Faculty of Computing and Digital Technology

School of Information and Communication Technology

Student Handbook

(Year 2025)

HELP University Sdn. Bhd. (Co No: 84963-D)

Subang 2 Campus

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HELP Vision

- To be University with strong culture and strong leadership that focuses on sound academic standards, continuous improvement, and the talent development of students and staff.
- To be University that offers learning experience that enhances career development, lifetime values and personal fulfilment.
- To be University with strong research focus in our key areas of excellence.
- To be a University that shares our success with the stakeholders and communities we serve.

HELP Mission

- To help people succeed in life and to live a life of significance through education

University Education Objectives (UEO)

NEP	*HELP VISION and MISSION*	*MQF 5 Clusters of LO*	*University Educational Objective (UEO)*
Developing Industry *Talent with Knowledge & Skills of the* *Discipline*	*HELP Mission* *To help people succeed in life and to live a life of significance through education*	*Knowledge and understanding* *Cognitive skills;* *Numeracy skills* *Digital Skills* *Practical skills*	*1) To develop industry-ready and intellectually curious talent.* *To develop industry-ready graduates equipped with strong disciplinary knowledge and intellectual curiosity—graduates who think critically and innovatively, are empowered to achieve career success, and contribute meaningfully to a dynamic and sustainable global environment.*
Moulding Citizens with shared values/norms working together capitalizing on unity in diversity The SEJAHTERA individual/community	*HELP Mission* *To help people succeed in life and to live a life of significance through education*	*Interpersonal Skills* *Communication Skills* *Leadership, autonomy and responsibility* *Entrepreneurial Skills* *Personal skills*	*2) To nurture inclusive and purpose-driven citizens.* *To nurture inclusive citizens who lead with empathy and integrity, guided by shared values and a respect for diversity—capable of fostering meaningful relationships and contributing positively to national harmony and global well-being.*
Developing Personality and *Character*	*HELP Mission* *To help people succeed in life and to live a life of significance through education*	*Personal skills* *Ethics and professionalism*	*3) To cultivate ethical and resilient individuals.* *To cultivate successful and ethical individuals of strong character and integrity, grounded in compassion, purpose, and moral courage—empowered to lead, overcome challenges, and contribute meaningfully and sustainably to society.*

1. Introduction

Welcome to the Faculty of Computing and Digital Technology of HELP University (HELP).

This Student Handbook (Handbook) outlines the academic and administrative structure for all candidates of the faculty programme, stipulating HELP policy and procedure, subject to regulatory guidelines for your programme progression and completion.

Students are advised to:

- **Read and understand the Handbook carefully before commencing their studies as well as whenever necessary during the course progression; and**
- **Obtain needful clarification and/or more information from the faculty on any information in the Handbook as well as other matters concerning their course.**

HELP University reserves the right to revise academic and administrative policy and procedure as well as the rates of course fees and charges after Management has given approval for the revision.

Undertaking an undergraduate or postgraduate programme successfully as an adult with a career, family and personal commitments is a challenging task. It requires physical and intellectual stamina, commitment, discipline and good time management; resulting in competence, confidence and networking advantage, among other attributes that you will gain, for an enriching and rewarding career and for success in life.

As a member of the HELP student community, you will be part of a larger cohort of students from diverse backgrounds and work experiences. The interaction with your fellow students and academic facilitators is part of your learning process. We trust that the faculty experience will provide you with the opportunity to develop beneficial social and business relationships.

We hope you will find your association with HELP and the faculty an enjoyable and rewarding one.

Faculty of Computing and Digital Technology,

HELP University

2. Welcome Note from the Dean

The Faculty of Computing and Digital Technology (formerly the Faculty of Applied Sciences and Multimedia) was established in 1998 to prepare individuals for a rewarding career in computing. Information and digital technologies are now part of daily life in a way that could not be envisioned in 1998. In particular, digital technologies and business performance are inextricably interwoven. Digital technologies continue to develop with breath taking and disruptive rapidity, with a continuing significant and urgent demand for qualified, competent and creative professionals.

High organisational performance can be built on alliances and partnerships. HELP has forged robust links with institutions of higher learning in more than 30 countries, with many partners across Asia and Europe. The strength of HELP's own and collaborative programmes has also enabled HELP scholars to obtain PhD scholarships from the world's top universities in the UK and Australia.

The School of Information and Communication Technology within the faculty works closely with its global partners and IT professional bodies to ensure that our curricula stay relevant to current needs and future challenges. Graduates require marketable skills to compete in the jobs market, and these skills sets change and evolve. We constantly review our pedagogy and delivery models to maintain the most relevant approach. At HELP we do not compromise on quality, and our consistent efforts to enhance quality recently won us a Brand Laureate Award. Our graduates are ideally positioned to drive the IT industry towards higher levels of innovation and success.

The School's robust links with industry have enabled us to introduce an innovative series of internship programmes that not only offer students valuable work experience, but also provide specific knowledge and development of specialised skills. Our mission is to produce self-directing graduates who can master new skills quickly and efficiently. Our primary aim is to produce graduates able to embrace rapid technological change and economic evolution, and at the same time prepare them to meet the demands and challenges of the Fourth Industrial revolution. We endeavour to instil attitudes and values that will prepare them for a lifetime of continued learning and leadership. The School distinguishes itself by adopting and facilitating unique approaches to teaching and learning models.

We welcome you to HELP University.

Professor Dr R Logeswaran A/L N Rajasvaran

Dean,
Faculty of Computing and Digital Technology

3. School of Information and Communication Technology

The School of Information and Communication Technology (School of ICT), is staffed by a group of highly qualified and committed academicians that are equipped with diverse exposure to a wide range of disciplines. Their combined experiences in both the public and private sectors ensure that the quality of teaching is maintained at a high standard.

With HELP University's mission statement, to be the leading and most successful education institution in fulfilling the education needs and aspirations of Malaysians, the School of ICT plays an integral role in this respect.

The IT programmes are offered at diploma and undergraduate levels with options to transfer to top partner universities, such as the University of Queensland, the Australian National University, the University of Technology Sydney, Beijing Jiaotong University and the University of Essex.

In recognition of its efforts to produce industry-ready technology graduates, HELP University was conferred the Premier Digital Tech Instituion (PDTI) award by the Malaysian Digital Economy Corporation (MDEC). The PDTI is endorsed by the Ministry of Education to selected Institutions of Higher Learning that are able to deliver first-class courses in digital technology to produce highly-employable graduates.

Staff List for the School of Information and Communication Technology

The school is supported academically by lecturers with industry as well as teaching experience, with expertise and strengths in the various areas of information and communication technology.

Administrative (603 -7849 3000)

Dean of Faculty Professor Dr R Logeswaran A/L N Rajasvaran	Ext. 3272 logeswaran.nr@help.edu.my
Assistant Manager Murni Zaitul Asywal Binti Mustafa	Ext. 3282 murnizaitul.m@help.edu.my
Coordinator Yeoh Hooi Sim	Ext. 3285 yeohhs@help.edu.my

Academic (603-7849 3000)

Professors	
Prof. Dr R Logeswaran A/L N Rajasvaran BEng (Hons) Computing (London) MEngSc (MMU) PhD (MMU)	Ext. 3272 logeswaran.nr@help.edu.my
Prof. Dr Sellappan A/L Palaniappan BEcons(Statistics) (Hons)	Ext. 2178 Sellappan.p@help.edu.my

MSc in Computer Science (London) PhD in Interdisciplinary Information Science (Pittsburgh)	
Prof. Dr Azween Bin Abdullah B.Sc. Computer Science Master of Software Engineering Ph.D. in Information Technology (Cybersecurity)	Ext. 2259 azween.a@help.edu.my

Senior Lecturers	
Ms Anitha Velayutham BIT (Info Sys) MBA (Int'l Bus) (CSU)	Ext. 3287 anithav@help.edu.my
Mr Kok Chye Hock BSc (Maths and CompSc) Hons (UKM) MIT (CSU)	Ext. 3275 kokch@help.edu.my
Ms Naline Shanmugam BIT (Artificial Intelligence) (UKM) MSc(CompSc) (UM)	Ext. 3276 nalines@help.edu.my
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Mr Koon Kim Peh BSc (Software Dev) (UTeM) MSc (CompSc) (UTAR)	Ext. 3283 kp.koon@help.edu.my
Mr Manibelen A/L Ratnasamy BSc (Hons) UKM MSc (Comp. Sc.) (UKM)	Ext:3290 manibelen.r@help.edu.my
Dr Shapla Khanam BSc (Hons) (Computer Science) (IIUM) MEng (Telecommunications Engineering) (UM) PhD (UM)	Ext: 3288 shapla.k@help.edu.my
Dr Yong Yoke Leng BCompSc (Hons) (majoring in Artificial Intelligence) (UM) M Comp Sc (UM) PhD (Computing) (Sunway)	Ext: 3273 yokeleng.y@help.edu.my

Lecturers	
Ms Umi Najiah Binti Ahmad Razimi BSc (Hons) (Information System Engineering) (UiTM) MSc (Information Technology) (UiTM)	Ext. 3284 uminajiah.ar@help.edu.my
Dr Saw Yi Jiau BEng (Hons) (Electrical and Computer Systems)(Monash) PhD (Electrical and Computer Systems) (Monash)	Ext. 3278 yijiau.s@help.edu.my

4. Mission, Vision & Values

Mission

To help people succeed in life and to live a life of significance through education.

Vision

a) To be a university with a strong culture of quality and leadership that focuses on sound academic standards, continuous improvement, and the talent development of students and staff
b) To be a university that offers a learning experience that enhances career development, lifetime values and personal fulfilment
c) To be a university with a strong research focus in key areas of excellence
d) To be a university that shares our success with the stakeholders and the communities we serve

Corporate Values

The educational and corporate philosophy of HELP University is:

a) Pride of Achievement
b) Sharing Success
c) The Courage to Be
d) To be Compassionate
e) To be Significant

Teaching Philosophy & Pedagogy

Teaching Philosophy

At HELP University, we focus on:

a) The Skill of Conceptualisation
b) The Science of Organisation

c) The Art of Articulation
d) The Practice of Application

Pedagogy

HELP's success lies in its unique educational philosophy and pedagogy. Firmly believing that education is an opportunity for an individual to realise his/her fullest potential in order to reach the pinnacle of his/her vocation and to lead a meaningful and fulfilling life, we utilise our faculty's impeccable academic credentials and vast experience in all levels and modes of education to design and deliver programmes that live up to the highest standards.

Moreover, the quality of instruction and delivery is benchmarked against the highest standards and criteria, and is guaranteed by an elaborate system of quality assurance imposed by examining boards, external examiners, peer evaluators and statutory regulations.

Our educational philosophy is holistic. On campus, there are sophisticated and unique programmes and services offered by qualified and experienced counsellors and psychologists for pastoral care and personal development of students to enable them to undertake their rigorous studies in the best psychological and emotional frames of mind for maximum achievement.

Quality Assurance

Preserving the Best There Is

HELP's unique reputation as a university of achievers has ensured it a worldwide reputation. The high standards that it has painstakingly achieved are guaranteed, and where necessary, enhanced through a system of Quality Assurance by HELP's partner universities and statutory requirements. In addition, HELP was the first private institution of higher learning to obtain the ISO 9001:2000 under AJA. Currently, the certification body for HELP's ISO 9001:2015 is NQA. In addition, since June 2020, HELP has been certified to ISO 45001:2018.

Quality assurance in HELP is based on a system of internal and external peer scrutiny. The principles of quality assurance in HELP is based on a developmental approach and viewed as a shared responsibility executed in a centralised and decentralised manner. Whilst the Vice Chancellor and senior management staff play a major role in steering the University's quality assurance system, all members of the University community are entrusted to recognise and promulgate best quality practices.

Accreditation

HELP University's programmes are recognised/accredited by the Malaysia Ministry of Higher Education, the Malaysian Qualifications Agency (MQA), the Multimedia Development Corporation and universities in Australia, New Zealand, United Kingdom, and United States of America. Our Diploma and Foundation programs are accepted for entry into top ranked universities, while our bachelor's degrees are accepted for postgraduate studies in leading universities in the UK, Australia and the USA. In addition, they are given maximum exemption by professional bodies for admission into professional qualifications.

5. Programmes

Technology is evolving at a great speed. The School of ICT offers current and relevant programmes that prepare our students for the future workforce.

Students are expected to progress in accordance with the course timetable unless there is good reason for not doing so. Students are advised that unless personal or business commitments necessitate deferment of one or more subjects, it is in their interest to complete the course as scheduled. If one or more subject deferments need to be made, students are still expected to complete the course within the required duration of commencement.

Students who exceed the maximum duration and wish to continue have to obtain approval for continuation. Such extension shall not exceed the maximum duration from commencement of the programmes. A continuation fee of RM2,000.00 is chargeable for each year beyond 3 years up to a maximum of an additional 2 years. The rate is subject to change without notice.

Course Progression

HELP keeps track of a student's progression and may ask for a written explanation if a student is found to be progressing unsatisfactorily in terms of results or non-enrolment of subject for an unreasonable length of time (about 6 months or more). This is especially important for international students because the Malaysian Immigration may not renew their student pass if they had been inactive or if they did not progress satisfactorily without reason.

Attendance

All students are expected to keep satisfactory attendance rate for all modules enrolled. For International students, a minimum regulatory requirement of 80% attendance must be met for each enrolled subject. Failing which, the student may risk cancellation of their visa.

Assesement of Students Learning

Assessment of students learning is a key aspect of quality assurance, and it is one of the most important measures to show the achievement of learning outcomes. Hence, it is crucial for an appropriate assessment method and mechanism to be in place. Qualifications are awarded based on the results of the assessment. The methods of student assessment must be clear, consistent, effective, reliable and in line with current practices. They must clearly measure the achievement of the intended learning outcomes" (COPPA 2nd Edition, 2017).

All Students are required to pass **BOTH** continuous and final assessments for every computing courses based on their passing marks. HEPs can define the meaning of a pass based on their grading system for overall marks; however, a pass should imply that the examiner is satisfied that the candidate has met all the learning outcomes of a particular course.

5.1 Diploma in Information Technology (R4/0611/4/0071) (09/30) (A6528)

The Diploma in Information Technology at HELP University provides students with a solid foundation in key areas of the IT field, preparing them to either enter the workforce or pursue higher studies. The programme covers up-to-date expertise in networking, web development, mobile app development, computer systems, cybersecurity, databases, and programming. Students also gain a strong grounding in mathematical concepts that underpin modern IT applications.

In addition to technical proficiency, the programme emphasises ethics and professional responsibility, ensuring students can apply their skills with integrity. The curriculum blends theoretical knowledge with hands-on application, fostering critical thinking, personal excellence, and effective communication from the first year. Students will be well-prepared to contribute meaningfully and ethically in today's fast-evolving and competitive technology landscape. At HELP University, we don't just teach you how to code; we prepare you to think like a problem-solver and apply your skills responsibly in the real world.

Programme Educational Objectives

The Diploma in Information Technology will produce information technology professionals who are:

PEO1	Equipped with the coherent foundational knowledge of IT principles and the necessary technical skills to pursue a career in the IT industry.
PEO2	Able to exhibit sound presentation and communication skills; and capable of working in a team environment and demonstrate effective leadership skills.
PEO3	Able to learn and apply computational skills to solve problems to succeed in a competitive working environment.
PEO4	Able to demonstrate an awareness of social and national responsibilities; and behave ethically and responsibly in the professional environment.
PEO5	Able to demonstrate an entrepreneurial mindset that incorporates creativity, innovation and analytical abilities; and apply skills and principles of lifelong learning in an academic and professional development.

Programme Learning Outcomes

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

PLO1	Apply knowledge of theoretical and technical concepts associâtes with computing and information technology to assist within an organisation's IT infrastructure.
PLO2	Apply problem-solving and analytical skills to organize, manage and evaluate information.
PLO3	Use computational tools and methods to provide technical support within the organization.
PLO4	Interact and collaborate effectively with peers, stakeholders and the community.
PLO5	Communicate effectively in written, spoken and computer-mediated forms.
PLO6	Apply a broad range of information, media and technology apps in solving IT problems in academic, global, economic and societal contexts.
PLO7	Apply computational and mathematical thinking skills in problem solving.

PLO8	Function individually or in teams effectively, with a capability to be a leader.
PLO9	Apply skills and principles for independent study and lifelong learning.
PLO10	Demonstrate an entrepreneurial mindset in the development of IT solutions.
PLO11	Understand and commit professionally, ethically and with humane responsibility in the field of information and computing ethics.

Programme Structure

- 2 years programme
- 19 academic subjects and 5 Mata Pelajaran Umum (MPU) to be completed in a minimum period of 2 years
- 14 weeks per full semester; 7 weeks per short semester
- Blended learning with 2 – 3 hours syncnhoronous classes

Maximum Duration for Programme Completion

The maximum time allowed for a student to complete a programme is Eight (8) years for the Diploma programme.(w.e.f. August 2021)

Progression

Students who have completed the Diploma in Information Technology will be able to pursue their studies towards one of the following programmes listed in Table 1. For partner universities, students will have to fulfill the minimum entry requirements set by the respective universities.

