calculus</li> <li>Programming Fundamentals</li> <li>Discrete Structures &amp; Probability</li> <li>Professional Development</li> <li>Computational Methods</li> <li>Object Oriented Programming &amp; Data Structures</li> <li>Computer Architecture &amp; Organisation</li> <li>Database Fundamentals</li> <li>Research Methodology in Computer Science</li> <li>Integrity and Leadership</li> <li>U4</li> <li>Character Building</li> <li>Sustainable Society</li> </ul>	Software Engineering Fundamentals Operating Systems Computer Networks Object Oriented Analysis & Design Algorithm Design & Analysis Industrial Training U2  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	<ul> <li>Final Year Project</li> <li>Elective 1</li> <li>Elective 2</li> <li>Elective 3</li> <li>Elective 4</li> <li>U1</li> <li>U1</li> <li>Fundamentals of Digital Competence for Programmers</li> </ul> Specialisation: Software Engineering <ul> <li>Software Reliability &amp; Quality Assurance</li> <li>Software Verification &amp; Validation</li> <li>Specialisation Elective 1</li> <li>Specialisation Elective 2</li> </ul> Specialisation: Game Development <ul> <li>Game Algorithms</li> <li>3D Game Programming</li> <li>Specialisation Elective 1</li> <li>Specialisation Elective 2</li> </ul> Specialisation: Data Science <ul> <li>Data Mining</li> <li>Data Visualisation</li> <li>Specialisation Elective 1</li> <li>Specialisation Elective 2</li> </ul> Specialisation: Cybersecurity <ul> <li>Cryptography and Data Security</li> <li>Ethical Hacking and Penetration Testing</li> <li>Specialisation Elective 1</li> <li>Specialisation Elective 1</li> </ul>

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**

Four (4) subjects should be taken from the following:

- Consumer Trends
- Creativity and Innovation
- Becoming A Leader
- Corporate Training
- Professional Image and Etiquette Corporate Communication
- Corporate Strategy
- Design Thinking for Strategic
- Communication
- Social Media Strategies
- Film Appreciation
- Basic Filmmaking
- Fundamental of Wireless Communications · Communications Networks

· Suspenseful Filmmaking

- Radio Network Planning Towards 5G • Internet & Mobile Application
- Media Anthropology
- Media Law
- Project Management
- Motion Capture Information Visualization
- Visual & Corporate Identity
- · Accounting for Decision Making Management
- Personal Finance
- Fundamentals of Marketing
- Digital Transformation Strategy
- Digital Transformation Technologies
- Ergonomics and Human Factor
- Machine Vision IoT Design and Interfacing
- Radio Network Planning Towards 5G
- Digital Business
- Business Information Systems
- Data Analytics for Businesses Cyber Security Understanding Management
- Fundamentals of Marketing
- Financial Management
- Data Analytics for Businesses
- Business Risk Management
- Consumer law
- Labour Law
- Law and Economics Environmental Law
- Law of Banking

#### **UNIVERSITY SUBJECTS**

- U1 Penghayatan Etika dan Peradaban (Local) or BM Komunikasi II (International)
- U1 Falsafah dan Isu Semasa (Local & International)
- U2 Bahasa Kebangsaan A or Foreign Language Beginners
- U4 Co-Curriculum



#### **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
Introduction to Discrete Mathematics and Linear Algebra Calculus and Statistics Fundamental Programming Fundamentals Professional Development Management Object Oriented Programming and Data Structures Computer Architecture and Organization Database Fundamentals Fundamentals of Digital Competence for Programmers Integrity and Leadership U4 Character Building Sustainable Society	<ul> <li>Software Engineering Fundamentals</li> <li>Operating Systems</li> <li>Computer Networks</li> <li>Object Oriented Analysis &amp; Design</li> <li>IT Project Management</li> <li>Information Systems Planning and Development</li> <li>Web Application Development</li> <li>Advanced Database</li> <li>Industrial Training</li> <li>U2</li> </ul>	System Administration Enterprise Application Integration Enterprise Information Systems Cybersecurity Theory and Practice Final Year Project Elective 1 Elective 2 Elective 3 Elective 4 U1 U1
Four (4) subjects shou	ld be taken from the following:	

