UTHM
Universiti Tun Hussein Onn Malaysia
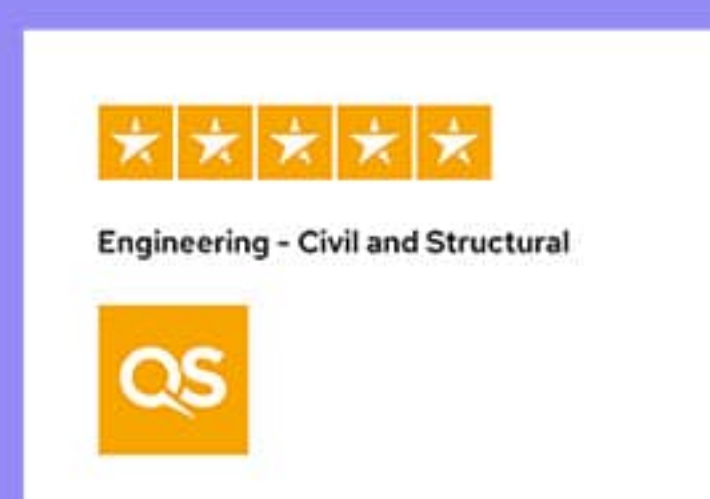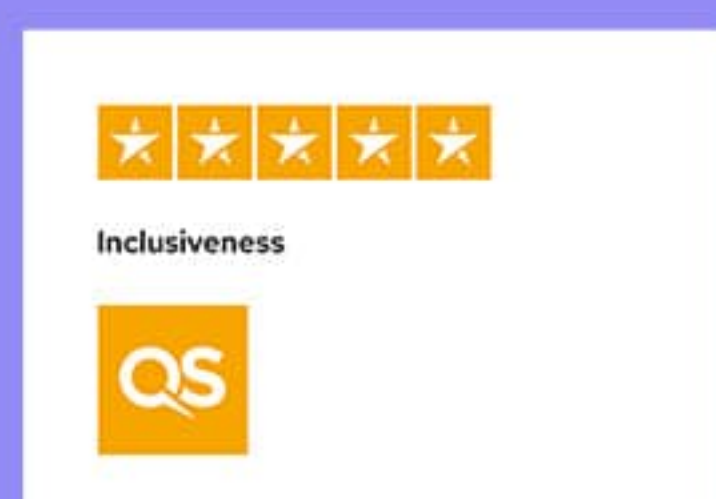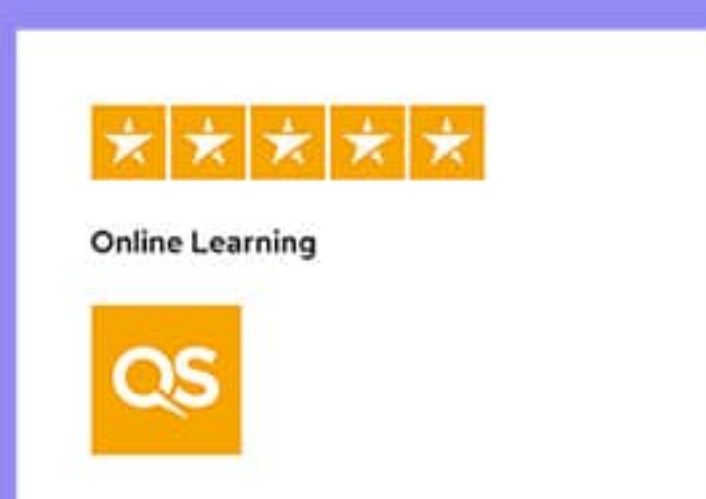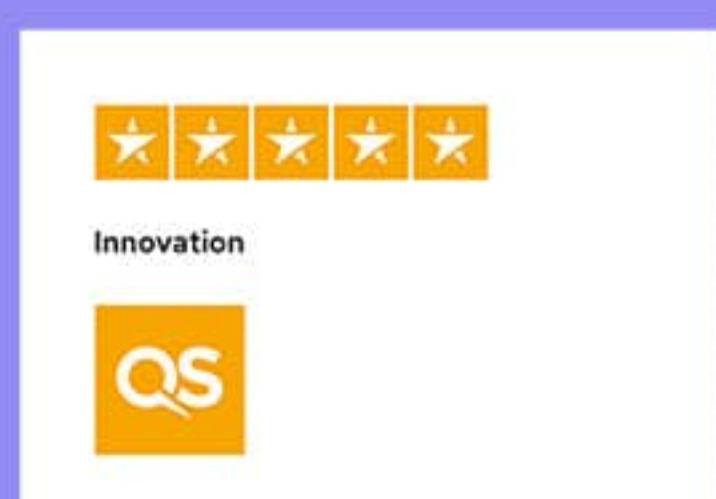
ACADEMIC PROFORMA 2022/2023