Table 1. Progression to Undergraduate Degree

No.	Programme Name	Abbreviation	Degree Awarded By
1	Bachelor of Information Technology (Hons)	BIT	HELP University
2	Bachelor of Information Technology (Data Analytics) (Honours)	BDA	HELP University
3.	Bachelor of Computer Science (Hons)	BCS	HELP University
4	Bachelor of Software Engineering	BJTU 2+2	Beijing Jiaotong University
5	Bachelor of Information Technology	UQ 2+2	University of Queensland
6	Bachelor of Computer Science	UQ 2+2	University of Queensland
7	Bachelor of Information Technology/Bachelor of Computer Science	AU 2+2	University of Adelaide

8	Bachelor Sc Computer Science	Essex 2+1	University of Essex
9	BEng Computer Networks	Essex 2+1	University of Essex
10	BEng Computers with Electronics	Essex 2+1	University of Essex
11	BEng Computers Systems Engineering	Essex 2+1	University of Essex
12	Bachelor of Software Engineering	2+2	Beijing Jiaotong University
	Bachelor of Information Technology(Cybersecurity)	2+2	Macquarie University
13	Bachelor of Information Technology (Data Science)	2+2	Macquarie University
14	Bachelor of Information Technology (Information Systems & Business Analytics)	2+2	Macquarie University
15	Bachelor of Information Technology (Software Technology)	2+2	Macquarie University
16	Bachelor of Information technology (Web & Mobile App Development)	2+2	Macquarie University
17	Bachelor of Cyber Security	2+2	Macquarie University
18	Bachelor of Information Technology	2+2	The University of Adelaide
19	Bachelor of Computer Science	2+2	The University of Adelaide
20	BSc (Hons) Computer Science)/second year	2+1	Plymouth University
21	BSc (Hons) Computer Science)(AI)/second year	2+2	Plymouth University
22	BSc (Hons) Computer Science)(Cybersecurity))/second year	2+2	Plymouth University
23	BSc (Hons) Computer Science)(Games Developemnt)/second year	2+2	Plymouth University
24	BSc (Hons) Computer Science)(Software Engineering)/second year	2+2	Plymouth University

5.2 Bachelor of Information Technology (Honours) (R4/0611/6/0094) (04/30)(A5954)

The Bachelor of Information Technology (Hons) offered by HELP University is a three-year course and is designed to equip students with skills and attributes required to be effective and efficient computing professionals.

The Bachelor of Information Technology (Hons) course has a core of IT subjects complemented with a selection from a wide range of subjects that includes the latest advances in IT skills, concepts and applications.

We put a premium on instilling students with the expertise and skills to take on new career challenges in IT. Graduates may find employment as computing professionals in both the commercial and technical sectors of the computing industry. Potential employers might be in manufacturing, commerce, small businesses, financial enterprises, public utilities, education or welfare.

Programme Educational Objectives

The Bachelor of Information Technology (Hons) will produce information technology professionals who are:

PEO1	Equipped with the necessary knowledge and technical skills to keep abreast of the rapidly evolving technological landscape.
PEO2	Able to exhibit sound presentation and communication skills; and capable of working in a team environment and demonstrate effective leadership skills.
PEO3	Problem-solvers and innovative thinkers, able to learn and apply computational skills independently and efficiently; and consequently able to succeed in a competitive.
PEO4	Able to demonstrate an awareness of social and national responsibilities.
PEO5	Able to demonstrate an entrepreneurial mindset that incorporates creativity, innovation and analytical abilities; and apply skills and principles of lifelong learning in an academic and professional development.

Programme Learning Outcomes

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

PLO1	Acquire and apply knowledge of principles, concepts and techniques associated with computing and IT.
PLO2	Apply analytical skills and principles of lifelong learning to organize, manage and evaluate information.
PLO3	Use computational tools and packages in the design, development, management and implementation of information systems.
PLO4	Interact and collaborate effectively with peers, stakeholders and the community.
PLO5	Able to demonstrate an entrepreneurial mindset that incorporates creativity, innovation and analytical abilities; and apply skills and principles of lifelong learning in an academic and professional development.
PLO6	Apply a broad range of information, media and technology apps in solving IT problems in academic, global, economic and societal contexts.
PLO7	Apply computational thinking and graphical/visual data in solving IT problems in academic, global, economic and societal contexts.
PLO8	Function individually or in teams effectively, with a capability to be a leader.

PLO9	Apply skills and principles of lifelong learning for social, economic and individual development.
PLO10	Demonstrate an entrepreneurial mindset in the development of IT solutions.
PLO11	Understand and commit professionally, ethically and with humane responsibility in the field of information and computing ethics.

Programme Structure

- 3 years programme
- 26 academic subjects and 6 additional subjects consisting of mandatory courses by the Malaysian government (Mata Pelajaran Umum - MPU) and the university, to be completed in a minimum period of 3 years
- (14 weeks per full semester; 7 weeks per short semester)
- Blended learning with 2 – 3 hours syncnhoronous classes

Maximum Duration for Programme Completion

The maximum time allowed for a student to complete a programme is Eight (8) years for Bachelor's degree programmes. (w.e.f. August 2021)

Progression

Students who have completed Year 1, Year 2 or Year 3 of the Bachelor of Information Technology with the necessary electives, will be able to pursue their studies towards one of the following programmes listed in Table 2. For partner universities, students will have to fulfill the minimum entry requirements set by the respective universities.

Table 2. Credit Transfer Pathways

No.	Programme Name	Abbreviation	Degree Awarded By
1	Bachelor of Software Engineering	BJTU 1.5+2	Beijing Jiaotong University
2	Bachelor of Information Technology	UQ 2+1	University of Queensland
3	Bachelor of Computer Science	UQ 2+1.5	University of Queensland
4	BEng (Software) (Honours)	UQ 2+2	University of Queensland
7	Bachelor of Information Technology	UA 1+2	University of Adelaide
8	Bachelor of Computer Science	UA 1+2.5	University of Adelaide
9	BSc Computer Games	Essex 1+2	University of Essex
10	BSc Computer Science	Essex 1+2	University of Essex
11	BEng Computer Science Networks	Essex 1+2	University of Essex
12	BEng Computer with Electronics	Essex 1+2	University of Essex

13	BEng Computer Systems Engineering	Essex 1+2	University of Essex
14	Swansea University	Swansea 1+2	Swansea University
15	Bachelor of Information Technology (Cybersecurity)	1.5 + 1.5	Macquarie University
16	Bachelor of Information Technology major in: • Cybersecurity • Data Science • Information Systems & Business Analysis • Software Technology • Web & Mobile App Development	1.5 + 1.5	Macquarie University
17	Bachelor of Information Technology Or Bachelor of Information Technology (Data Analytics) (Honours)	1+2	Murdoch University
18	Bachelor of Information Technology	1+2	The University of Adelaide
19	Bachelor of Computer Science	1+2.5	The University of Adelaide
20	BSc Computer Science	1+2	Swansea University
21	Bachelor of Engineering in Computer Science & Technology	2+1	Beihing Jiatong University
22	BSc (Hons) Computer Science/Second year	1+2 Students will have to complete the following elective modules: BDA100 Introduction to programming BIT104 Applications of Mathematics in IT	Plymouth University
23	Bsc (Hons) Computer Science (AI)/second year		
24	Bsc (Hons) Computer Science (Cybersecurity)/second year		
25	Bsc (Hons) Computer Science (Games Development)/second year		
26	Bsc (Hons) Computer Science (Software Engineering)/second year		

27	BSc (Hons) Computer Science/Final year	2+2 Students will have to complete the following elective modules: BDA100 Introduction to programming BIT104 Applications of Mathematics in IT BIT205 Object Oriented Programming BIT208 Data Structures and Algorithms BIT210 Web Programming	
28	Bsc (Hons) Computer Science (Software Engineering)/second year		

Work-Based Learning (WBL) Mode

Students who have completed Year 1 and Year 2 of the Bachelor of Information Technology (Hons) programme have the option to pursue a WBL mode, subject to the following conditions:

- Minimum CGPA of 2.00 at the time of application for WBL;
- Acceptance from the WBL organisation;
- Enrolment in the following subjects during the WBL period:
    - Final Year Project I
    - Final Year Project II
    - Industrial Internship
    - IT Project Management
    - Mobile Applications Development / Enterprise Application Development / Concurrent Programming (Choose 1)
    - Cybersecurity and Ethics
    - Cloud Solutions Development / Cyberdefence and Ethical Hacking (Choose 1)
    - Startup Ideation

Students who would like to apply for the WBL option are encouraged to consult the School of ICT in Year 2.

5.3 Bachelor of Information Technology (Data Analytics) (Honours) (R2/0611/6/0104) (02/26) (A6240)

The primary aim of the Bachelor of Information Technology (Data Analytics) (Honours) is to produce graduates with an understanding of the business challenges of an enterprise, and the ability to conceive and manage solutions that are increasingly data-driven. The programme also aims to address the high industry demand for business and data analysts. Graduates will be trained in the latest data analytics methods and tools; including fundamental and advanced statistical and mathematical principles upon which advanced data analysis techniques are built (machine learning, pattern recognition, data mining, etc.). They will be able to consult on, support or develop the technological platforms of an enterprise to achieve a competitive advantage, building a career in roles ranging from data and systems analysts to data engineers and data scientists. Graduates will be able to independently understand, work through and solve problems that arise in the area of management and IT as well as in interdisciplinary matters in practice.

Programme Educational Objectives

The Bachelor of Information Technology (Data Analytics) (Honours) will produce information technology professionals who are:

PEO1	Equipped with the necessary knowledge and technical skills in computational methods/tools for achieving strategic business analysis and decision-making goals.
PEO2	Able to exhibit sound presentation and communication skills; and capable of working in a team environment and demonstrate effective leadership skills.
PEO3	Problem-solvers and innovative thinkers, able to learn and apply computational skills independently and efficiently; and consequently able to succeed in a competitive professional or academic environment.
PEO4	Able to demonstrate an awareness of social and national responsibilities; and behave ethically and responsibly in the professional environment.
PEO5	Able to demonstrate an entrepreneurial mindset that incorporates creativity, innovation and analytical abilities; and apply skills and principles of lifelong learning in an academic and professional development.

Programme Learning Outcomes

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

PLO1	Acquire and apply knowledge of principles, concepts and techniques associated with the management and analysis of data to meet business needs.
PLO2	Apply analytical skills and principles of lifelong learning to organize, manage and evaluate information.
PLO3	Use computational tools and packages in the design, development, management and implementation of data and analytics models.
PLO4	Interact and collaborate effectively with peers, stakeholders and the community.
PLO5	Able to demonstrate an entrepreneurial mindset that incorporates creativity, innovation and analytical abilities; and apply skills and principles of lifelong learning in an academic and professional development.
PLO6	Apply a broad range of information, media and technology apps in solving IT problems in academic, global, economic and societal contexts.

PLO7	Apply computational thinking and graphical/visual data in solving IT problems in academic, global, economic and societal contexts.
PLO8	Function individually or in teams effectively, with a capability to be a leader.
PLO9	Apply skills and principles of lifelong learning for social, economic and individual development.
PLO10	Demonstrate an entrepreneurial mindset in the development of IT and analytics solutions.
PLO11	Act professionally, ethically and with humane responsibility, with awareness of the impact of technology on individuals, organisations and society.

Programme Structure

- 3 years programme
- 25 academic subjects and 6 additional subjects consisting of mandatory courses by the Malaysian government (Mata Pelajaran Umum - MPU) and the university, to be completed in a minimum period of 3 years
- 14 weeks per full semester; 7 weeks per short semester
- Blended learning with 2 – 3 hours syncnhoronous classes

Maximum Duration for Programme Completion

The maximum time allowed for a student to complete a programme is Eight (8) years for Bachelor's degree programmes.

Progression

Students who have completed Year 1, Year 2 or Year 3 of the Bachelor of Information Technology with the necessary electives, will be able to pursue their studies towards one of the following programmes listed in Table 3. For partner universities, students will need to fulfill the minimum entry requirements set by the respective universities.

Table 3. Credit Transfer Pathways

No.	Programme Name	Abbreviation	Degree Awarded By
1	BSc Computer Science	1+2	Swansea University

5.4 Bachelor of Computer Science (Honours) (N/0613/6/0006) (08/27) (MQA/PA15760)

The HELP University Bachelor of Computer Science (Hons) is aimed at supplementing the computing degrees offered at HU. There is a marked need for computer science graduates to meet the national goals and global goals of the fourth industrial revolution, particularly in the areas of cybersecurity, data science, artificial intelligence and blockchain. Computer scientists are needed for a variety of applications in multiple industries and will need to be able to solve problems using technologies that are constantly evolving. The programme has been designed to provide a strong theoretical foundation and flexibility in terms of a wide range of electives so that students will be able to apply themselves to future technological requirements.

Programme Educational Objectives

The Bachelor of Computer Science (Hons) shall produce computing professionals who are:

PEO1	Able to adapt appropriate methodologies and techniques to provide computing solutions based on relevant knowledge and technical skills in the field of computer science in line with industry requirements.
PEO2	Effective team player with leadership skills, autonomy, and responsibility and able to communicate effectively with discipline related stakeholders.
PEO3	Ethical and responsible, with an appreciation of professional, social, cultural, and global issues.
PEO4	Lifelong learners who are able to drive scientific and societal advancement through technological innovation and entrepreneurship.

Programme Learning Outcomes

A graduate of the Bachelor of Computer Science (Hons) will be able to:

PLO1	Apply mathematical, algorithmic principles and computer science theory in the modelling and design of computing problems.
PLO2	Apply problem-solving and analytical skills to suggest and implement solutions or projects and test models to meet desired needs within realistic constraints.
PLO3	Adapt appropriate methodologies and techniques for modelling, designing, developing, and evaluating computing solutions.
PLO4	Interact, communicate, and collaborate effectively with peers, stakeholders, and the community in written, spoken and computer-mediated forms
PLO5	Utilise digital and numeracy skills to derive efficient computing solutions.
PLO6	Demonstrate capability to lead, work in a team and to be accountable in producing computing solutions
PLO7	Apply skills and principles for independent study and lifelong learning.
PLO8	Demonstrate an entrepreneurial mindset in the development of computing solutions.
PLO9	Act professionally, ethically and with humane responsibility with awareness of the impact of computer science projects on individuals, organisations and society.
PLO10	Demonstrate an entrepreneurial mindset in the development of computing solutions.
PLO11	Act professionally, ethically and with humane responsibility with awareness of the impact of computer science projects on individuals, organisations and society.

Programme Structure

- 3 years programme
- 27 academic subjects and 6 additional subjects consisting of mandatory courses by the Malaysian government (Mata Pelajaran Umum - MPU) and the university, to be completed in a minimum period of 3 years
- 14 weeks per full semester; 7 weeks per short semester
- Blended learning with 2 – 3 hours syncnhoronous classes

Maximum Duration for Programme Completion

The maximum time allowed for a student to complete a programme is Eight (8) years for Bachelor's degree programmes.

Table 4. Credit Transfer Pathways

No.	Programme Name	Abbreviation	Degree Awarded By
1	BSc (Hons)/Second year	1+2 Students will have to complete the following elective modules: BDA100 Introduction to Programming BIT102 Front-End Web Development	Plymouth University
2	BSc (Hons)Computer Science (AI)/Second year		
3	BSc (Hons)Computer Science (Cybersecurity)/Second year		
4	BSc (Hons)Computer Science (Games Development)/Second year		
5	BSc (Hons)Computer Science (Software Engineering)/Second year		
6	BSc (Hons)/final year	2+2 Students will have to complete the following elective modules: BDA100 Introduction to Programming BIT102 Front-End Web Development	
7	BSc (Hons)Computer Science (AI)/Final year		

		BIT104 Application of Mathematics in IT BIT203 Advanced OO Programming BDA203 Advanced Database Systems BCS205 Principles of Machine Learning	
8	BSc (Hons)Computer Science (Cybersecurity)/Final year	2+2 Students will have to complete the following elective modules: BDA100 Introduction to Programming BIT102 Front-End Web Development BIT104 Application of Mathematics in IT BIT203 Advanced OO Programming BDA203 Advanced Database Systems BIT215 Cybercrime & Digital Forensics BIT204 Advanced Networking	Plymouth University
9	Bachelor of Information Technology	1 + 2 Students must complete a total of 44 units at HELP, including FEC101 Applied Mathematical Studies ***in addition*** to the standard 40 units of first year coursework	University of Queensland
10	Bachelor of Information Technology	2 + 1	University of Queensland
11	Bachelor of Computer Science	1 + 2 Students must complete a total of 44 units at HELP, including FEC101 Applied Mathematical Studies ***in addition*** to the standard 40 units of first year coursework	University of Queensland

12	Bachelor of Computer Science	2 + 1	University of Queensland

5.5 Master of Data Science (R/0613/7/0045) (07/30) (MQA/FA13820)

The programme aims to produce graduates to meet the growing demand for data science professionals who are capable of making decisions based on the availability of comprehensive data. It prepares graduates to apply analytics techniques for knowledge discovery and dissemination to assist researchers or decision-makers in achieving organisational objectives.