#### **ELECTIVE SUBJECTS**

UNIVERSITY

**SUBJECTS** 

- Consumer Trends Creativity and Inno ing A Leader Corporate Training
- · Corporate Commu Corporate Strategy Design Thinking for Strategi
- Social Media Strategie
- Suspenseful Film Fundamental of Wireless

Information Visualizatio

- IoT Design and Interfacing
   Radio Network Planning Tow Project ManagerMotion Capture
  - ness Information Systems Data Analytics for Businesses

Accounting for Decision Making

Fundamentals of Marketing Digital Transformation Strategy

- Data Analytics for Busin
- Business Risk Manag
- Law and Econ

#### Visual & Corporate Identity U1 - Falsafah dan Isu Semasa (Local & International)

- U1 Penghayatan Etika dan Peradaban (Local) or BM Komunikasi II (Interna
- U2 Bahasa Kebangsaan A or Foreign Language Beginners

U4 - Co-Curriculun





#### **FOUNDATION IN INFORMATION TECHNOLOGY**

(R3/010/3/0140) 02/27 (A7858)

Modern lifestyle has progressed rapidly with the evolution of current technology. Technological solutions derived from Information Technology 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.

Classes and laboratories are equipped with hardware, software and tools for student to experience an engaging teaching and learning environment and nurturing their knowledge in technical and soft skills.

After completion of Foundation in Information Technology programme, students are able to further their Bachelor Degree Programmes in either Information Technology, Computer Science or Science from Faculty of Information Science and Technology (FIST) or Faculty of Computing and Informatics (FCI).

#### PROGRAMME STRUCTURE

I HOGHAMME OTHOGTONE		
Trimester 1	Trimester 2	Trimester 3
Communicative English Critical Thinking Algebra* Trigonometry Computer Applications Introduction to Computer Architecture and Operating System	Essential English     Calculus     Introduction to Physics	<ul> <li>Academic English</li> <li>Fundamentals of Business Management</li> <li>Introduction to Probability and Statistics</li> <li>Problem Solving and Programming</li> <li>Mini IT Projects</li> <li>Introduction to Multimedia Technology</li> </ul>

<sup>\*</sup> Pre requisite for TCM1134 Calculus

#### **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, they will be learning core components of communication, such as Internet Computing, TCP/IP Programming, High-Speed Networks, Client Server Computing and Real Time Systems.

Ultimately, we expect our Data Communications and Networking graduates to branch into areas of communication 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
Computer Architecture and Organisation Data Communications and Networking Computer Programming Database Systems Operating Systems System Analysis and Design Ethics and Professional Conducts Discrete Mathematics and Probability U2 U3 U4 Character Building Sustainable Society Elective 1 Elective 2	Computer Securi Computer Netwo System Administ Data Structures a Internet of Things Routing and Swit Network Security	and Application on and Architecture ty orks ration and Maintenance and Algorithms s (IoT) Fundamentals	Clo Mai Hig Moi Rea Dat	
	tals of Digital Competence for Pr ives (Non-computing course fro		e • Technolo	gy Transfer • Organisational Behaviour
(Philosoph  U1:     Local:     Penghayat     (Appreciat     Civilization		U2 Local: Students without credit in BM at SP i.Bahasa Kebangsaan A. If the stude taken this course before, he/she me any other courses in the U2 categor Students who obtained credit in BM SPM Level Any other courses in the U2 categor International: Any other courses in the U2 categor International Internat	ent has ust take ry** I at ry*** foreign	U3 - Integrity and Leadership U4 - Choose one U4 from the list offered



#### **BACHELOR OF INFORMATION TECHNOLOGY (HONS.)** (BUSINESS INTELLIGENCE AND ANALYTICS) (R2/481/6/0079) 11/21 (A7498)

This programme equips students with business intelligence and analytical skills to provide insights and improved decision making to corporations in achieving business agility. The purpose 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. Some of the subjects covered in this programme are Data Mining and Machine Learning, IT Project Management for Business Analysts, Business Intelligence, Internet Marketing, Human Computer Interaction and Enterprise Resource Planning.