CENTRE FOR DIPLOMA STUDIES
CEDS

Global Technopreneur University 2030
GTU 2030

DIPLOMA IN INFORMATION TECHNOLOGY

EXCELLENT
★★★★★
QS

Universiti Tun Hussein Onn Malaysia
Is Rated as a Five-Star Institution

★★★★★
Teaching
QS

★★★★★
Employability
QS

★★★★★
Innovation
QS

★★★★★
Online Learning
QS

★★★★★
Inclusiveness
QS

★★★★★
Engineering - Civil and Structural
QS

CAD
Centre for Academic
Development and Excellence
Universiti Tun Hussein Onn Malaysia
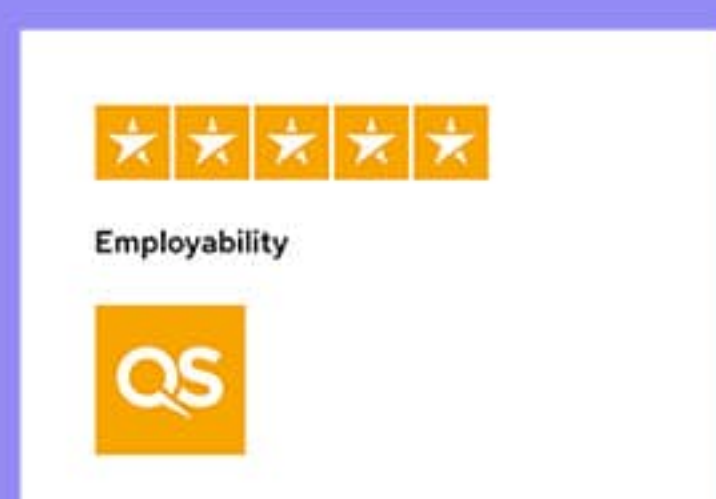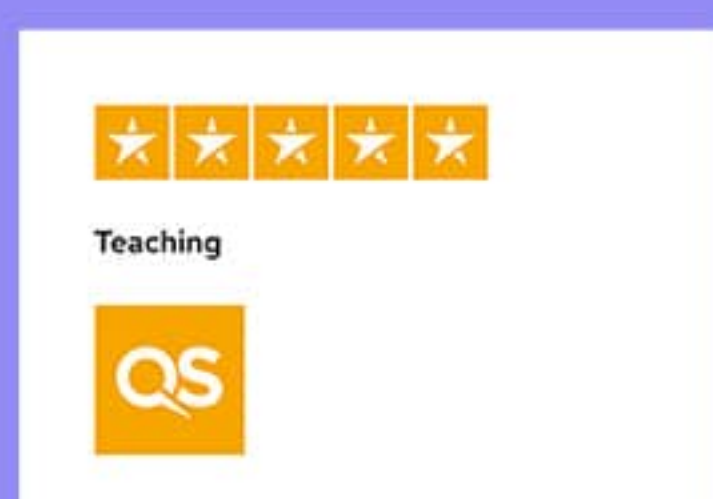
https://cad.uthm.edu.my
cad@uthm.edu.my

PUSAT PENGAJIAN DIPLOMA
UTHM KAMPUS PAGOH, HAB PENDIDIKAN TINGGI PAGOH
KM 1, Jalan Panchor, 84600, Panchor, Johor.

Information contained in this proforma is true at the time of printing and the University has the right to make any amendment according to needs.

Contents

Foreword by the Vice Chancellor

Assalammualaikum Warahmatullahi Wabarakatuh and greetings.

First and foremost, I would like to congratulate and welcome all new students to UTHM. As the need for formal education progressed within each of you, you have entrusted us to become one of your milestones. And for this, the honour is mine.

Looking forward past the pandemic of Coronavirus, the endemic era seems promising - especially towards the nation's education landscape. Hardship over the past two years has made us mature and agile, where reliance on the traditional way of doing things has subsided. Thus, do expect an array of positive changes and implementation en route to your success.

Inline, due to our responsibility and mandate, continuous improvement is something that we have implanted in our DNA - since our inception. Critical consideration of your journey towards essential education lifecycle (i.e. before, during, and after) has been made perpetually. Thus, parallel to our direction towards a global technopreneur university by 2030, four main pillars have been established - Edu-Train, Technopreneur, Prihatin, and Governance. All pillars are being convoluted within a holistic ecosystem, which synergises the staff, the industries, the communities, the environment, and of course, you – as the focal point.