Objectives

The objectives of the Master of Data Science are to produce graduates who are able to:

- Apply quantitative modelling and data analysis techniques to the solution of real world business problems, communicate findings, and effectively present results using data visualisation techniques.
- Recognise and analyse ethical issues in business related to intellectual property, data security, integrity, and privacy.
- Demonstrate knowledge of statistical data analysis techniques utilised in decision-making.
- Use data mining software to solve real-world problems.
- Employ cutting edge tools and technologies to analyse Big Data.
- Apply algorithms to build machine intelligence.
- Demonstrate use of team work, leadership skills and decision making.

Programme Educational Objectives

The Programme Educational Objectives (PEO) of the Master of Data Science are to produce graduates who are:

PEO1	Knowledgeable and technically competent in the discipline of data science in line with industry requirements.
PEO2	Effective communicators who collaborate well with stakeholders and demonstrate good leadership quality in an organization.
PEO3	Problem solvers and critical thinkers, able to approach data science problems using numerical and computing skills with an understanding of professional and ethical responsibilities.
PEO4	Lifelong learners, who are able to demonstrate entrepreneurial skills for successful personal and career advancement in the field of data science.

Programme Learning Outcomes (PLO)

A graduate of the Master of Data Science will be able to:

PLO1	Integrate advanced knowledge related to research issues in computing.
PLO2	Recommend innovative solutions that are at the forefront of developments in the fields of study.
PLO3	Construct computing solutions and tools in terms of their usability, efficiency and effectiveness.
PLO4	Demonstrate effective interaction within a group and with a diverse audience through project discussions and participation in discourses related to the field of study.
PLO5	Exhibit effective communication within a group and with a diverse audience by publishing and presenting technical materials in the field of study.
PLO6	Utilise digital skills to acquire, interpret and extend knowledge in computing.
PLO7	Apply numerical skills to acquire, interpret and extend knowledge in computing.
PLO8	Demonstrate leadership, teamwork, autonomy and responsibility in delivering services related to the field of study.
PLO9	Exhibit capabilities to extend relevant knowledge through life-long learning.
PLO10	Exhibit capabilities of having an entrepreneurial mindset to the related field of study.
PLO11	Uphold professional and ethical practices in conducting research and delivering services related to the field of study.

Programme Details

1. 6 academic subjects to be completed in a minimum period of 1 year for full time and 2 years for part time.
2. Short semesters = 11 weeks; Long semester=21 weeks.
3. 5 hours of teaching per subject per week.

Programme Structure and Maximum Duration for Programme Completion

Program Name : Master of Data Science (FULL TIME)
Program Code : HUMDS
Min Duration : 1 Year
Max Duration : 3 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
Semester 1 (11 weeks)	MDS501	Programming for Data Science	Core	4
	MDS502	Data Management	Core	4
	MDS505	Research Methods	Core	4
Total credit hours for semester 1				**12**
Semester 2 (11 weeks)	MDS503	Statistics for Data Science	Core	4
	MDS504	Applied Machine Learning	Core	4
Total credit hours for semester 2				**8**

Semester 3 (21 weeks)	MDS506	Dissertation	Core	20
Total credit hours for semester 3				**20**
		Total Credit Hours (1 Year)		40

Program Name : Master of Data Science (PART TIME)
Program Code : HUMDS
Min Duration : 2 Year
Max Duration : 5 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
Semester 1 (11 weeks)	MDS501	Programming for Data Science	Core	4
Total credit hours for sem 1				4
Semester 2 (11 weeks)	MDS503	Statistics for Data Science	Core	4
Total credit hours for sem 2				4
Semester 3 (11 weeks)	MDS502	Data Management	Core	4
Total credit hours for sem 3				4
Semester 4 (11 weeks)	MDS504	Applied Machine Learning	Core	4
Total credit hours for sem 4				4
Semester 5 (11 weeks)	MDS505	Research Methods	Core	4
Total credit hours for sem 5				4
Semester 6 (21 weeks)	MDS506	Dissertation	Core	20
Total credit hours for sem 6				20
Total Credit Hours (1 Year)				40

5.6 Master in Artificial Intelligence (ODL) (N-DL/0613/7/0057) (07/30) (MQA/PA18347)

Programme Code : HUMAI (FULL TIME)

Min Duration : 1 Years

Max Duration : 3 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
Semester 1 (15 weeks)	MDS501	Programming for Data Science	Core	4
	MDS502	Data Management	Core	4
	MDS505	Research Methods	Core	4
		Total credit hours for sem 1		12
Semester 2 (15 weeks)	MAI502	Deep Learning for Computer Vision	Core	4
	MDS504	Advanced Machine Learning	Core	4
	MDS505	Applied Statistics	Elective	4
	MAI503	Natural Language Processing		
		Total credit hours for sem 2		12
Semester 3 (13 weeks)	MAI506	Project Report	Core	12
	MCS502	Network Security and Cryptography	Elective	4
	MAI507	Ethics and Cybersecurity		
		Total credit hours for sem 3		16
		Total Credit Hours (1 Year)		**40**

Programme Code : HUMAI (PART TIME)

Min Duration : 2 Years

Max Duration : 5 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
Semester 1 (15 weeks)	MDS501	Programming for Data Science	Core	4
	MDS505	Research Methods	Core	4
			Total credit hours for sem 1	8
Semester 2 (15 weeks)	MDS504	Applied Machine Learning	Core	4
			Total credit hours for sem 2	4
Semester 3 (13 weeks)	MCS502	Network Security and Cryptography	Elective	4
	MAI507	Ethics and Cybersecurity		
			Total credit hours for sem 3	4
Semester 4 (15 weeks)	MDS502	Data Management	Core	4
			Total credit hours for sem 4	4
Semester 5 (15 weeks)	MAI502	Deep Learning for Computer Vision	Core	4
	MDS505	Applied Statistics	Elective	4
	MAI503	Natural Language Processing		
			Total credit hours for sem 5	8
Semester 6 (13 weeks)	MAI506	Project Report	Core	12
			Total credit hours for sem 6	12
			Total Credit Hours (2 Years)	**40**

5.7 Master of Cybersecurity (ODL) (N-DL/0613/7/0056) (07/30) (MQA/PA18340)

The programme aims to produce graduates to meet the growing demand for Cybersecurity professionals who are capable of securing the confidentiality, integrity and availability of comprehensive data and information. It prepares graduates to apply analytics techniques for knowledge discovery and dissemination to assist researchers or decision-makers in achieving organisational objectives.

Objectives

The MCS is an Open and Distance Learning (ODL) programme designed with the following objectives:

- Comprehensive Knowledge: Equip students with a thorough understanding of cybersecurity principles, practices, and technologies.
- Skill Development: Foster technical skills in areas such as threat analysis, incident response, and risk management.
- Critical Thinking: Encourage analytical and critical thinking to assess security challenges and devise effective solutions.
- Ethical Framework: Instill a strong ethical foundation for addressing cybersecurity issues, including legal and regulatory compliance.
- Real-World Application: Provide practical experience through case studies, simulations, and projects that reflect current cybersecurity trends and threats.
- Collaboration and Communication: Enhance teamwork and communication skills essential for working in diverse cybersecurity environments.
- Leadership Preparation: Prepare students for leadership roles in cybersecurity by developing management and strategic planning capabilities.
- Lifelong Learning: Promote continuous learning and adaptation to rapidly evolving cybersecurity landscapes and technologies.
- Global Perspective: Encourage a global viewpoint on cybersecurity challenges and solutions, considering international standards and practices.
- Research and Innovation: Inspire research and innovation in cybersecurity, preparing students to contribute to advancements in the field.

Programme Educational Objectives (PEO)

The programme educational objectives of the MCS are as shown in Table below:

PEO	Programme Educational Objective (PEO) for Master of Cybersecurity
PEO 1	Knowledgeable and technically competent in the discipline of cybersecurity in line with industry requirements.
PEO 2	Effective communicators who collaborate well with stakeholders and demonstrate good leadership qualities in an organization.
PEO 3	Problem solvers and critical thinkers, able to approach cybersecurity problems using numerical and computing skills with an understanding of professional and ethical responsibilities.
PEO 4	Lifelong learners, who are able to demonstrate entrepreneurial skills for successful personal and career advancement in the field of cybersecurity.

Programme Learning Outcomes (PLO)

The programme learning outcomes of the MCS are shown in Table below:

PLO	Programme Learning Outcomes (PLO)

PLO 1	Integrate knowledge concerning current research issues and produce work that is at the forefront of developments in the field of Cybersecurity.
PLO 2	Apply problem-solving skills, computational thinking and statistical analysis to develop and evaluate Cybersecurity solutions.
PLO 3	Use contemporary software tools for Cybersecurity, risk and vulnerability assessments and evaluation.
PLO 4	Work collaboratively with stakeholders from diverse backgrounds.
PLO 5	Communicate effectively with stakeholders to prepare and present technical material to a diverse audience.
PLO 6	Apply computing skills to develop and manage Cybersecurity solutions.
PLO 7	Apply mathematical and other qualitative skills to assesrisk and vulnerability and evaluate Cybersecurity countermeasures.
PLO 8	Function individually or in teams effectively, with a capability to be a leader.
PLO 9	Pursue independent study and demonstrate the awareness for lifelong learning and professional development in Cybersecurity.
PLO 10	Demonstrate an entrepreneurial mindset in the development of analytics solutions.
PLO 11	Act professionally, ethically and with humane responsibility, with awareness of the impact of Cybersecurity projects on individuals, organisations and society.

Programme Code : HUMCS (FULL TIME)

Min Duration : 1 Years

Max Duration : 3 Years

No	Semester/ Year Offered	Name and Code of Course		Classification (Compulsory Major/ Minor/ Elective)	Credit Value
1	SEM 1/ YEAR 1	MCS501	Cybersecurity Fundamentals	Core	4
2		MDS501	Applied Programming	Elective (choose 1)	4
3		MDS502	Data Management		
4		MDS505	Research Methodology	Core	4
				Sub total	12
5	SEM 2/ YEAR 1	MCS502	Network Security and Cryptography	Core	4
6		MCS503	Ethical Hacking and Penetration Testing	Core	4
7		MCS504	Advanced Digital Forensics	Core	4
				Sub total	12
8	SEM 3/ YEAR 1	MAI506	Project Report	Core	12
9		MDS503	Applied Statistics	Elective (choose 1)	4
10		MDS504	Advanced Machine Learning		
				Sub total	16
				PROGRAMME - TOTAL CREDIT	**40**

Programme Code : HUMCS (PART TIME)

Min Duration : 2 Years

Max Duration : 5 Years

No	Semester/ Year Offered	Name and Code of Course		Classification (Compulsory Major/ Minor/ Elective)	Credit Value
1	SEM 1/ YEAR 1	MCS501	Cybersecurity Fundamentals	Core	4
2		MDS505	Research Methodology	Core	4
				Sub total	8
3	SEM 2/ YEAR 1	MCS503	Network Security and Cryptography	Core	4
				Sub total	4
4	SEM 3/ YEAR 1	MDS501	Applied Programming	Elective (choose 1)	4
5		MDS502	Data Management		
				Sub total	4
6	SEM 1/ YEAR 2	MCS504	Ethical Hacking and Penetration Testing	Core	4
				Sub total	4
7	SEM 2/ YEAR 2	MCS503	Advanced Digital Forensics	Core	4
8		MDS503	Applied Statistics	Elective (choose 1)	4
9		MDS504	Advanced Machine Learning		
				Sub total	8
10	SEM 3/ YEAR 2	MAI506	Project Report	Core	12
				Sub total	12
				PROGRAMME - TOTAL CREDIT	**40**

5.8 Doctor of Philosophy in Computing (PhD) (N-DL/0610/8/0007) (07/32) (MQA/PA18346)

This broad based doctorate by research programme addresses advanced research in the various areas within the umbrella of ICT. The programme aims to produce graduates to meet the growing demand for ICT and computing professionals who are capable of leading, research and development, and creating solutions for a broad spectrum of ICT needs across a wide range of industries. It prepares graduates to innovate computing techniques to meet the current and future needs of researchers and decision-makers in achieving organisational objectives.

Objectives

The objectives of the programme are to produce graduates who are able to:

· Apply computing theories and techniques to solve real-world problems and communicate findings effectively.

· Recognise and analyse ethical issues in related to intellectual property, data security, integrity and privacy.

· Demonstrate knowledge of computing techniques utilised in decision-making.

· Use computing tools and software to solve real-world problems.

· Employ cutting-edge tools and technologies to analyse complex problems.

· Apply complex algorithms to build computing solutions.

· Demonstrate teamwork, leadership skills and decision-making skills.

Programme Educational Objectives

The Programme Educational Objectives (PEO) of the Doctor of Philosopgy are to produce graduates who are:

PEO1	Knowledgeable and technically competent to foster research and development in innovating solutions in line with industry and academia.
PEO2	Effective communicators who lead in their areas of expertise and are able to interact effectively with stakeholders.
PEO3	Problem-solvers and critical thinkers, able to advance the profession with an understanding of professional and ethical responsibilities.
PEO4	Lifelong learners, who are able to demonstrate entrepreneurial skills for successful personal and career advancement in the field.

Programme Learning Outcomes (PLO)

A graduate of the Doctor of Philosophy will be able to:

PLO1	Integrate state-of-art knowledge through a systematic comprehension and in-depth understanding of the field of study.
PLO2	Develop original research work that broadens the boundary of knowledge through an in-depth thesis that has been presented and defended according to HEP standards.
PLO3	Develop innovative computing solutions that stand the tests of applicability, efficiency and effectiveness.
PLO4	Demonstrate effective interaction with peers, scholarly communities and society of diverse audiences through participation in dismodule s related to the field of study.
PLO5	Exhibit effective communication with peers, scholarly communities and society of diverse audiences by publishing and presenting technical materials in the fields of study.
PLO6	Utilise appropriate digital tools to acquire, interpret and extend knowledge in computing.
PLO7	Apply appropriate numerical techniques to acquire, interpret and extend knowledge in computing.
PLO8	Demonstrate leadership, teamwork, autonomy and responsibility in conducting research based on computing theoretical framework.
PLO9	Exhibit capabilities to extend relevant knowledge through life-long learning.
PLO10	Exhibit capabilities of having an entrepreneurial mindset related to the field of study.
PLO11	Uphold professional and ethical practices in conducting research and delivering solutions related to the field of study.

Programme Details

1. 1 academic subject and Thesis to be completed in a minimum period of 3 years for full time and 4 years for part time.

2. Additional modules based on research topic may be taken.

Programme Structure and Maximum Duration for Programme Completion

Programme Name : Doctor of Philosophy in Computing (FULL TIME)

Program Code : HUPHDC

Min Duration : 3 Years

Max Duration : 5 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
(Within First 3 months)	PHD701	Research Methodology	Core	-
(Within 3-5 years)	PHD702	Thesis	Core	-
Total credit hours				-

Programme Name : Doctor of Philosophy in Computing (PART TIME)

Program Code : HUPHDC

Min Duration : 4 Years

Max Duration : 8 Years

Semester	Subject Code	Subject Name	Classification	Credit Hours
(Within First 3 months)	PHD701	Research Methodology	Core	-
(Within 4-8 years)	PHD702	Thesis	Core	-
Total credit hours				-

6. Mata Pelajaran Pengajian Umum (MPU)

Summary Tables of **Mata Pelajaran Pengajian Umum (MPU)** to be taken by students enrolled in

- **Diploma in Information Technology**
- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Data Analytics) (Honours)**
- **Bachelor of Computer Science (Hons)**

6.1 MPU for Diploma Programme

No	Subject name	Code	Credit Hours	Local	Foreigner	Subject Requirement
MPU1	Penghayatan Etika dan Peradaban/Appreciation of Ethic and Civilization	MPU2182	2	Select 1		Compulsory for all local students
	Falsafah dan Isu Semasa/Philosophy and Contemporary Issues	MPU2192				
	Bahasa Melayu Komunikasi 1/Malay Language for Communication	MPU2132			√	Compulsory for all international students
MPU2/MPU3	Bahasa Kebangsaan A/National Language	MPU2212	2	√		Local students **without a Bahasa Melayu credit in SPM** or who took Bahasa Melayu/Malay Language at **UEC or IGCSE, must take Bahasa Kebangsaan A**
	Kursus Integriti dan Anti Rasuah (KIAR)/Integrity and Anti -Corruption Cours	MPU2382		√		**Local students with** or **without a Bahasa Melayu credit in SPM**, those who **took Bahasa Melayu/Malay Language** at **UEC or IGCSE**, students who have **completed Bahasa Kebangsaan A**, and **all international students must take KIAR**
MPU4	Co-curriculum - Sports 1	MPU2412	2	Select 1		Compulsory for all local and international students
	Co-curriculum - Community Service 1	MPU2422				
	Total credit hours for Mata Pelajaran Pengajian Umum (MPU)			6	6	
General Elective	Communication 1	GEN2513	3	√		Must be taken to fulfill the total credit hours unless replaced by an elective offered by the academic department. Compulsory for all local and international students.
HELP Graduate Attribute (HGA)	Discovering Oneself	D2HGA101	2	√		Compulsory for all local and international students
	Kursus Integriti dan Anti Rasuah (KIAR)*/Integrity and Anti -Corruption Course			11	11	

Note:

- Students who fail to satisfy the requirements of the course will not be eligible to graduate and will not be awarded the diploma/degree certificate.
- # It is COMPULSORY for local students without a credit in SPM Bahasa Melayu to do MPU2212 (Diploma) or MPU3212 (Degree).
- **Students who wishes to seek exemption for the MPU subject(s) are required to submit the exemption request(s) enclosing the academic transcript(s) and course syllabus to the Registry.
- Students are allowed to choose one of the MPU4 elective subjects if available on the offering list.
- **THE PRE-REQUISITES FOR MPU 4: MPU 2 & MPU3. STUDENTS NEED TO COMPLETE THE MPU 2 & MPU3 BEFORE ENROLLING IN MPU4.**

6.2 MPU for Degree Programmes

- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Data Analytics) (Honours)**
- **Bachelor of Computer Science (Hons)**

No	Subject name	Code	Credit Hours	Local	International	Subject Requirement
MPU1	Penghayatan Etika dan Peradaban/Appreciation of Ethics and Civilization	MPU3182	2	√		Compulsory for all local students
	Falsafah dan Isu Semasa/Philosophy and Contemporary Issues	MPU3192		√	√	Compulsory for all local and international students
	Bahasa Melayu Komunikasi 2/Malay Language for Communication	MPU3142			√	Compulsory for all international students
MPU2/MPU3	Bahasa Kebangsaan A/National Language	MPU3212	2	√		Local students **without a Bahasa Melayu credit in SPM** or who took Bahasa Melayu/Malay Language at **UEC or IGCSE, must take Bahasa Kebangsaan A**
	Kursus Integriti dan Anti Rasuah (KIAR)/Integrity and Anti -Corruption Cour	MPU3382		√		**Local students with** or **without a Bahasa Melayu credit in SPM**, those who **took Bahasa Melayu/Malay Language** at **UEC or IGCSE**, students who have **completed Bahasa Kebangsaan A**, and **all international students must take KIAR**
	A * Gen Careers in Malaysia and Beyond	MPU3372				**Certificate students** who **completed KIAR (2 credits)** may transfer the credit to the Diploma level, and are exempted from KIAR at the Degree level but **must take MPU3372** to fulfill credit requirements.
MPU4	Co-curriculum - Sports 2	MPU3412	2	Select 1		Compulsory for all local and international students
	Co-curriculum - Event Management 2	MPU3432				
	Total credit hours for Mata Pelajaran Pengajian Umum (MPU)			8	8	
General Elective	Communication and Leadership Skills	GEN3513	3	√		Must be taken to fulfill the total credit hours unless replaced by an elective offered by the academic department. Compulsory for all local and international students.
HELP Graduate Attribute (HGA)	Discovering Oneself	HGA101	2	√		Compulsory for all local and international students
	Engaging the World	HGA201	1	√		**Prerequisite: HGA101**. Compulsory for all local and international students
	Total credit hours for Mata Pelajaran Pengajian Umum (MPU), General Elective and HELP Graduate Attribute (HGA)			14	14	

7. Grading Scheme

7.1 IT Undergraduate Programmes (prior August 2024)

- Diploma in Information Technology
- Bachelor of Information Technology (Hons)
- Bachelor of Information Technology (Data Analytics) (Honours)
- Bachelor of Computer Science (Hons)

FROM AUG 2024 **INTAKE** AND ONWARDS FOR UNDERGRADUATE, FOUNDATION STUDIES AND DIPLOMA PROGRAMMES			
MARK RANGE	GRADE	GRADE POINT	DESCRIPTION
85-100	A+	4.00	High Distinction
80-84	A	3.75	High Distinction
75-79	A-	3.50	Distinction
70-74	B+	3.25	Distinction
65-69	B	3.00	Credit
60-64	B-	2.75	Credit
55-59	C+	2.50	Pass
50-54	C	2.00	Pass
0-49	FL	0.00	FAIL

Mark Range	GRADE	GRADE POINT	DEGREE CLASSIFICATION
85 – 100	HD1	4.00	FIRST CLASS
80 – 84	HD2	3.75	
75 – 79	DI1	3.50	SECOND UPPER CLASS
70 – 74	DI2	3.25	
65 – 69	CR1	3.00	SECOND LOWER CLASS
60 – 64	CR2	2.75	
55 – 59	PS1	2.50	THIRD CLASS
50 – 54	PS2	2.00	PASS
0 – 49	FL	0.00	FAIL

Note:

1) Candidates must pass both Continuous Assessments and Final Assessments in each module. To be awarded a pass grade for each module, they must also achieve an overall module mark of not less than 60%.
2) Candidates are allowed to repeat/retake each module up to 2 times prior to the maximum duration of study.
3) To pass a module, students must achieve an overall module mark of not less than 60% and will be given maximum up to 2 attempts at a module to revise and resubmit that component(s) for re-assessment to achieve at least 60% marks and above.
4) If the academic results are unsatisfactorily (failed in the first or second time for each module), the candidate is encouraged to attend a counselling session to improve their performance or withdraw from the programme.
5) Assessment Plan
   - The final grade for a module comprises of one or a combination of a few assessment tasks.
   - Graded academic tasks involve continuous assessments such as assignments, quizzes, tests, final project assessment, etc.
   - The assessment plan with the distribution of weighting will be stated in the module outline.
6) These regulations allow for two attempts at a module as follows: -
   - First attempt
   - Second attempt (Additional Assignment = AA)
     Students who do not pass a module at the first attempt may be given an opportunity to revise and resubmit that component(s) for re-assessment.
7) Calculation of Grade Point Average (GPA)
   - Each semester of study will result in a Grade Point Average (GPA) for each student – this sums up how well a student has performed during the entire semester.
   - The Cumulative GPA for all attempted modules is calculated according to the formula below.
     CGPA = Summation of grade points average / number of modules

7.2 IT Masters Programmes

- Master of Data Science
- Master in Artificial Intelligence (ODL)
- Master in Cybersecurity (ODL)

The grades awarded to students are based on total marks obtained out of a maximum of 100 and in accordance with the following grading scale:

MARK RANGE	GRADE	GRADE POINT	DESCRIPTION	REMARK
90 - 100	A+	4.00	High Distinction	
80 – 89	A	3.75	Distinction	
70 – 79	B+	3.50	High Credit	
60 – 69	B	3.00	Credit	
55 – 59	C+	2.50	Low Credit	50 – 59: Referred (given maximum 2 times REDO chance)
50 – 54	C	2.00	Pass	
0 - 49	F	0.00 (NOT included in GPA calculation)	Fail	0 – 49: Poor Failure (given maximum 2 times RETAKE)

7.3 IT PhD Programme

- **Doctor of Philosophy in Computing (PhD)**

The PhD programme is a research based degree, which consists of a mandatory Research Methodology module and the Thesis. Candidates need to pass both modules:

- The Research Methodology module consists of several assessments and candidatesneed to achieve an overall pass mark for the course.
- The research progress during the Thesis component consists of several periodic progress monitoring assessments. Candidates need to pass all periodic assessments and may be withdrawn from the programme is progress is unsatisfactory.
- The final assessment for the award of the degree is through the thesis examination and viva voce, by a panel of Internal and External Examiners.

There is no GPA or CGPA calculation for the PhD programme. Award of the degree is dependent on passing all the components above.

8. Admission Information

Entry Requirements

The following minimum entry requirements are a general guideline. International students should contact the School of ICT or the university to determine their eligibility.

8.1 Diploma in Information Technology

i. Possess SPM with at least THREE (3) credits in any subjects (inclusive of Mathematics or any equivalent qualification); **OR**

ii. A pass in Sijil Tinggi Persekolahan Malaysia (STPM) with a minimum Grade C of Grade Point (GP) 2.00 in any TWO (2) subjects and a credit in Mathematics at SPM level (or Mathematics equivalent to SPM); **OR**

iii. A pass in Sijil Tinggi Agama Malaysia (STAM) with a minimum grade of Maqbul (Pass) and a credit in Mathematics at SPM level (or Mathematics equivalent to SPM); **OR**

iv. 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**

v. A Certificate (Level 3, MQF) in a related field with at least a CGPA of 2.00; **OR**

vi. Other relevant and 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).

Notes:

- Candidates with a pass in Mathematics at the SPM level (or Mathematics equivalent to SPM) may be admitted if their admission qualification contains Mathematics subject(s) equivalent to Mathematics at the SPM level.
- 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 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.
- Candidates with a credit in Computing-related subject(s) at the SPM level (or equivalent to SPM level) may be given preferential consideration

8.2 IT Degree Programmes

- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Data Analytics) (Honours)**

i. A pass in STPM with a minimum Grade of C (GP 2.00) in any TWO (2) subjects; **OR**

ii. A pass in STAM with a minimum Grade of Jayyid in any TWO (2) subjects; **OR**

iii. A pass in Matriculation or Foundation studies with a minimum CGPA of 2.00; **OR**

iv. Diploma (Level 4, MQF) in Non-Computing with a minimum CGPA of 2.75. Candidates with CGPA below 2.75 but more than 2.50 can be admitted subject to a thorough rigorous assessment; **AND** a credit in: Mathematics at SPM level or its equivalent; **OR**
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 first semester or before enrolment with unconditional offer. **OR**

v. Diploma in Computing fields (Level 4, MQF) or 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**

vi. Diploma Kemahiran Malaysia (DKM) / Diploma Vokasional Malaysia (DVM) in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval; **OR**

vii. Diploma Lanjutan Kemahiran Malaysia (DLKM) in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval; **OR**

viii. Other relevant and 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 first semester or before enrolment with unconditional offer).

Notes:

- 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 equivalent / more than the Additional Mathematics offered at an SPM level.

International applicants will also be required to fulfil one of the following English language competencies:-

- IELTS 5.0
- TOEFL (paper based): 410
- TOEFL (internet based): 35
- MUET: Band 3
- Equivalent qualification

8.3 Computer Science Programmes

- **Bachelor of Computer Science (Honours)**

i. A pass in STPM (Arts Stream) with a minimum Grade of C (GP 2.00) in any TWO (2) subjects; **OR**
ii. A pass in STAM with a minimum Grade of Jayyid in any TWO (2) subjects; **OR**
iii. A pass in Matriculation or Foundation studies with a minimum CGPA of 2.00; **OR**
iv. Any Diploma in Science and Technology (Level 4, MQF) with a minimum CGPA of 2.75. 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: Additional Mathematics at the SPM level or its equivalent; **OR**
v. 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 first semester or before enrolment with unconditional offer. **OR**
vi. A pass in STPM (Science Stream) or its equivalent with a minimum Grade of C (GP 2.00) in Mathematics subject and ONE (1) Science / ICT subject; **OR**
vii. Diploma in Computing fields (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 internal evaluation process; **OR**
viii. Diploma Kemahiran Malaysia (DKM) / Diploma Vokasional Malaysia (DVM) in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval; **OR**
ix. Diploma Lanjutan Kemahiran Malaysia (DLKM) in Computing fields with a minimum CGPA of 2.50 subjected to HEP Senate / Academic Board's approval; **OR**
x. Other relevant and 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 the first semester or before enrolment with unconditional offer).

Notes:

- 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 equivalent / more than the Additional Mathematics offered at an SPM level

International applicants will also be required to fulfil one of the following English language competencies:-

• IELTS 5.0
• TOEFL (paper based): 410
• TOEFL (internet based): 35
• MUET: Band 3
• Equivalent qualification

8.4 Master of Data Science

Any one of the following:-

i. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.75, as accepted by the HEP Senate; OR
ii. ii. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.00 and not meeting a CGPA of 2.75 can be accepted subject to a thorough rigorous assessment as determined by the HEP; OR
iii. iii. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.50 can be accepted subject to a thorough rigorous assessment as determined by the HEP to identify the appropriate prerequisite courses that equivalent to their working experience in the Computing or related fields; OR
iv. iv. A Bachelor's degree (Level 6, MQF) in Non-Computing fields with a minimum CGPA of 2.50 can be accepted subject to appropriate prerequisite courses; OR
v. v. Other qualifications equivalent to a Bachelor's degree (Level 6, MQF) in Computing or related fields recognised by the Government of Malaysia must fulfil the requirement on item i or ii.

For candidates without a Computing Degree, prerequisite module(s) should be taken to adequately prepare them for their advanced study.

International applicants will also be required to fulfil one of the following English language competencies:-

- CEFR (Low B2)

8.5 Master in Artificial Intelligence (ODL) & Master in Cybersecurity (ODL)

Admission to this programme is in fulfilment of any one of the following requirements:

i. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.50, as accepted by the HEP Senate; OR

ii. A Bachelor's degree (Level 6, MQF) in Computing or related fields with a minimum CGPA of 2.00 and not meeting a CGPA of 2.50 can be accepted subject to a thorough rigorous assessment as determined by the HEP; OR

iii. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.00 can be accepted subject to a thorough rigorous assessment as determined by the HEP to identify the

appropriate prerequisite courses that equivalent to their working experience in the Computing or related fields; OR

iv. A Bachelor's degree (Level 6, MQF) in Non-Computing field with a minimum CGPA of 2.00 can be accepted subject to appropriate prerequisite courses; OR

v. Other qualifications equivalent to a Bachelor's degree (Level 6, MQF) in Computing or related fields recognised by the Government of Malaysia must fulfil the requirement on item i or ii.

vi. Accreditation of Prior Experiential Learning for Access (APEL.A) entry route through recognition of learning and experiences.

NOTE FOR MASTER IN CYBER SECURITY:

a) For candidates who have not passed the rigorous internal assessment, the HEP can determine for the candidate to be re-assessed for entry to the programme to pass preparatory courses as determined by the HEP before entering the programme, and subject to the HEP Senate / Academic Board's approval.
b) Rigorous assessment can be done through interviews, portfolios, written tests, or any form of assessment.
c) International student : Achieve a minimum of Band 4 in MUET or equivalent to CEFR (Low B2). If a student does not meet this requirement, the HEP must offer English proficiency courses to ensure that the student's proficiency is sufficient to meet the needs of the programme
d) For candidates without a Computing Degree, a pre-requisite module in computing should be taken to adequately prepare them for their advanced study.
    i) Data Communications and Networking (MCS107)
    ii) Operating Systems Fundamentals (MCS110)
    iii) Reinforcement Mathematics can be offered as part of or outside the curriculum structure. If Reinforcement Mathematics is offered as part of the curriculum structure, it should count as an addition to the total number of credits required for graduation.

English Competency Requirement (International Student):

Achieve a minimum of Band 4 in Malaysian University English Test (MUET) orequivalent to Common European Framework of Reference for Languages (CEFR) (Low B2).
If a student does not meet this requirement, the HEP must offer English proficiency courses to ensure that the student's proficiency is sufficient to meet the needs of the programme

8.6 Doctor of Philosophy in Computing (PhD)

Admission to this programme is in fulfilment of any one of the following requirements:

• A Master's Degree or equivalent AND

• candidates must have completed at least ONE (1) of their earlier Degrees (Master's or Bachelor's) in Computing or related to Computing.

International students must have proof of good proficiency in verbal and written English. For example, International English Language Testing System (IELTS) score of 6.0 or its equivalent.

Note:

• There shall be no direct entry from Bachelor's Degree level to PhD level.

• Candidates registered for Master's Degree by research programmes with a Bachelor's Degree level may apply to convert their candidacy to the PhD programmes subject to having shown competency and capability in conducting research at PhD level and approval by the HEP Senat

9 Credit Exemptions/Transfer of Credits

Transfer of credits may be granted based on subjects completed in equivalent courses conducted at educational institutions recognised by HELP University (HELP). The request may be made at the time of the course application or within a reasonable time of course commencement. Credit transfers are normally considered and approved by the faculty Academic Board, the Dean and/or the Head of School, based on the applicant's prior learning at undergraduate / postgraduate level that matches generally 80% or more of the curriculum of the related faculty course subject. Credit transfer applicants shall be notified in writing of the approval of their request via a Credit Transfer Confirmation, a copy of which shall be placed in the students' files. The credit transfer shall be entered in HELP's Students' Records System upon payment of the applicable fee. Credit transfers into faculty courses may be approved up to a maximum of 50% of course requirement.

Applications for Credit Exemptions

Applications for credit exemptions should be made at the same time as applications for admission to a course.

Supporting documents include:

- A certified copy of transcripts of academic qualifications and any appropriate supporting document e.g. grading system used to explain transcript, course structure etc.
- Copy of subject outlines taken from the institution's handbook for the year when the subjects were successfully completed.
- A certified translation if the transcript or other documents are not in English.
- Proof of English Language Competency.
- Other documents at the request of HELP.

10 Policies and Regulations

(for more details, please refer to the University Handbook 2024)

10.1 Registration

Every student is required to do an official registration every semester. Students who fail to complete the registration process are not considered officially enrolled and will be denied for any completion of courses at the end of the semester. Students shall confirm their subject enrolment by week 0 of each semester and shall be enrolled for the subject if payment has already been made. If the fee is not paid, no enrolment shall be made.

Below are some simple rules to guide students:

- Registration will commence in the beginning of a new semester. Students can obtain the required Subject Registration Form from the Main Registry. Students are required to fill in the form, obtain the signature of the designated School of ICT's staff (where necessary) and submit the completed form to the Main Registry.
- Once registration is completed, students will retain once copy of the form and the Assistant Registrar (AR) will issue an invoice which will be used when making payment.
- Registration is incomplete until all fees payable have been at the Bursary's Office in accordance with HELP University payment policies and regulations. All students are required to comply with the payment deadline as specified in the semester schedule.
  OR
- Students can enrol the subjects online via newmypride.help.edu.my

10.2 Cancellation of Subjects Offered

The School of ICT makes every reasonable effort to offer courses as indicated in the Subjects Availability List which is posted in the Learning Management System (LMS). However, the school reserves the right to make changes or cancel subjects in the proposed schedule because of insufficient enrolment or for any other reasons deemed valid. Students are responsible to keep themselves posted by viewing the web site periodically.