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

#### PROGRAMME STRUCTURE

PROGRAMME STRUCTURE			
Year 1	Year 2		Year 3
Computer Architecture and Orga Data Communications and Netw Computer Programming Database Systems Operating Systems System Analysis and Design Ethics and Professional Conduct: Discrete Mathematics and Proba U2 U3 U4 Elective 1 Elective 2 Character Building Sustainable Society	orking  Web Techniqu System Integr Computer Sec Computer Net System Admir S Data Structure Internet of Thi Business Intel Business Statl	es and Application ation and Architecture urity works istration and Maintenance is and Algorithms ngs (IOT) Fundamental igence	Enterprise Resource planning     Cloud Computing     Management of Information Security     Internet Marketing     Project Management for Business Analysts     Data Mining and Machine Learning     Data Analytics Fundamentals     Data Storytelling     Industrial Training     Project I
ELECTIVE SUBJECTS	Fundamentals of Digital Competence fo     Open Electives (Non-computing course		echnology Transfer • Organisational Behaviour
UNIVERSITY SUBJECTS	U1 U1 - Falsafah dan Isu Semasa (Philosophy and Current Issues) U1: Local: Penghayatan Etika dan Peradaban (Appreciation of Ethics and Civilizations)	U2: Local: Students without credit in BM at SPM Le i.Bahasa Kebangsaan A. If the student h taken this course before, he/she must te any other courses in the U2 category** Students who obtained credit in BM at SPM Level Any other courses in the U2 category***	as ake

Any other courses in the U2 category\*\*\*

language, he/she must choose one which he/ she has no formal education in.

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)

U1 - Falsafah dan Isu Semasa

Local:

(Philosophy and Current Issues)

Penghayatan Etika dan Peradaban

(Appreciation of Ethics and

Bahasa Melayu Komunikasi 2

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

The objective of this course is to equip students with the necessary knowledge and skills required to be successful in building the much needed intelligent computer systems. Based on the solid foundations of Computer Science and Information Technology, the three-year degree programme covers the traditional grounds of artificial intelligence, such as fundamental in artificial intelligence, programming language concept, and computational intelligence. It then extends to advanced and deeper understanding of AI techniques in application, such as Computer Vision, Natural Language Processing, Data analytics, etc.

Career Prospects: Computer Scientist, Knowledge Engineer, Software Engineer, Systems Analyst, and Programmer.

#### PROGRAMME STRUCTURE

**UNIVERSITY SUBJECTS** 

Year 1	Year 2	Year 3
Computer Architecture and Organisation Data Communications and Networking Computer Programming Database Systems Operating Systems System Analysis and Design Ethics and Professional Conducts Discrete Mathematics and Probability Elective 1 Elective 2 U2 U3 U4 Character Building Sustainable Society	Human Computer Interaction     Software Engineering Fundamentals     Web Techniques and Application     Programming Language Concept     Artificial Intelligence Fundamentals     Data Structures and Algorithms     Computer Networks     Semantic Web Technology     Machine Learning     Computer Graphics     Data Analytics Fundamentals     Elective 3     Elective 4     U1	<ul> <li>Parallel Computing</li> <li>Algorithm Design and Analysis</li> <li>Data Wrangling and Visualization</li> <li>Natural Language Processing</li> <li>Cloud Computing</li> <li>Expert Systems</li> <li>Computational Intelligence</li> <li>Computer Vision</li> <li>Industrial Training</li> <li>Project I</li> <li>Project II</li> </ul>
ELECTIVE CLIDIECTO	Digital Competence for Programmers - Technopreneur Venture Ion-computing course from other faculties)	Technology Transfer • Organisational Behaviour

Local:

SPM Level

Students without credit in BM at SPM Level

i.Bahasa Kebangsaan A. If the student has

taken this course before, he/she must take

any other courses in the U2 category\*\*

Students who obtained credit in BM at

Any other courses in the U2 category\*\*\*

Any other courses in the U2 category\*\*\* \*\*\* Should the student choose to take foreign U3 - Integrity and Leadership

U4 - Choose one U4 from the list offered



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

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

Security Technology is designed to develop knowledge and skills in 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 on 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, and