10.3 The responsibilities of the students

i) Malaysian Student Responsibilities

As a student at faculty, you are responsible to:

- Dedicate yourself to your studies to the best of your ability
- Familiarise with the rules and regulations governing the postgraduate programme in which you are enrolled and ensure that the respective modules selected meet the programme requirements.
- Be mindful of the practices and policies of the faculty for the programme enrolled are stipulated in the materials and information made available to you.
- attend lectures, tutorials, and seminars for each module in which you are enrolled
- Adhere to the deadlines for work to be submitted.

- Undertake joint responsibility for your own learning and enrichment in education.
- Take the initiative to consult the lecturer (s) and / or the administrators when faced with problems.
- Contribute to the development of faculty programs and policies by participating in consultative and deliberative processes in a responsible and ethical manner.
- Be mindful of the faculty's commitment to equal opportunity, to demonstrate tolerance and respect for all members of the University community.
- Respect the right of peers and staff members to express views and opinions.

Please refer to the **General Policies and Procedures of HELP University**.

ii) International Student Responsibilities

In addition to the responsibilities stated above, you shall adhere to the rules and regulations imposed by the Malaysian Immigration. These rules and regulations are monitored for compliance by the International Student Services Department (ISSD). In the event of any breaches, the University is obliged to notify the relevant authorities and your student visa maybe cancelled or not renewed.

11. Programme Structure

Programs are assigned a specified Subject Code and a certain number of Credit Hours.

11.1Subject Numbering System

Subjects are numbered so as to indicate the level of advancement. In general, Subjects with lower numbers are those which should be completed first. Subjects with numbers beginning with 100, 200 and 300 courses are Year 1, 2 and 3 courses respectively.

100-Level	**Year 1**
200-Level	**Year 2**
300-Level	**Year 3**
500-Level	**Master Level**

11.2Prerequisites

Subjects prerequisites are listed in this handbook in the Subject Descriptions. These requirements are intended to ensure students have a reasonable chance of completing a subject without a low or fail grade. A prerequisite is a subject that must be taken and passed prior to registering for any of the subjects that require it.

Any student who has failed in the first of a sequence of subjects is not allowed to enrol for the subsequent subject until the fail grade has been changed to a pass grade.

Students can refer to the respective programme proforma for the subject prerequisites.

Non-Computing degree students are advised to seek advise and/or counselling from the School of ICT for the pre-requisite module(s) before enrolling in the Master of Data Science programme.

11.3Adding or Dropping Subjects

a) Students are required to enrol during the official registration periods determined by HELP University, failing which they may not be allowed to attend any classes or be allowed to be assessed in any of the assessed items. Each student shall be given an invoice at the point of enrolment and students are to pay their fees promptly.
b) For full semester registration, subject enrolment must be made at the Registry or through myPride within the 1st and 2nd week from the semester commencement date. For half semester, enrolment must be made within the 1st week of the semester.
c) Students are given two (2) weeks from programs commencement date to enrol for subjects, not applicable for short semesters. However, the deadlines may differ from semester to semester and by program. Students are advised to confirm the deadlines at the beginning of each semester with the Registry or School of ICT.
d) Students are to ensure that they fulfill the subject pre-requisites. For subjects that do not conform to the normal procedures the students must get approval from the School of ICT.
e) Students who submit the enrolment form within the 3rd & 4th week, or after the stipulated enrollment date, must obtain approval from the School of ICT and the policy under FINANCIAL REQUIREMENTS – Item 7.3, late enrolment penalty fee, will apply (not applicable to short semester).
f) Subject enrolment will not be allowed after the 4th week from the semester commencement date except under special circumstances and approval is on a case to case basis.
g) The Registry will not enrol the student's desired subjects if
    - The pre-requisites are not met
    - The student has reached the maximum number of subjects enrolled for the semester
    - The student has not entered for the minimum number of subjects for the semester without approval from the School of ICT
    - The student has fee outstanding at the time of subject enrolment

11.4Change of Majors

- Students are advised to seek advice and/or counselling from the School of ICT before deciding to change their major/specializations.
- Students who have completed (including subjects enrolled for the latest semester) 15 subjects or above are not allowed to change their major.
- Students shall NOT be charged any fee for their first change of major/ specialization.
- A 'Change of Major Fee' (RM 100) shall be charged for the second and subsequent changes of majors/specializations.
- If an exemption has been give for a third year subject, the student will be required to enrol for another subject to replace it, which may be a second or third year subject. This will be determined by the Head of the Department and is subject to the condition that the total number of final year subjects the student takes in HELP University is no less than 8.

11.5Change of Programme Status (Full time or Part time)

(applicable to Master of Data Science only)

- Students are advised to seek advice and/or counselling from the School of ICT before deciding to change their status from part time to full time or vice versa.
- Students shall NOT be charged any fee for their first change of programme status.
- A 'Change of Status Fee' (RM 100) shall be charged for the second and subsequent changes of programme status.

11.6Withdrawal Procedure from Subjects

- Students are required to write in officially to the Registry for any request to withdraw from an enrolled subject.
- All requests for subject withdrawals are subject to approval of the management or the respective partner university.
- No refund shall be given for withdrawal of subject (s).

11.7Withdrawal Procedure from HELP University

A student shall be deemed to be no longer enrolled in a program at HELP University if:

- The student has completed the requirements for that program;
- Registration in the course has been terminated; or
- The student has been excluded on academic or disciplinary grounds.
- Any student who wishes to discontinue/withdraw from HELP University should inform HELP University immediately in writing. A withdrawal form, available at the Registry/School of ICT must be completed and submitted to the School of ICT Technology to be processed.
- Any student who withdraws from a program before the commencement date shall be refunded only the tuition fee, the resource fee and security deposit.
- 50% of the term/semester fees and the full security deposit and resource fee paid shall be refunded to a student who withdraws from a program within 2 weeks of the date of commencement.
- A student who withdraws from a program 2 weeks after the commencement or date of enrolment will NOT be given any refund of all fees paid except the security deposit which will be refunded in full, provided there is no other outstanding fees.
- A student who has registered and does not attend class for one month from the date of commencement or enrolment shall be classified as having withdrawn unofficially and all fees, except the resource fee and the security deposit, shall be forfeited.
- If a student withdraws after full completion of a program at HELP University and wishes to apply for a new program at a later date, the application fee and registration fees (for undergraduate programs only) shall be waived. Students will be required to complete a new application form and submit all relevant documents and pay the security deposit, course/tuition fee and any other fee payable for the new program.
- If a student withdraws before completion of a program at HELP University, but later wishes to re-apply for a new program at HELP University, he/she shall be considered a new applicant. Therefore he/she shall be required to complete a new application and submit all relevant documents and pay the full administrative fee.
- All money due will be refunded to the financial sponsor as indicated on the application form. Should the financial sponsor change in the course of the study period, an official letter from the original financial sponsor must be submitted to the Registrar to indicate the change.
- If the cheque is to be written in a name other than that of the financial sponsor, an authorisation letter from the financial sponsor must be submitted together with the withdrawal form.
- A sum of RM 20.00 (Ringgit Malaysia Twenty Only) shall be deducted from the security deposit in the event of failure to return the HELP Student Identification Card.

12 Assessment and Evaluations

The School follows the university-wide assessment method, where all students are subjected to the same regulations.

12.1Diploma in Information Technology

Level 1 and Level 2

Generally, weightage of each assessment item will be based on the following percentage:

Contious Assesement	50 - 70%
Final Assessments	30 - 50%
Total	100%

It is the duty of the examiner of each unit, at its commencement, to make available to students the format, timing, and weightage of assessment for that unit. It is the responsibility of each student to ensure that he is fully informed of the assessment applied to each unit for which he is enrolled.

An examiner may, in consultation with the Head of School, approve a variation in the assessment instrument to be used for a student in the following circumstances:

- Illness of a student which must be supported by documentary evidence; or
- any other cause, which must be supported by documentary evidence.

A student can be granted a supplementary assessment (SX) on the basis of illness or other extenuating cause(s), on a case by case basis.

12.2IT Degree Programmes

- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Data Analytics) (Honours)**
- **Bachelor of Computer Science (Hons)**

Generally, weightage of each assessment item will be based on the following percentage:

Contious Assesement	50 - 70%
Final Assessments	30 - 50%
Total	100%

Most of the year 3 modules are coursework base which is no final exam.

12.3Master of Data Science

The assessment of a unit may be made up by exam or assignment components. Assignment components may be seminar presentations, time-constrained tests, projects, assignments or other

forms of assessment. The number, and weightage, of assessment items may be vary from subject to subject.

Generally, weightage of each assessment item will be based on the following percentage:

Continuous Assessment(s)	50 - 100%
Final Assessment	30 - 50%
Total	100%

12.4. Master in Artificial Intelligence & Master in Cyber Security

The assessment of a unit may be made up by exam or assignment components. Assignment components may be seminar presentations, time-constrained tests, projects, assignments or other forms of assessment. The number, and weightage, of assessment items may be vary from subject to subject.

Generally, weightage of each assessment item will be based on the following percentage:

Continuous Assessment (CA)	40 - 60%
Final Assessment (FA)	40 - 60%
Total	100%

12.5. Doctor of Philosophy in Computing (PhD)

The assessment of modules would follow the assessment criteria of the respective module. The Thesis award is dependent on the final decision by the Examination panel.

13 Academic Consultations

Academic consultation is an integral part of a student's academic experience. Academic advisors are able to give support and guidance to students who seek their service, but it is the responsibility of each student too to be familiar with academic policies and regulations and to take responsibility for his or her study at HELP University.

Graduation/program requirements vary greatly from one university to another. It is especially important for students to learn about the universities' academic policies and procedures thoroughly. New students will be informed on the education system and its requirements through a series of seminars conducted every semester.

An academic advisor offers students information, guidance and advice throughout their undergraduate program. Speciafically, academic advisors assist students in identifying degree requirements and help students balance their course load each semester, so they do not take too many demanding classes in one semester. Students will also be informed on classes that require prerequisites or other restrictions before registration.

Students are encouraged to make an appointment to seek advice from an academic advisor to discuss important educational issues and matters pertaining to transfer to foreign institutions. Students can also do their own research under the guidance of an academic advisor on universities and their requirements, ranks, profile etc.

14 Subject Descriptions

The descriptions for each of the subjects in the respective programmes are given below.

14.1Diploma in Information Technology

Level 1 / Year 1

DIP1000 Programming Principles

This course covering fundamental concepts for computer programming for beginners. It introduces variables, data types, and control flow, emphasizing the importance of modular programming and code organization. Students gain insights into algorithm development based on routine problems. This course also addresses error handling and debugging techniques, promoting good programming practices.

DIP1001 Computer System Essentials

This is a foundational course that explores the core principles of computer systems. The subject categorizes key features and services offered by diverse operating systems and hardware. Emphasizing practical skills, the course equips students with diagnostic and troubleshooting expertise, enabling hem to adeptly address hardware and software issues.

DIP1002 Introduction to Analysis and Design

This course introduces fundamental concepts, methodologies and techniques for developing an information system. The course provides an overview of the role of a systems analyst in an organization and the main tasks and activities that must be performed in the various phases of the Systems Development Life Cycle.

DIP1003 Database Concepts and Practices

This course offers students an understanding of database concepts and its components, structured query language (SQL) and modeling techniques. The course provides a foundation for further studies in database and information systems.

DIP1004 Calculus and Linear Algebra

Students will learn linear algebra and calculus. Under linear algebra, learners will study how matrices, matrix algebra and vector operations and how these are applied in computer graphics and cryptography. Finally, under calculus, students will be exposed to the idea of limits, differentiation and integration.

DIP1005 Ethics in Computing

This course will introduce a balanced exploration of the social, philosophical, ethical and legal implications of computing and the controversies they arise. It covers the issues face by members of a technological society and professionals in computer-related fields. The goal of this course is to develop computer professionals who understand the implications of what they create and how it fits into society at large.

DIP1006 Object-Oriented Programming Fundamentals

This course introduces students to the fundamental concepts and principles of Object-Oriented Programming (OOP). It is designed for individuals with basic programming knowledge who want to delve into the paradigm that dominates modern software development. The course covers key OOP concepts, principles, and their practical applications through lectures, hands-on coding sessions, case studies, and group projects. At the end of the course, students will proficiently design and implement software solutions using OOP principles, enhancing problem-solving skills.

DIP1007 Networking and Data Communications

This course provides students with a fundamental knowledge in computer networks and data communications. The information infrastructure that enables electronic switching techniques in different layers of the OSI model will also be explored. Students will be prepared with skill sets to design, configure, diagnose network systems using IP Addressing, commands, and software tools.

DIP1008 Computing Mathematics

This course will focus on mathematical reasoning for mathematical problem-solving. The course covers concepts of sets, relations, functions, recurrence relations, Boolean algebra, and graphs. The course will also cover proofs of mathematical statements using propositional rules and mathematical induction.

DIP1009 Modern Web Development

This course will introduce web development processes and scripting languages involve in both front-end and back-end development. Students will learn how to create forms for user interaction, implement controls for managing the logic of the application and set up the application to read and write data from and to database management system.

Year 2

DIP2001 Fundamentals of Operating Systems

This course explains the fundamental concepts and structures of operating systems. Students will also be exposed to how computer resources are scheduled and managed. Students will also have hands on experience on installation and the use of command utilities of an open source operating system.

DIP2002 Statistic and Probability

This course provides students with essential knowledge in probability and statistics, enabling them to analyze data and tackle problems across various domains. The curriculum covers descriptive statistics and fundamental probability concepts.

DIP2003 Digital Security Essentials

This course is designed to provide students with the knowledge and skills needed to navigate the complex world of cybersecurity, emphasizing ethical conduct, understanding cyber threats, and implementing effective information assurance strategies.

DIP2004 Cloud Computing Fundamentals

This course provides students with appropriate knowledge in cloud computing; covering cloud concepts, infrastructure, services, architecture design, performance, security and economics in the cloud computing platform. Students are prepared with the skills sets to present and convince clients to convert from traditional computing environment into a cloud computing environment, and act as a solution architect to construct a cloud architecture based on the requirements.

DIP2005 Mobile App Development

This course provides students with a fundamental knowledge in mobile applications development; exploring different mobile activities, user experiences, background processing, data sharing, data storing, and basic mobile programming techniques in a native mobile application development platform. Students are prepared with the skill sets to select an appropriate platform, troubleshoot, design, and create a simple mobile application.

DIP2006 User-centered Design

This course introduces the user experience design processes and is oriented towards methods for approaching a design problem. The focus of the course is to develop user experience designs based on the needs of users. Learners are equipped with skills in establishing requirements, design, prototyping and construction. Finally, learners are taught how to evaluate their designs.

DIP2007 Networking and Data Communications II

This course provides students with a advanced knowledge in computer networking systems. Students will be prepared with skill sets to analyse port numbers, protocols used to form networking in

telecommunications, network security, simple cloud concepts, data center, high availability design, and network problems troubleshooting.

DIP2008 Capstone Project

This course provides students with the opportunity to independently plan, execute, and present a comprehensive IT project. Emphasis is placed on project management, technical implementation, and effective communication of project outcomes.

DIP2009 Industrial Internship

The course provides students with employability skills and relevant work experience in a particular sector and role through internship.

14.2IT Degree Programmes

- **Bachelor of Information Technology (Hons)**
- **Bachelor of Information Technology (Data Analytics) (Honours)**
- **Bachelor of Computer Science (Hons)**

Bachelor of Information Technology (Hons)

Year 1

BDA100 Programming Fundamentals
(formerly known as BIT100 Introduction to Programming)

This course will introduce students to the core components of programming using the Python programming language. Students will learn to write Python programs using concepts such as functions, variables, selection, iteration, file-processing, and object-oriented approach.

BIT101 Computer Architecture and Organisation

This course provides a comprehensive exploration of computer systems, covering the relationships among hardware components and subsystems. Students categorize and analyze the key features and services offered by different computer operating systems and hardware configurations. Practical skills are developed through writing a program at the assembly/machine level. The course further explores the timing diagram behavior of a simple processor implemented at the logic circuit level.

BIT102 Web Design and Development
(formerly known as BIT102 Internet Concepts and Infrastructure)

This course intended to teach students the fundamentals to build front-end portion of websites. Students learn to create and design websites using web languages such as HTML, CSS, JavaScript, PHP and MySQL. Students also exposed to best practices in designining responsive websites.

BIT103 Introduction to Database Systems

The principal objective of this course is to provide an introductory level comprehensive knowledge of Database Management Systems (DBMS). The course includes the following topics: relational databases, Entity relationship diagrams, integrity constraints, normalization, query processing, transaction management, concurrency control, recovery techniques, and database management.

BIT106 OO Programming Fundamentals
(formetly known as BIT106 Programming in Java I)

This subject aims to introduce students to programming using the Java programming language. Students will be taught fundamental control structures using Java and basic problem solving algorithms. The subject will also introduce object-oriented programming concepts for developing object-oriented applications.

BIT107 Data Communications and Networking
(formerly known as BIT107 Introduction to Data Communications)

This course provides students with a fundamental knowledge in computer networks and data communications. The information infrastructure that enables electronic switching techniques in different layers of the OSI model will also be explored. Students will be prepared with skill sets to construct, configure, and analyse small scale LAN using IP addressing, basic subnetting, and software tools.

BIT108 Discrete Mathematics

This course will focus on mathematical reasoning for mathematical problem-solving. The course covers concepts of sets, relations, functions, recurrence relations, and graphs. The course will also cover proofs of mathematical statements using propositional rules and mathematical induction. Students will also learn counting techniques, basic probability and probability distribution.

BIT110 Introduction to Operating Systems

This course explains the fundamental concepts and structures of operating systems. Students will also be exposed to how computer resources are scheduled and managed. Students will also have hands on experience on installation and the use of command utilities of an open source operating system.

FEC100 Professional Communications for Business

This course introduces the various communication options available in a business context so that students can make appropriate choices in the workplace. Application of business communicationprinciples through creation of effective business documents and oral presentations. This course includes the study and application of team communication and use of technology to facilitate the communication process.

FEC101 Applied Mathematical Studies

Students will learn linear algebra and calculus. Under linear algebra, learners will study how matrices, matrix algebra and vector operations and how these are applied in computer graphics and cryptography. Finally, under calculus, students will be exposed to the idea of limits, differentiation and integration.

Year 2

BIT201 Systems Architecture and Design
(formerly known as IT and Entrepreneurship)

Pre-Requisite (s): BIT106 or BDA100

The subject will cover the various tasks involved in software systems modelling. Students will be taught various methods for modelling software systems and designing architectural components.

BIT206 User Experience Design

This course introduces the user experience design processes and is oriented towards methods for approaching a design problem. The focus of the course is to develop user experience designs based on the needs of users. Learners are equipped with skills in establishing requirements, design, prototyping and construction. Finally, learners are taught how to evaluate their designs.

BIT216 Software Engineering Principles

Pre-Requisite (s): BIT201

This subject studies both theoretical and practical application aspects in engineering software solutions. Software engineering is one of the most important areas of study and research in the computer science field. It is crucial for students to fully understand the countless dilemmas faced in software development and be able to apply proper standards, techniques and principles in producing high quality software solutions.

BIT212 Cloud Computing

Pre-Requisite (s): BIT107

The objectives of this subject are to present students with the principles behind cloud computing as organizations shift to this new paradigm of IT infrastructure. Students will explore the evolution of IT infrastructure and how it affects business operations and costs.

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BDA203 Advanced Database Systems
Pre-Requisite (s): BIT103

Students will create the conceptual, logical and physical design of databases and then use SQL for data definition and data manipulation of the database and learn how to write PL/SQL programs to create stored procedures, functions and triggers. Learners will also be instructed on transaction management, evaluating database performance and backup and recovery techniques. They will learn how to apply enterprise DBMS concepts and design through use of case studies. They will also discuss issues in transaction processing and distributed databases

BIT210 Advanced Web Development (Elective)

This course will enable students to acquire and apply the standards, techniques, tools and frameworks of web technologies. The syllabus also covers the fundamental concepts behind the notion of XML, Web services and full-stack web development in developing fully functional web a pplications.

BIT217 Internet of Things (Elective)

This course provides students with a basic to intermediate level of knowledge in the Internet of Things. The fundamentals, platforms, board architecture, embedded programming, mobile cloud computing, and network connectivity in the Internet of Things are also covered. Students are prepared with the skill sets to select an appropriate platform, troubleshoot, design, and create an interesting Internet of Things product.

BIT219 Introduction to Mobile Apps (Elective)

This course provides students with a fundamental knowledge in mobile applications development; exploring different mobile activities, user experiences, background processing, data sharing, data storing, and basic mobile programming techniques in a native mobile application development platform. Students are prepared with the skill sets to select an appropriate platform, troubleshoot, design, and create a simple mobile application.

BIT204 Network Security (Elective)

This course introduces the theories and concepts in computer systems networks especially in Internet Protocol networks environment. This course provides the students with a soundklnowledge in computer systems network techniques such as Foundation of Network, Direct Link Network, Packet Switching, Internetworking, End to End Protocols, Congestion Control and Resource Allocation, End to End Data, Network Security and Applications. Fundamental networking principles as well as optimized network design for functionality and performance, which focuses on the current technology in Local Area Network and Wide Area Network communication systems are also covered.

BIT215 Cybercrime and Digital Forensics (Elective)

This course will allow students to investigate the principles of digital forensics, focusing on computer forensics. Computer forensics is application of the scientific method to digital media in order to establish factual information for judicial review. This course includes significant practical sessions in applying computer forensics in realistic real-world scenarios, allowing students to analyse and evaluate digital evidence through the use of forensic tools and techniques (Public Domain tools). Theoretical knowledge of computer information as digital evidence and the basic techniques associated with gathering, preserving and presenting digital evidence are also covered in this course.

BCS201 Data Structures and Algorithms (Elective)

This course focuses on the fundamental data structures and algorithms, including their design, analysis, and implementation. These data structures and algorithms are used in most software system including the Web, operating systems, compilers, databases, etc. Therefore this knowledge will guide the students in the selection of an appropriate structure for a software system.

BIT211 Multimedia Systems (Elective)

This course will provide students with a general introduction to the theory, skills, and techniques that are relevant to multimedia development. Students will learn the theoretical concepts behind multimedia authoring and have practical experience in planning, designing, managing, developing and evaluating multimedia content.

BDA206 Enterprise Data Infrastructure (Elective)

This course will expose students to the expanding role of Data Warehousing, the strategies behind its development and the utilization of its information to answer fundamental business questions.

BCS202 Computer Systems Engineering (Elective)

This course provides an introduction to how computers work at the lowest levels and will cover topics from binary numbers and logic gates to assembly language. The course aims at providing a basic understanding of how computers work and how to develop programs for a microcontroller based computer system.

BCS205 Principles of Machine Learning (Elective)

This course provides a foundational basis for machine learning concepts, subsequently into understanding contemporary machine learning algorithms and building the intuition to successfully develop these algorithms and models to solve real world problems. Learners will learn how to perform modelling and prediction, regression, classification, neural networks,clustering. They will also be exposed to topics in reinforcement learning and how to evaluate and optimize their models. Guidance will be provided on the applications of machine learning.

FEC200 Technopreneurship and Innovation (Free elective)

This course provide students with a broad understanding of the field of entrepreneurship and the use of IT in various aspects of businesses. This course identiies the role of the digital revolution in new business ventures, and examines the factors leading towards entrepreneurial success, and the skills and behaviours necessary to be a successful entrepreneur. Students are prepared to define and refine an idea, develop the opportunity, and plan and deliver the business venture planning. The importance of the business plan is highlighted as preparation for launching a business venture, managing the business and obtaining investor funds.

FEC201 Multivariate Calculus and Ordinary Differential Equations (Free elective)

This course will focus on two main areas: multivariable functions and ordinary differential equations. Students will study and visualise functions with two or more variables and apply optimisation techniques to these functions to find maxima and minima. Ordinary differential equations (ODE's) are used to describe how things change with time. ODE's can be used to create and analyse models that are used in engineering, biology and many other areas. Mathematical software will be used to aid in understanding and solving problems that arise.

Year 3

BIT301 IT Project Management

This course provides students with a sound foundation in project management. Lectures are

conducted to instil students with the various knowledge, tools and techniques required for managing projects. Working in groups, students will learn from one another, learn and apply relevant

techniques and skills in order to fulfill the requirements needed for a project.

BIT303 Cybersecurity and Ethics
(formetly known as BIT303 IT Management, Ethics and Security)

This course provides students with a comprehensive understanding of cybersecurity principles and practices, with a supplementary focus on ethical considerations in computing. Students will also learn about policies and compliance standards, ensuring a comprehensive understanding of cybersecurity governance and regulatory requirements. The course aims to equip students with the knowledge and skills necessary to protect digital assets, mitigate cybersecurity threats, and

understand ethical decision-making in the context of technology.

BIT304 Final Year Project I

Pre-Requisite (s): Completion of Year 1 & 2 subjects

The aim of this course is to provide students an opportunity to acquire, apply and integrate knowledge that will enable them to participate in and lead product development projects. Students will gain knowledge of project management, creative idea generation and communication, and will be capable of handling all stages of product development from requirements gathering and concept generation through to the analysis and design phases.

BIT305 Final Year Project II

Pre-Requisite (s): BIT304

This course is a continuation of BIT304 and provides students with an opportunity to acquire, apply and integrate knowledge that will enable them to participate in and lead product development projects. Students will gain knowledge of project management, creative idea generation and

communication, and will be capable of handling all stages of product development from requirements gathering and concept generation through to the analysis and design phases.

BIT320 Industrial Internship

Pre-Requisite (s): All Yr 1 & 2 Subjects

The course is intended to provide the students with employability skills, relevant work

experience in a particular sector and role.

BCS302 Cyberdefense and Ethical Hacking (Elective)

This course provides students with knowledge in computer security. It explores the security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to assess, and analyse the security by looking for weakness and vulnerabilities of computer systems in a company.

BIT312 Cloud Solution Development (Elective)

This course provides students with appropriate knowledge in developing solution using cloud technologies; covering cloud storage development, NoSQL database solution development, REST APIs development, serverless solution development, messaging services, container services, information caching, and solution deployment using CI/CD pipelines in the cloud computing platform. Students are prepared with the skills sets to experience DevOps and deploy applications in the cloud based on the requirements.

BIT311 Mobile Applications Development (Elective)

This course provides students with an advanced knowledge in mobile applications development. It explores advanced user interface designs, ecommerce, accessibility, geolocation, advanced graphics and views, cloud services, emerging technologies and mobile programming techniques (native / hybrid) in a mobile application platform. It prepares students with the skill sets to choose a suitable platform, troubleshoot, design, and create an advanced level mobile application.

BIT306 Object Oriented Enterprise Application Development (Elective)

This course provides students with an advanced knowledge in object oriented enterprise applications development using a framework. It explores Spring framework, Spring Boot, MVC, Hibernate, RESTFUL API, Security and AOP in the applications. It prepares students with the skill sets to adapt to the real world industry standard to troubleshoot, support and develop enterprise level application.

BCS302 Cyberdefense and Ethical Hacking (Elective)

This course provides students with knowledge in computer security. It explores the security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to assess, and analyse the security by looking for weakness and vulnerabilities of computer systems in a company.

BIT312 Cloud Solution Development (Elective)

This course provides students with appropriate knowledge in developing solution using cloud technologies; covering cloud storage development, NoSQL database solution development, REST APIs development, serverless solution development, messaging services, container services, information caching, and solution deployment using CI/CD pipelines in the cloud computing platform. Students are prepared with the skills sets to experience DevOps and deploy applications in the cloud based on the requirements.

BIT313 Concurrent Programming (Elective)

This course explores the technique of object-oriented programming in Java using abstraction, encapsulation, and inheritance. The language features such as exception handling, collection framework, file input/output, and multithreading are also included. The course also includes reusable design, UML modelling, implementation of UML class diagrams, and graphical user interface

Programming.

FEC300 Startup Ideation (Free Elective)

This course equips students with vital skills to craft compelling business plans for groundbreaking startups. Guided by a dynamic curriculum, students continuously engage in real-time research, developing and refining their plans throughout the semester. Emphasizing viability, business models, and execution proficiency, this hands-on experience prepares students for success in the dynamic startup landscape.

Bachelor of Computer Science (Hons)

BCS102 Fundamentals of Artificial Intelligence

This course provides an overview of concepts and ideas that have emerged in Artificial Intelligence (AI) research. It introduces classical concepts and provides foundational knowledge for modern concepts.

Year 2

BCS201 Data Structures and Algorithms

This course focuses on the fundamental data structures and algorithms, including their design, analysis, and implementation. These data structures and algorithms are used in most software system

including the Web, operating systems, compilers, databases, etc. Therefore this knowledge will guide thestudents in the selection of an appropriate structure for a software system.

BCS202 Computer Systems Engineering

This course provides an introduction to how computers work at the lowest levels and will cover topics from binary numbers and logic gates to assembly language. The course aims at providia basic a understanding of how computers work and how to develop programs for a microcontroller based computer system.

BCS203 Blockchain Technology Concepts (Elective)

This course will introduce student to the core components of Blockchain and its applications. Students will learn the foundations of Blockchain such as public and private keys, private, public, and hyperledeger Blockchains, and transactions process in Blockchain. Learners will understand how hash encryption, public key and private encryption works. This course also looks at transaction concept in blockchain, mining and the consensus concept. Learners will also get to discuss case studies in blockchain.

BCS204 Blockchain Applications and Smart Contracts (Elective)

This course will introduce student to the development of Blockchain applications and smart contracts. Students will learn Solidity programming language, thereum platform, anddeveloping decentralized applications.

BCS205 Principles of Machine Learning (Elective)

This course provides a foundational basis for machine learning concepts, subsequently into understanding contemporary machine learning algorithms and building the intuition to successfully develop these algorithms and models to solve real world problems. Learners will learn how to perform modelling and prediction, regression, classification, neural networks, clustering. They will also be exposed to topics in reinforcement learning and how to evaluate and optimize their models. Guidance will be provided on the applications of machine learning.

Year 3

BCS304 Final Year Project I

The aim of this course is to provide students an opportunity to acquire, apply and integrate knowledge that will enable them to participate in and lead product development projects. Students will gain knowledge of project management, creative idea generation and communication, and will be capable of handling all stages of product development from requirements gathering and concept generation through to the analysis and design phases. This course requires students to conduct literature review and to produce a prototype as a proof of concept.

BCS305 Final Year Project II

This course is a continuation of BCS304 and provides students with an opportunity to acquire, apply and integrate knowledge that will enable them to participate in and lead product development projects. Students will gain knowledge of project management, creative idea generation and communication, and will be capable of handling all stages of product development from requirements gathering and concept generation through to the analysis and design phases.

BCS301 Blockchain Development (Field Elective)

This course will introduce student to the development of Blockchain platform with applications. Students first learn how to create and use a development environment. Learners will learn how to construct a genesis block, develop encryption methods with SHA256 hashing and create new transaction methods. They will learn encryption, proof of work, and nodes synchronization. Learners will then develop a mining method and create a blockchain explorer website before developing their own blockchain project.

BCS302 Cyberdefence and Ethical Hacking (Field Elective)

This course provides students with knowledge in computer security. It explores the security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to assess, and analyse the security by looking for weakness and vulnerabilities of computer systems in a company.

BCS303 Statistics for Data Science (Field Elective)

This course explores statistical concepts used for predictive modelling, such as linear regression, classification, naïve bayes, discriminant analysis and unsupervised learning. Learners will be exposed to data story telling techniques and interpretive strategies to draw out meaning and value from data. These skills and methods will be implemented using statistical software.

BCS306 Natural Language Processing (Field Elective)

This course introduces students to computer vision from basic image processing and recognition techniques to modern deep learning models such as convolution neural network. Deep learning m methods can achieve state-of-art results on challenging computer vision problems such as image classification, object detection and face recognition.

BCS307 Deep Learning for Computer Vision (Field Elective)

This course introduces the fundamentals concepts and techniques of natural language processing with emphasises on two approaches to NLP: probabilistic and machine learning techniques. Natural Language Processing (NLP) is a sub-area of artificial intelligence which involves computational modelling of natural languages to form applications such as automatic summarization, machine

translation and speech processing.

FEC300 Startup Ideation (Free Elective)

This course equips students with vital skills to craft compelling business plans for groundbreaking startups. Guided by a dynamic curriculum, students continuously engage in real-time research, d eveloping and refining their plans throughout the semester. Emphasizing viability, business models, and execution proficiency, this hands-on experience prepares students for success in the dynamic startup landscape.

Bachelor of Information Technology (Data Analytics) (Honours)

Year 1

BDA100 Programming Fundamentals

This course will introduce students to the core components of programming using the Python programming language. Students will learn to write Python programs using concepts such as functions, variables, selection, iteration, file-processing, and object-oriented approach.

BDA101 Analytics for Decision Making

This course provides students with a fundamental understanding of analytics and the important role it plays in organisations. The topics covered will expose students to the role of big data in decision making. This course also provides a foundation for more advanced analytics tools and techniques.

Year 2

BDA203 Advanced Database Systems

Students will create the conceptual, logical and physical design of databases and then use SQL for data definition and data manipulation of the database and learn how to write PL/SQL programs to create stored procedures, functions and triggers. Learners will also be instructed on transaction m anagement, evaluating database performance and backup and recovery techniques. They will learn how to apply enterprise DBMS concepts and design through use of case studies. They will also discuss issues in transaction processing and distributed databases.

BDA205 Data Mining and Visualization

This course integrates the principles of data visualization and data mining, emphasizing the i mportance of extracting meaningful insights from data and presentin g them in a visually compelling manner. It allows students to gain proficiency in both data visualization and data mining, enabling them to make informed decisions based on data-driven insights.