#### PROGRAMME STRUCTURE

Local

Penghayatan Etika dan Peradabar

(Appreciation of Ethics and

Bahasa Melayu Komunikasi 2

NOGRAMME STRUCTURE			
Year 1	Year 2	Year 3	
Computer Architecture and Organisation Data Communications and Networking Computer Programming Database Systems Operating Systems System Analysis and Design Ethics and Professional Conducts Discrete Mathematics and Probability Elective 1 Elective 2 U2 U3 U4 Character Building Sustainable Society	Human Computer Interaction Web Techniques and Application System Integration and Architecture Computer Security Computer Networks System Administration and Maintenance Data Structures and Algorithms Cybersecurity Law Ethical Hacking and Security Assessment Information Assurance and Security Elective 3 Elective 4	Enterprise Resource Planning     Cloud Computing     Management of Information Security     Malware and Intrusion Detection     Password Authentication and Biometrics     Digital Forensics     Applied Cryptography     Security Analysis & Vulnerability Assessment     Python for Security     Industrial Training     Project I	
	Digital Competence for Programmers - Technopreneur Ventu ehaviour - Open Electives (Non-computing course from other		
UNIVERSITY SUBJECTS U1 - Falsafah dan I (Philosophy and C		U3 - Integrity and Leadership	

Students without credit in BM at SPM Level

i.Bahasa Kebangsaan A. If the student has

taken this course before, he/she must take

any other courses in the U2 category\*\*

Students who obtained credit in BM at

Any other courses in the U2 category\*\*\*

Any other courses in the U2 category\*\*\*

\*\*\* Should the student choose to take foreign language, he/she must choose one which he/

U4 - Choose one U4 from the list offered



#### **DIPLOMA IN INFORMATION TECHNOLOGY**

(R3/481/4/0229) 12/27 (A8553)

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: Programmer, E-Commerce Developer, Internet/ Software Application Developer, IT Technical Support Officer, Database Manager, Information Systems Manager, System Analyst, etc.

Data Communications & Networking Introduction to Computer Security Operating Systems Systems Analysis & Design Computer Architecture Ethics & Cybertechnology Mathematical & Statistical Techniques Discrete Structures & Probability Database Systems Character Building Sustainable Society U1   Copen elective course (non-computing) - English - Business Communication in Digital Age - Fundamentals of Entrepreneurship  LECTIVE SUBJECTS  Open elective course (non-computing) - English - Business Communication in Digital Age - Fundamentals of Entrepreneurship  U2/U3 Local: Students without credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Bahasa			Year 2	
IVERSITY SUBJECTS  U1 Falsafah dan Isu Semasa (Philosophy and Current Issues)- Local OR Bahasa Melayu Komunikasi 1 - International  U2/U3 Local: Students without credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Only Any other courses in the U2 or U3 category** OR International: Choose one course in the U2/U3 category** ** Should the student choose to take foreign language, he/she must choose one which he/ she has no formal education in.	Calculus & Algebra Data Communications & Networ Introduction to Computer Securit Operating Systems Systems Analysis & Design Computer Architecture Ethics & Cybertechnology Mathematical & Statistical Techn Discrete Structures & Probability Database Systems	iques	Fundamentals of Networking     System Administration and Main     Internet & Web Publishing     Introduction to Information Assured Enterprise Resource Planning     System Integration Architecture     Human Machine Interaction     Introduction to Cloud Computing     Industrial Training     Final Year Project     U2/U3	rance & Security
and Current Issues)- Local OR Bahasa Melayu Komunikasi 1 - International  Students without credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Only Any other courses in the U2 or U3 category** OR International: Choose one course in the U2/U3 category**  ** Should the student choose to take foreign language, he/she must choose one which he/ she has no formal education in.		English    Business Communication in D	U2/U3	
category** OR International: Choose one course in the U2/U3 category**  ** Should the student choose to take foreign language, he/she must choose one which he/ she has no formal education in.		and Current Issues)- Local OR Bahasa Melayu Komunikasi 1 -	Students without credit in BM at SPM Level Bahasa Kebangsaan A Students who obtained credit in BM at SPM Level Only	Siloso silo e i i i silo i i i i silo i i i i i i i i i i i i i i i i i i
language, he/she must choose one which he/ she has no formal education in.			category** OR International: Choose one course in the U2/U3 category**	
nte: The above programme structure serves as a guide. Courses may differ according to intakes.			** Should the student choose to take foreign	
			language, he/she must choose one which he/	
$\bigcup_{i \in \mathcal{A}} C_i \bigcup_{i \in \mathcal{A}} H$	te: The above programme structure se	rves as a guide. Courses may differ accordin	language, he/she must choose one which he/ she has no formal education in.	7