BDA206 Enterprise Data Infrastructure

This course will expose students to the expanding role of Data Warehousing, the strategies behind its development and the utilization of its information to answer fundamental business questions.

BDA306 Machine Learning and AI

The main focus is the automated extraction of patterns representing knowledge implicitly stored in large databases by examining some important techniques and algorithms in a rigorous manner. This subject also covers the key tasks of data mining, including data preparation (i.e. pre-processing), association rule mining, classification, prediction, clustering, and evaluation. Some selected areas of applications are covered. The subject also examines the general trends in data mining. The subject concludes by examining some social impacts of data mining.

BDA307 Big Data Technologies

This course covers the basic technologies associated with the storage, pipelining and processing of massive amounts of data. Students will learn about common techniques for storage of big data and algorithms for processing the data, and research on latest technologies to manage the ever growing amount of data used by organizations.

14.3Master of Data Science

MDS501 Programming for Data Science

This module equips students with fundamentals of programming using a high-level programming language to solve problems focusing on data. This module covers various data analysis and processing techniques such as retrieval, extraction, conversion, aggregation, filtering, processing and storing using programming libraries and toolkits.

MDS502 Data Management

This module introduces techniques related to modelling, extraction, cleansing, profiling, integration and access of data. This module then introduces the role of databases and database management systems, covering relational and non-relational databases. Policies for access and sharing including provisions for appropriate protection of privacy, ethics, confidentiality, security, or other requirements are also discussed.

MDS503 Statistics for Data Science

This module provides an introduction to basic statistical concepts and methods which include: simple and multiple linear regression, classification, decisions trees, support vector machines, and unsupervised learning. In addition, this module will serve as an introduction to implementing these methods through the use of statistical software.

MDS504 Applied Machine Learning

This module provides a foundation to the principles of machine learning by exploring major approaches and algorithms, feature engineering and model evaluation methods. This module covers different algorithms and techniques in developing machine learning systems for real-world problems focusing on prescriptive analytics.

MDS505 Research Methods

This module instructs students on the various processes related to conducting research, including: writing research proposals and research reports, sample selection, as well as collecting, processing and analysing data. This module will also introduce students towards various methods of conducting quantitative research.

MDS506 Dissertation

This module is a research project based on industry requirements. Students will conduct an industry based research project supervised by an academic staff member and a supervisor from industry. They may work on the project on-site, or they may work on the project at the university. Students will learn to apply the knowledge of the foundations, theory and methods of data science they have learned in the programme and build a research project on their own from start to finish. They will gain real-world exposure to modern data science challenges. Students will have the flexibility to choose their own domain and technology stack for their project. Projects will be drawn from real-world problems and may be conducted with government, industry or academic partners. The dissertation is a significant piece of work in which students should demonstrate a mature knowledge of data science and its applications.

14.4Master in Artificial Intelligence (ODL)

MDS501 Applied Programming

This module equips students with fundamentals of programming using a high-level programming language to solve problems focusing on data. The module covers various data analysis and processing techniques such as retrieval, extraction, conversion, aggregation, filtering, processing and storing using programming libraries and toolkits.

MDS502 Data Management

This module introduces techniques related to modelling, extraction, cleansing, profiling, integration and access of data. The module then introduces the role of databases and database management systems, covering relational and non-relational databases. Policies for access and sharing including provisions for appropriate protection of privacy, ethics, confidentiality, security, or other requirements are also discussed.

MDS505 Research Methodology

This course guides students on the various processes related to conducting research, including: writing research proposals and conducting literature review. This module will also introduce students towards various methods of conducting quantitative research.

MAI502 Deep Learning for Computer Vision

This course introduces students to computer vision from basic image processing and recognition techniques to modern deep learning models such as convolution neural network. Deep learning methods can achieve state-of-art results on challenging computer vision problems such as image classification, object detection and face recognition.

MDS504 Applied Machine Learning

This module provides a foundation to principles of machine learning by exploring major approaches and algorithms, feature engineering and model evaluation methods. The module covers different algorithms and techniques in developing machine learning systems for real-world problems focusing on prescriptive analytics.

MDS503 Applied Statistics

This module provides an introduction to basic statistical concepts and methods which include: simple and multiple linear regression, classification, decisions trees, support vector machines, and unsupervised learning. In addition, this module will serve as an introduction to implementing these methods through the use of statistical software.

MAI503 Natural Language Processing

This course introduces the fundamentals concepts and techniques of natural language processing with emphasis on two approaches to NLP: probabilistic and machine learning techniques. Natural Language Processing (NLP) is a sub-area of artificial intelligence which involves computational modelling of natural languages to form applications such as automatic summarization, machine translation and speech processing. It is essential in development of Large Language Models (LLM).

MDS506 Project Report

This module is a project based on academic and/or industry requirements. Students in this module will conduct a project supervised by an academic staff member and possibly a supervisor from industry.

Students will learn to apply the knowledge of the foundations, theory and methods they have learned in the programme and build a project on their own from start to finish. They will gain real-world exposure to modern challenges. The students will have the flexibility to choose their own domain and technology stack for their project. Projects will be drawn from real-world problems and may be conducted with government, industry or academic partners. The project is a significant piece of work in which students should demonstrate a mature knowledge of the field and its applications.

MCS502 Network Security and Cryptography

This module provides students with an in-depth knowledge in computer networking and security concepts. It explores the network security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to construct, and analyse the digital security in a company.

MAI507 Ethics and Cybersecurity

This course provides students with an understanding of cybersecurity principles and practices, with a focus on ethical considerations in computing. Students will also learn about policies and compliance standards, ensuring a comprehensive understanding of cybersecurity governance and regulatory

requirements. The course aims to equip students with the knowledge and skills necessary to protect digital assets, mitigate cybersecurity threats, and understand ethical decision-making in the context of technology.

14.5Master of Cybersecurity (ODL)

MCS501 Cybersecurity Fundamentals

This module presents an overview of the coverage of cybersecurity, including how to correctly define relevant threats, assess their severity and probability, countermeasures. With relevant case studies, students will be able to practice preliminary assessment and measurement relating to security of information assets.

MCS502 Network Security and Cryptography

This module provides students with an in-depth knowledge in computer networking and security concepts. It explores the network security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to construct, and analyse the digital security in a company.

MCS503 Ethical Hacking and Penetration Testing

This module provides students with knowledge in computer security. It explores the security concepts and practices applied in the industry on how to defend numerous types of attacking. It prepares students with skill sets to assess, and analyse the security by looking for weakness and vulnerabilities of computer systems in a company.

MCS504 Advanced Digital Forensics

This module will allow students to investigate the principles of digital forensics, focusing on computer forensics and its application in real-world scenarios, allowing students to analyse and evaluate digital evidence through the use of forensic tools and techniques (Public Domain tools). Theoretical knowledge of computer information as digital evidence and the basic techniques associated with gathering, preserving and presenting digital evidence are also covered in this course.

MDS505 Research Methodology

This course guides students on the various processes related to conducting research, including: writing research proposals and conducting literature review. This module will also introduce students towards various methods of conducting quantitative research.

MDS506 Project Report

This module is a project based on academic and/or industry requirements. Students in this module will conduct a project supervised by an academic staff member and possibly a supervisor from industry.

Students will learn to apply the knowledge of the foundations, theory and methods they have learned in the programme and build a project on their own from start to finish. They will gain real-world exposure to modern challenges. The students will have the flexibility to choose their own domain and technology stack for their project. Projects will be drawn from real-world problems and may be conducted with government, industry or academic partners. The project is a significant piece of work in which students should demonstrate a mature knowledge of the field and its applications.

MDS501 Applied Programming

This module equips students with fundamentals of programming using a high-level programming language to solve problems focusing on data. The module covers various data analysis and processing techniques such as retrieval, extraction, conversion, aggregation, filtering, processing and storing using programming libraries and toolkits.

MDS502 Data Management

This module introduces techniques related to modelling, extraction, cleansing, profiling, integration and access of data. The module then introduces the role of databases and database management systems, covering relational and non-relational databases. Policies for access and sharing including provisions for appropriate protection of privacy, ethics, confidentiality, security, or other requirements are also discussed.

MDS503 Applied Statistics

This module provides an introduction to basic statistical concepts and methods which include: simple and multiple linear regression, classification, decisions trees, support vector machines, and unsupervised learning. In addition, this module will serve as an introduction to implementing these methods through the use of statistical software.

MDS504 Applied Machine Learning

This module provides a foundation to principles of machine learning by exploring major approaches and algorithms, feature engineering and model evaluation methods. The module covers different algorithms and techniques in developing machine learning systems for real-world problems focusing on prescriptive analytics.

14.6Doctor of Philosophy in Computing (PhD)

PHD701 Research Methodology

This module provides guidance on the various processes related to conducting research, including: writing research proposals and conducting literature review. This module will also introduce various methods of conducting quantitative research.

PHD702 Thesis

This module is a research project based on the gap in the Body of Knowledge of the chosen topic area in computing. The candidates will conduct an in-depth research project supervised by an academic staff member. The research project may be undertaken on-site or remotely. The candidates will learn to apply the knowledge of the foundations, theory and methods in the field to build a research project on their own from start to finish. They will gain real-world exposure to the challenges in conducting focused research. They will have the flexibility to choose their own domain and technology stack for their project. Projects will be drawn from real-world problems and may be conducted with government, industry or academic partners. The thesis is the most significant piece of work in which candidates must demonstrate a mature knowledge of the field and contribute to the Body of Knowledge in the field of computing.

15 Awards, Sponsorships and Winners

The achievements of our students are too numerous to mention. Other than successfully procuring sponsorships and awards from the university and from our industry partners, our students have also been also scholarship recipients from our partner universities.

Information on HELP study awards and bursaries are found in the HELP Study Award Booklet.

16 Programme Structure

16.1Diploma in Information Technology

Year 1 (10 compulsory)		
DIP1000 Programming Principles	4	
DIP1001 Computer System Essentials	4	
DIP1002 Introduction to Analysis and Design	4	
DIP1003 Database Concepts and Practice	4	
DIP1004 Calculus and Linear Algebra	4	
DIP1005 Ethics in Computing	4	

DIP1006 Object-oriented Programming Fundamentals	4	
DIP1007 Networking and Data Communications I	4	
DIP1008 Computing Mathematics	4	
DIP1009 Modern Web Development	4	
Year 2 (9 compulsory)		
DIP2001 Fundamental of Operating Systems	4	
DIP2002 Statistics and Probability	4	
DIP2003 Digital Security Essentials	4	
DIP2004 Cloud Computing Fundamentals	4	
DIP2005 Mobile App Development	4	
DIP2006 User Centered Design	4	
DIP2007 Networking and Data Communications II	4	
DIP2008 Capstone Project	5	DIP1002, DIP1003, DIP1009
DIP2009 Industrial Internship	6	All Yr 1 Subjects
Note: **Students are required to complete 19 academic subjects and 3 MPU subjects , 1 General elective subject and HGA subject (90 credit hours)**		

16.2Bachelor of Information Technology (Hons)

(w.e.f.

Subject	Credit Hours	Pre-Req
Year 1 (8 Compulsory)		
BIT101 Computer Architecture and Organisation	4	
BIT102 Front-End Web Development	4	
BIT103 Introduction to Database Systems	4	
BIT106 OO Programming Fundamentals	4	
BIT107 Data Communications and Networking	4	
BIT108 Discrete Mathematics	4	
BIT110 Introduction to Operating Systems	4	
BDA100 Introduction to Programming	4	
Choose 1 Free Elective from Any Year 1 HELP Undergraduate Programme		
FEC101 Applied Mathematical Studies	4	
FEC100 Professional Communications for Business	4	
Year 2 (5 Compulsory)		
BIT201 System Architecture and Design	4	BIT106/BDA100
BIT206 User Experience Design	4	
BIT212 Cloud Computing	4	BIT107
BIT216 Software Engineering Principles	4	BIT201
BDA203 Advanced Database Systems	4	BIT103
Choose Any 3 Field Elective from Year 2		
BIT210 Advanced Web Development	4	

BIT217 Internet of Things	4	BIT110
BIT219 Introduction to Mobile Apps	4	BIT106
BIT204 Network Security	4	
BIT215 Cybercrime and Digital Forensics	4	
BIT208 Data Structures and Algorithms	4	BIT106
BIT211 Multimedia Systems	4	
BDA206 Enterprise Data Infrastructure	4	BIT103
BCS202 Computer Systems Engineering		
BCS205 Principles of Machine Learning		
Choose 1 Free Elective from Any Year 2 HELP Undergraduate Programme		
FEC201 Multivariate Calculus and Ordinary Differential Equations	4	
FEC200 Technopreneurship and Innovation	4	
Year 3 (5 Compulsory)		
BIT301 IT Project Management	4	
BIT303 Computer Ethics and Cybersecurity	4	
BIT304 Final Year Project I	6	All Yr 1 & 2 Subjects
BIT305 Final Year Project II	5	BIT304
BIT320 Industrial Internship	6	All Yr 1 & 2 Subjects
Choose Any 2 Field Electives		
BCS302 Cyberdefence and Ethical Hacking	4	
BIT312 Cloud Solutions Development	4	BIT212
BIT311 Mobile Applications Development	4	BIT106
BIT306 Entreprise Application Development	4	BIT102 & BIT106
BIT313 Concurrent Programming	4	BIT106
Choose 1 Free Elective from Any Year 3 HELP Undergraduate Programme		
FEC300 Starup Ideation	4	
Plus **Relevant Mata Pelajaran Pengajian Umum (MPU) subjects. Refer to Section 6.2 for more details.**		
Note: **Students are required to complete 26 academic subjects and 4 MPU subjects and 2 HELP Graduate Attribure Subjects (HGA) = total 32 subjects (120 credit hours)**		

16.3Bachelor of Information Technology (Data Analytics) (Honours)

(w.e.f.

Subject	Credit Hours	Pre-Req
Year 1 (9 Compulsory)		
BIT101 Computer Architecture and Organisation	4	
BIT103 Introduction to Database Systems	4	
BIT107 Data Communications and Networking	4	
BIT110 Introduction to Operating Systems	4	
BIT108 Discrete Mathematics	4	
BDA101 Analytics for Decision Making	4	
BIT106 Object Oriented Programming	4	
BDA100 Programming Fundamentals	4	
BIT102 Web Design and Development	4	
Year 1 (Choose 1 Free Elective from Any Year 1 HELP Undergraduate Programme)		

FEC101 Applied Mathematical Studies	4	
FEC102 Technopreneurship and Innovation	4	
Year 2 (7 Compulsory)		
BIT201 Systems Architecture and Design	4	BIT106/BDA100
BIT206 User Experience Design	4	
BIT212 Cloud Computing	4	BIT107
BIT210 Advanced Web Development	4	
BDA203 Advanced Database Systems	4	BIT103
BDA205 Statistics and Data Visualization	4	
BDA206 Enterprise Data Infrastructure	4	BIT103
Year 2 (*Choose 1 Free Elective from Any Year 2 HELP Undergraduate Programme)*		
FEC200 Technopreneurship and Innovation	4	
FEC102 Multivariate calculus and Ordinary Differential Equations	4	
Year 3 (7 Compulsory)		
BIT301 IT Project Management	4	
BIT304 Final Year Project I	6	All Yr 1 & 2 Subjects
BIT305 Final Year Project II	5	BIT304
BT320 Industrial Internship	6	All Yr 1 & 2 Courses
BIT303 Computer Ethics and Cybersecurity	4	
BDA306 Machine Learning and Artificial Intelligence	4	BDA205
BDA307 Big Data Technologies	4	
Year 3 (*Choose 1 Free Elective from Any Year 3 HELP Undergraduate Programme)*		
CMM300 Startup Ideation	4	
Plus **Relevant Mata Pelajaran Pengajian Umum (MPU) subjects. Refer to Section 6.2 for more details.**		
Note: **Note:** **Students are required to complete 26 academic subjects and 4 MPU subjects and 2 HELP Graduate Attribure Subjects (HGA) = total 32 subjects (120 credit hours)**		

16.4 Bachelor of Computer Science (Hons)

Subject	Credit Hours	Pre-Req
Year 1 (7 Compulsory)		
BIT101 Computer Architecture and Organisation	4	
BIT102 Web Design and Development	4	
BIT103 Introduction to Database Systems	4	
BDA100 Programming Fundamentals	4	
BIT107 Data Communications and NetworkingF	4	
BIT110 Introduction to Operating Systems	4	
BCS102 Fundamentals of Artificial Intelligence	4	
BIT108 Discrete Mathematics	4	
BIT106 Object Oriented Programming	4	

Choose 1 Field Elective from Any Year 1 HELP Undergraduate Programme		
BCS105 Multimedia Systems	4	
BDA101 Analytics for Decision Making	4	
Year 2 (5 Compulsory)		
BIT201 Systems Architecture and Design	4	
BIT206 User Experience Design	4	
BIT216 Software Engineering Principles	4	
BCS201 Data Structures and Algorithms	4	BIT106
BCS202 Computer Systems Engineering	4	
Choose 2 Field Electives from Any Year 2 HELP Undergraduate Programme		
BCS203 Blockchain Technology Concepts		
BCS204 Blockchain Applications and Smart Contracts		BCS203
BDA205 Data Mining and Visualisation		
BCS205 Principles of Machine Learning		
BIT204 Network Security		
BIT215 Cybercrime and Digital Forensics		
BIT212 Cloud Computing		
BDA203 Advanced Database Systems		
BIT210 Advanced Web Development		
Choose 2 Free Electives from Any Year 1/2 HELP Undergraduate Programme		
FEC101 Applied Mathematical Studies	4	
FEC100 Professional Communication for Business	4	
FEC200 Technopreneurship & Innovation	4	
Year 3 (5 Compulsory)		
BCS304 Final Year Project I	3	All Yr 1 & 2 Subjects
BCS305 Final Year Project II	5	BIT304
BT320 Industrial Internship	6	All Yr1 & 2
BIT303 Cybersecurity and Ethics	4	
BIT313 Concurent Programming	4	
Choose 2 Field Electives from Any Year 3 HELP Undergraduate Programme		
BIT301 IT Project Management	4	
BIT306 Enterprise Application Development	4	
BCS301 Blockchain Development	4	
BCS302 Cyberdefence and Ethical Hacking	4	
BCS303 Statistics for Data Science	4	
BDA306 Machine Learning and AI	4	
BCS306 Natural Language Processing	4	
BCS307 Deep Learning for Computer Vision	4	
Choose 1 Free Elective from Any Year 1/2 HELP Undergraduate Programme		
FEC300 Startup Ideation	4	

Plus **Relevant Mata Pelajaran Pengajian Umum (MPU) subjects. Refer to Section 6.2 for more details.**
Note: **Students are required to complete 27 academic subjects and 4 MPU subjects and 2 HELP Graduate Attribure Subjects (HGA) = total 33 subjects (120 credit hours)**

16.5 Master of Data Science

(w.e.f. January 2021)

Subject Code	Subject Name	Classification	Credit Hours
MDS501	Programming for Data Science	Core	4
MDS502	Data Management	Core	4
MDS503	Statistics for Data Science	Core	4
MDS504	Applied Machine Learning	Core	4
MDS505	Research Methods	Core	4
MDS506	Dissertation	Core	20
	Total Credit Hours (1 Year)		40

16.6 Master in Artificial Intelligence (ODL)

Course	Classification	Credit Hours
MDS501 Applied Programming	Core	4
MDS502 Data Management	Core	4
MDS505 Research Methodology	Core	4
MAI502 Deep Learning for Computer Vision	Core	4
MDS504 Advanced Machine Learning	Core	4
MAI506 Project Report	Core	12
MDS503 Applied Statistics	Elective	4
MAI503 Natural Language Processing	Elective	4
MCS502 Network Security and Cryptography	Elective	4
MAI507 Ethics and Cybersecurity	Elective	4
Total Credit Hours (1 Year)		**40**

16.7 Master of Cybersecurity (ODL)

		Course	Classification
MCS501	Cybersecurity Fundamentals	Core	4
MCS502	Network Security and Cryptography	Core	4
MCS503	Ethical Hacking and Penetration Testing	Core	4
MCS504	Advanced Digital Forensics	Core	4
MDS505	Research Methodology	Core	4
MAI506	Project Report	Core	12
MDS501	Applied Programming	Elective	4
MDS502	Data Management	Elective	4
MDS503	Applied Statistics	Elective	4
MDS504	Advanced Machine Learning	Elective	4

16.8 Doctor of Philosophy in Computing (PhD)

Course	Classification
PHD701 Research Methodology	Core
PHD702 Thesis	Core

17 Internship & Job Placement

Many of our graduates are headhunted by various multinational companies before they even graduate, and many of these companies also provide internship opportunities to our students.

A minimum 3 months internship placement is mandatory for both the Diploma and undergraduate degreee programmes. Apart from acquiring practical experience in the industry, our students are able to interact and network with industry leaders and professionals in the working environment.

The Work-Based Learning (WBL) option in the Bachelor of IT (Hons) also provides a year-long option to enable students to complete their third and final year while working full-time.

Some of the organizations that our students have been employed by include:

- Accenture
- Broadcast Network Systems (ASTRO)
- Citibank
- Dassault Systemes
- Dell
- Fusionex
- Geoview Data Services

- Hewlett Packard
- HSBC (China)
- IBM
- Maxis Communications
- Motorola Malaysia
- MIMOS
- Pilot Multimedia
- Sapura Holdings
- Shell

18 Credit Transfer Arrangements

Please note that students will need to consult the Faculty of Computing and Digital Technology on the grades and English language requirements that they need to obtain in order to transfer the following unversities. Furthermore, the Faculty reserves the right to make appropriate changes to the information presented in the next few pages. Thus, it is important for students to check with the Faculty on any changes at the beginning of each new semester.

18.1The University of Queensland, Australia

1. Students must successfully complete the Diploma in Information Technology or the Bachelor of Information Technology (Honours) (one or two years) at HELP University to be eligible for the pathways listed below. Applications for any other pathways will be considered on a case by case basis.

2. Students must achieve the required GPA for admission to the chosen UQ program.

3. Students are required to meet the UQ English language proficiency entry requirements- https://ppl.app.uq.edu.au/content/3.40.14-english-language-proficiency-admission

4. The pathways listed in Table 4 are based on the current curriculum of both universities and changes by either party may warrant a review and re-assessment of credit. It is the responsibility of each party to communicate any such changes.

5. To be awarded credit for the UQ Math B Entry requirement

    a. Bachelor applicants must complete BIT104 Application of Mathematics in IT in their first year.

    b. Bachelor applicants who completed 2 years of the Bachelor must complete BIT208 Data Structures and Algorithms.

Table 4. Articulation pathways to UQ

HELP Uni Program	UQ Program	Credit Awarded	Remaining at UQ
2 years of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (Cyber Security)	24 units	24 units (2 years)
2 years of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (Data Science)	24 units	24 units (2 years)
2 years of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (Machine Learning)	24 units	24 units (2 years March commencement; 1.5 years July commencement)
2 years of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (No Major)	24 units	24 units (1.5 years)
2 years of Bachelor of Information Technology (Honours)*	Bachelor of Engineering (Honours) Software*	32 units	32 units (2 years)
2 years of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (No Major)	32 units	16 units (1 year)
1.5 years of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (No Major)	24 units	24 units (1.5 years)
1.5 years of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (No Major)	24 units	24 units (2 years March commencement; 1.5 years July commencement)
1 year of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (No Major)	16 units	32 units (2 years)
1 year of Bachelor of Information Technology (Honours)	Bachelor of Computer Science (No Major)	16 units	32 units (2 years March commencement; 2.5 years July commencement)
2 years of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (Computer Systems & Networks)	32 units	16 units (1 year)

2 years of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (Software Design)	32 units	16 units (1 year)
1.5 years of Bachelor of Information Technology (Honours)	Bachelor of Information Technology (Software Design)	24 units	24 units (1.5 years)

* Applicants must have previously completed suitable high school or other Physics or Chemistry studies to meet the UQ Physics or Chemistry entry requirement.

HELP Uni Program	UQ Program	Credit Awarded	Remaining at UQ
Diploma in Information Technology	Bachelor of Computer Science (Cyber Security)	16 units	32 units (2.5 years)
Diploma in Information Technology	Bachelor of Computer Science (Data Science)	16 units	32 units (2 years March commencement; 2.5 years July commencement)
Diploma in Information Technology	Bachelor of Computer Science (Machine Learning)	16 units	32 units (2 years March commencement; 2.5 years July commencement)
Diploma in Information Technology	Bachelor of Computer Science (No Major)	16 units	32 units (2 years)
Diploma in Information Technology	Bachelor of Information Technology (Computer Systems & Networks)	24 units	24 units (2 years March commencement only)
Diploma in Information Technology	Bachelor of Information Technology (Enterprise Information Systems)	16 units	32 units (2 years)
Diploma in Information Technology	Bachelor of Information Technology (No Major)	24 units	24 units (1.5 years)
Diploma in Information Technology	Bachelor of Information Technology (Software Design)	24 units	24 units (1.5 years March commencement; 2 years July commencement)

Diploma in Information Technology	Bachelor of Information Technology (Software Information Systems)	24 units	24 units (2 years March commencement; 1.5 years July commencement)

18.2Macquarie University, Australia

HELP Diploma in Information Technology

- Macquarie Bachelor of Information Technology (2+2)
- Macquarie Bachelor of Cyber Security (2+2)

HELP Bachelor of Information Technology:-

- Macquarie Bachelor of Cyber Security (1.5 + 1.5)
- Macquarie Bachelor of Cyber Security (1.5 + 1.5)

18.3The Eastern Institute of Technology, New Zealand

- BComp Systems, The Eastern Institute of Technology (EIT)
  HELP Diploma in Information Technology (2 years at HELP University) +
  BComp Systems (ONE year on campus study (2 semesters) + six months compulsory internship)

18.4Cardiff University, United Kingdom

- Bachelor of Information Technology
  HELP Diploma in Information Technology (2 years at HELP University + 2 years at Cardiff University)
- BSc Computer Science (1 + 2 or 1 + 3 with one Year at Industry)
- BSc Computer Science with Specialism (1 + 2 or 1 + 3 with one year Industry)
- BSc Software Engineering (1 + 2 or 1 + 3 with Year Industry)
- BSc Business Information Systems (1 + 2 or 1 + 3 with one year Industry)
- MSc Advanced Computer Science
- MSc Information Security and Privacy
- MSc Computing
- MSc Computing and IT Management

18.5Northumbria University, United Kingdom

- MSc Computer Science
- MSc Business Information Systems Management
- MSc Computer Network Technology

18.6University of Essex, United Kingdom

HELP Bachelor of Information Technology and HELP Bachelor of Information Technology (Data Analytics):-

- Essex Bsc Computer Games (1+2)
- Essex BSc Computer Science (1+2)

- Essex BEng Computer Networks (1+2)
- Essex BEng Computers with Electronics (1+2)
- Essex BEng Computer systems Engineering (1+2)

HELP Diploma in Information Technology:-

- Essex BSc Computer Science (2+1)
- Essex BEng Computer Networks (2+1)
- Essex BEng Computer with Electronics (2+1)
- Essex BEng Computer Systems Engineering (2+1)
- Essex Any UG course from the School of Computer Science and Electronics Engineering (2+2)

18.7 **Swansea University, United King**

18.8 HELP Bachelor of Information Technology and HELP Bachelor of Information Technology (Data Analytics) (Honours) BSc Computer Science (1+2)

18.9 Beijing Jiaotong University, China

- HELP Diploma in Information Technology + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)
- HELP Bachelor of Information Technology (1.5 years) + 2 years at the Beijing Jiaotong University (Bachelor of Software Engineering)
- HELP Diploma in Information Technology + 2 years at the Beijing Jiaotong University (Bachelor of Engineering in Computer Science)

18.10 The University of Adelaide

a) HELP Diploma in Information Technology:-

- Adelaide Bachelor of information Technology (2+2)
- Adelaide Bachelor of Computer Science (2+2)

b) HELP Bachelor of Information Technology (Hons) only:-

- Adelaide Bachelor of Information Technology (1+2)
- Adelaide Bachelor of Computer Science (1+2.5)

18.11 Murdoch University

HELP Bachelor of Information Technology (Hons) or HELP

- Bachelor of Information Technology (Data Analytics) (Honours):-
- Murdoch Bachelor of Information Technology (1+2)

For the most up-to -date data, please refer to the latest information here: FCDT Pathways List.xlsx

19 Extra-Curricular Activities

The success of the faculty lies in its ability to vary the learning experience. Apart from class studies, projects and participation in competitions, the department also promotes extracurricular activities for their students. These activities are either held in conjunction with the University or on our own. Students are encouraged to join the following clubs organised by the IT Student Council:

- The IT Student Council
- The Robotics Club
- The IoT Club
- 3D Printing Club
- eSports Club
- Cybersecurity Club

Students can also play eSports at the computer lab every Wednesday at lunchtime.

As part of our efforts to prepare students for the Fourth Industrial Revolution, we offer free and mandatory workshops on Data Analytics and Business Intelligence, Robotics, Blockchain and Machine Learning.

20 Research and Development Activities

We are committed to R&D activities. Our collaborations with many industry partners is evidence of our focus to increase industry relevance of our research and also close engagement with our community. The current focus of the faculty R&D activities lies in the areas of analytics, blockchain and AI.

Research Area	Supervisor/Researcher	Sample Projects
Artificial Intelligence, Image Processing	Prof. Dr. R. Logeswaran	Computed-Aided Diagnosis System for Liver Diseases
Data Analytics	Prof. Dr. R. Logeswaran	Intelligent Analytics-based Portfolio Selection for Stock Market
Data Compression	Prof. Dr. R. Logeswaran	Lossless Data Compression of Satellite Telemetry Data
Internet of Things (IOT), Artificial Intelligence	Dr. Rachel Saw	IOT and AI-based vertical farming smart greenhouse, AI-based circadian lighting control
Machine (ML) and Deep Learning (DL)	Dr. Shapla Khanam	ML and DL techniques for different application areas such Healthxare, traffic analysis
Cybersecurity	Dr. Shapla Khanam	Network security, particularly Intrusion Detection for IoT applications
Blockchain	Anitha Velayutham	ERC20 Token Exchange – managing digital assests using security tokens.
Artificial Intelligence	Naline Shanmugam	Chatbot for automating respones to common student queries.
Artificial Intelligence, Image Processing	Umi Najiah Ahmad Razimi	Air pollution detection using image processing and big data analysis. Android based Indoor Air Monitoring System using Image Processing
Artificial Intelligence	Koon Kim Peh	Course Timetabling System
Software Engineering	Seetha Letchumi	DevOps practices, and software architecture specialing on software quality assurance - Moodle Learning Management System
Artificial Intelligence	Dr Yong Yoke Leng	Detection and Recognition of FOREX Repetitive Patterns using Machine Learning Techniques
Image processing	Dr Yong Yoke Leng	Recognition of occuded objects in images and video footage

For the most up-to -date data, please refer to the latest information here: FCDT Research and Development Activities.xlsx

21 Useful Services

21.1Learning Resource Centre (LRC)

The LRC, also known as the HELP University Library, provides students with learning resources to support study and research and is managed by a team of professionally qualified personnel and trained assistants. The library has a large collection of books, periodicals, print journals as well as online resources. Online databases are accessible using the HELPLIVE email ID and password. Students are required to register with HELPDesk by emailing helpdesk@helplive.edu.my to obtain the login details.

Students should refer to the library website at < http://library.help.edu.my > for updates on a regular basis.

21.2International Student Services Department (ISSD)

The ISSD is responsible for providing advice and support to the HELP international students with regard to liaison with the Malaysian government authorities including visa processing and immigration matters, student arrival and induction, student discipline, academic progress and general welfare.

Students who are required to renew their student pass shall apply to ISSD two months in advance before the expiry date. It is the students' responsibility to ensure that their Student Pass is valid and submit all necessary documents on time for renewal. ISSD sends a reminder email to the students 60 days before their visa expiry.

Please refer to < http://help.edu.my/international-student-admission/# > for further details.

21.3Accommodation

For information on accommodation, please refer to the website at
http://www.help.edu.my/living-lifestyle/campus-accommodation.html

21.4Computer Facilities and MyPride Student Portal

1. Computer laboratories and learning spaces equipped with computer facilities are available on campus. The Corporate Information Centre (CIC) HELP Desk provides technical and troubleshooting assistance to support the computer resources at HELP.
2. The "New MyPride" student portal allows students to view their official results, financial and academic status and verify their personal details. Students are required to register with the CIC HELPDesk by emailing: helpdesk@helplive.edu.my to obtain the login details for the "New MyPride" account. Students with outstanding fees will not be able to view their results from "New MyPride".

21.5HELP Counselling

Other matters pertaining to student well-being shall be brought to the attention of the Dean of faculty for further discussion and resolution. Alternatively, students may wish to contact HELP Counselling for career advisory services or professional guidance on personal matters.

CAREERsense@HELP, telephone: +603 2711 2000 ext.1130 or Centre for Psychological & Counselling Services, telephone: +603 2096 1212.

21.6Grievance Procedure

The faculty is committed to providing a conducive study and work environment. All complaints are treated seriously, and the faculty will attempt to resolve them soonest possible. The faculty has grievance procedure available to enable students to make complaints, and that complaints are responded to appropriately without prejudice to the student. If you have concerns about your treatment by the faculty, by a staff member or by another student, first and foremost you should try and resolve the problem directly with the person(s) concerned. Wherever possible, complaints should be resolved through a process of discussion, cooperation and conciliation.

21.7Disability Services

If you have a disability, you are encouraged to contact the faculty administrator (s) as early as possible to discuss your individual needs. The faculty administrator (s) will provide the relevant reference or information the available support (if applicable) by the University.

21.8Faculty Programme Office

1. Faculty's office is open from 9:00 a.m. – 5:30 p.m. on weekdays, 9:00 a.m. – 1.00 p.m. on Saturdays, and is closed on Sundays and public holidays. Please contact us early to confirm the time if you wish to come to the office a little later.
2. Important information is normally given to students via helplive email. The administrators may also communicate with students via their land or mobile phones; please return our calls if we are unable to reach you. Students' communication with the faculty may be made through office phones or HELPLIVE e-mail - response may take up to 3 working days. Students are required to update the faculty of any change in their e-mail addresses/mobile phone numbers.