Campus	Programme	Minimum Entry Requirements
CYBERJAYA MELAKA	Diploma  • Diploma in Information Technology	<ol> <li>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</li> <li>Pass UEC with a minimum of Grade B in at least three (3) subjects (inclusive of Mathematics and a Pass in English); OR</li> <li>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</li> <li>Pass STAM with a minimum grade of Maqbul (Pass) AND a Credit in Mathematics at SPM Level or its equivalent; OR</li> <li>Possess SKM Level 3 in a related field. (Candidates without Mathematics can be admitted subject to a thorough rigorous assessment to determine their competencies in Mathematics that are equivalent to SPM level); OR</li> <li>A Certificate (Level 3, MQF) in a related field with at least a CGPA of 2.00); OR</li> <li>Other relevant &amp; equivalent qualifications recognised by the Malaysian Government. (Candidates can be admitted if their admission qualification contains Mathematics subject(s) equivalent to Mathematics at the SPM level. Those without a pass in Mathematics at SPM level or equivalent can be admitted but required to take and pass the reinforcement Mathematics subject. The reinforcement Mathematics subject must be offered in the first semester or before enrolment with unconditional offer).</li> <li>Note:</li> <li>Candidates with a pass in Mathematics at the SPM level (or Mathematics equivalent to SPM) may be admitted if their admission qualification contains Mathematics equivalent to Mathematics at the SPM level.</li> <li>Candidates with a pass in Mathematics at SPM level (or Mathematics equivalent to SPM) and without a Mathematics subject in their admission qualification need to take and pass the reinforcement Mathematics subject that is equivalent to the SPM level. The reinforcement Mathematics subject must be offered in first semester or before enrolment with unconditional offer.</li> <li>Candidate with a</li></ol>
CYBERJAYA MELAKA	Foundation  • Foundation in Information Technology	<ul> <li>I. Pass SPM/O-Level or its equivalent with a minimum of Grade C in at least five (5) subjects inclusive of English, Mathematics and two (2) science subjects; OR</li> <li>II. Pass UEC with a minimum of Grade B in Mathematics, English and two (2) science subjects.</li> </ul>

Campus	Programme	Minimum Entry Requirements
Campus	Trogramme	Pass in Foundation or Matriculation studies from a recognised institution with a minimum
	Bachelor	CGPA of 2.00, OR  II. Pass STPM (Arts Stream) or its equivalent with a minimum of Grade C (CGPA 2.00) in any TWO (2) subjects or any equivalent qualification; OR
CVDEDIAVA		III. Pass A-Level with a minimum of Grade D (CGPA 2.00) in any TWO (2) subjects; OR
CYBERJAYA	Bachelor of Computer Science (Hons) Specialization in	IV. Pass STAM with a minimum grade of Jayyid in any TWO (2) subjects; OR
	Software Engineering     Game Development	V. Any Diploma in Science and Technology (Level 4, MQF) with a minimum CGPA of 2.75.
	Data Science     Cybersecurity	Candidates with a CGPA below 2.75 but more than 2.50 can be admitted subject to a thorough rigorous assessment;
		AND a credit in:
MELAKA	Bachelor of Computer Science (Hons)     Artificial Intelligence	<ul> <li>Additional Mathematics at the SPM level or its equivalent; OR</li> <li>Mathematics and any one of the Science, Technology or Engineering subjects at SPM level or its equivalent. Candidates need to take and pass the reinforcement Mathematics equivalent to Additional Mathematics at the SPM level. The subject must be offered in the first semester or before enrolment with unconditional offer. OR</li> </ul>
		VI. Pass STPM in (Science Stream) in or its equivalent with a minimum of Grade C (GP 2.00) inclusive of Mathematics and one Science / ICT subject; OR
		VII. Pass A-Level with a minimum of Grade D in Mathematics and ONE (1) Science/ ICT subject; OR
		VIII. Pass UEC with a minimum of Grade B in at least FIVE (5) subjects (inclusive of Mathematics, English and one Science / ICT subject); OR
		IX. Diploma in Computing (Level 4, MQF) or its equivalent with a minimum CGPA of 2.50. Candidates with a CGPA below 2.50 but more than 2.00 may be admitted subject to a thorough rigorous assessment; OR
		X. Pass DKM /DLKM/DVM in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval*; OR
		XI. Other relevant & equivalent qualifications recognised by the Malaysian Government. (Candidates can be admitted if their admission qualification contains Mathematics subject(s) equivalent to Additional Mathematics at the SPM level. If it is not equivalent, reinforcement Mathematics subject that equivalent to the SPM level must be offered in first semester or before enrolment with unconditional offer).
		Note: *DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.
		Students are required to pass the reinforcement Mathematics before being allowed to take related core courses. The candidate can sit for any subjects that did not indicate Mathematics as a pre-requisite.
		Reinforcement Mathematics can contribute to the overall graduating credit.
		Students from Matriculation / Foundation or its equivalent can be exempted from taking the Reinforcement Mathematics, provided that the Mathematics offered at that programme level is equivalent / more than the Additional Mathematics offered at an SPM level.
		Pass Foundation / Matriculation studies with a minimum CGPA of 2.00 from a recognised institution and a Credit in Mathematics at SPM Level or its equivalent*; OR     Pass STPM or its equivalent with a minimum Grade C (GP 2.00) in any TWO (2) subjects
		AND a Credit in Mathematics at SPM Level or its equivalent*; OR  III. Pass A-Level with a minimum of Grade D in any TWO (2) subjects AND a Credit in
		Mathematics at SPM Level or its equivalent*; OR
	Bachelor	<ul><li>IV. Pass UEC with a minimum of Grade B in at least five (5) subjects (inclusive of Mathematics* and English); OR</li></ul>
		<ul> <li>V. A pass in STAM with a minimum grade of Jayyid in any TWO (2) subjects (including a credit in Mathematics at SPM level or its equivalent*); OR</li> </ul>
CYBERJAYA	Bachelor of Information Technology (Hons) Information System	VI. Diploma in Computing (Level 4, MQF) or equivalent with a minimum CGPA of 2.50. Candidates with CGPA below 2.50 but more than 2.00 may be admitted subject to a thorough rigorous assessment; OR
MELAKA	Bachelor of Information Technology (Hons)     Data Communications and Networking	VII. Diploma (Level 4,MQF) in Non-Computing with a minimum CGPA of 2.75 AND a Credit in Mathematics at SPM Level or its equivalent* . Candidates with a CGPA below 2.75 but
	Bachelor of Information Technology (Hons)     Security Technology     Bachelor of Information Technology (Hons)     Business Intelligence and Analytics	more than 2.50 can be admitted subject to a thorough rigorous assessment; OR  VIII. Pass DKM/DLKM/DVM in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval**; OR
		IX. Other relevant & equivalent qualifications recognised by the Malaysian Government. (Candidates can be admitted if their admission qualification contains Mathematics subject(s) equivalent to Mathematics at the SPM level. If it is not equivalent, the reinforcement Mathematics subject equivalent to the SPM level must be offered in the first semester or before enrolment with unconditional offer).
		Note:  * Candidates with a pass in Mathematics at SPM level need to take and pass the reinforcement Mathematics subject that is equivalent to the SPM level. The reinforcement Mathematics subject must be offered in the first semester or before enrolment with unconditional offer.
		**DKM /DLKM/DVM candidates may be required to undergo Bridging Programme as an additional requirement.
		Students are required to pass the reinforcement Mathematics before being allowed to take related core courses. The candidate can sit for any subjects that did not indicate Mathematics as a prerequisite.
		Reinforcement Mathematics can contribute to the overall graduating credit.
		Students from Matriculation / Foundation or its equivalent can be exempted from taking reinforcement Mathematics, provided that the Mathematics offered at that programme level is



#### MULTIMEDIA UNIVERSITY [DU001(B)]

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#### **Melaka Campus**

Jalan Ayer Keroh Lama, 75450 Melaka, Malaysia



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