Nevertheless, given the current state of VUCA (volatile, uncertain, complex, and ambiguous) that we faced, initiatives within our pillars have been supported by the Ministry of Higher Education Malaysia (MoHE). Therefore, edges including Experiential Learning and Competency-Based Education (EXCEL), High Impact Educational Practices (HIEPs), Future Ready Curriculum (FRC), and Entrepreneurship Integrated Education (EIE) have been materialised especially in our curriculum. Thus, we strongly believe that the initiatives, together with our exceptional physical and non-physical facilities, will produce all-inclusive graduates and later professionals, as promised in our tagline, 'UTHM Produces Professional".

Last but definitely not least, I am openheartedly welcoming all new students to become our people. Notwithstanding striving to bring pleasant experiences along your journey, I prayed for your success throughout.

"Education is the passport to the future, for tomorrow belongs to those who prepare for it today" (Malcolm X)

Best wishes.

"WITH WISDOM WE EXPLORE"
"VISION OF COMMON PROSPERITY"

YBHG. PROFESSOR Ts. Dr. RUZAIRI BIN ABDUL RAHIM
Vice Chancellor
Universiti Tun Hussein Onn Malaysia

Foreword by the Deputy Vice Chancellor
(Academic and International)

Assalammualaikum Warahmatullahi Wabarakatuh and greetings.

Primarily, I am profoundly congratulating and welcoming all new students of the academic session 2022/2023 to Universiti Tun Hussein Onn Malaysia (UTHM). Hopefully you will achieve success in education as desired, in addition to gaining experience while at UTHM.

I also would like to thank and congratulate the Centre for Academic Development and Excellence (CAD) and the faculties for successfully publishing this academic proforma. It is hoped that the information provided in this academic proforma can be a reference and help students in planning their learning path throughout their studies.

As is well known, the spread of COVID-19 which began at the end of 2019 has affected not only the daily lives of individuals and the national economy, but also educational institutions are also faced with the issue of sustainability of academic programs. To address these issues, UTHM has acted to adjust the operation and implementation of academic programs based on the situation. UTHM is also determined to remain agile and relevant in the academic field in the current endemic transition era. In addition, with the support of the adoption of new initiatives from the Ministry of Higher Education Malaysia (MOHE) and also UTHM itself, I am confident that the university's academic excellence will continue to be preserved and enhanced.

Allow me to share briefly about UTHM's focus on Technical and Vocational Education and Training (TVET) based education. UTHM's efforts started from before the registration of students, where UTHM has considered the need for credit transfer, especially for higher levels of study. UTHM also provides solutions either for the articulation of academic programs internally at UTHM or externally involving other institutions. Then during the study period, extensive improvements in terms of program content, physical and non -physical facilities continued to be carried out. Afterward, UTHM has also provided a centralized support system to graduates. All these stated efforts are only part of UTHM's sustainable academic ecosystem towards a Technopreneur University by 2030.

Finally, I hope that all the agendas that have been and will be implemented by UTHM will give you valuable experience in exploring and acquiring the competencies you dream of. I pray that you will continue to gain knowledge and forge outstanding success.

"The more that you read, the more things you will know,
the more that you learn, the more places you'll go" (Dr. Seuss)

"WITH WISDOM WE EXPLORE"
"VISION OF COMMON PROSPERITY"

YBHG. PROFESSOR TS. DR. AZME BIN KHAMIS
Deputy Vice Chancellor (Academic and International)
Universiti Tun Hussein Onn Malaysia

Foreword from Dean

Assalamualaikum Warahmatullahi Wabarakatuh and Warm Greetings

Congratulations and welcome to all of you that have made the right choice of taking the first step in joining Universiti Tun Hussein Onn Malaysia (UTHM) that is the 15th IPTA established in Malaysia. I wish to welcome all of you to the Centre for Diploma Studies (CeDS) which is always ready to support and train you to be a semi-professional in the field of engineering, science and technology.

As a center, we are responsible for running and operating the Diploma programmes at UTHM. CeDS has a clear vision and mission in developing and empowering all Diploma programmes offered. Currently, seven (7) Diploma programmes being offered and the number of programmes will be increasing in the future in line with the country's employment needs.

I believed you have chosen a right programme that suits with your qualifications and dreams. Furthermore, the study period for all programmes is only 2 years and 9 months, which the student will be completed their studies in a shorter time. In the meantime, Diploma graduates will be absorbed to continue study to follow the Bachelor Degree programmes at UTHM with respect to the terms and conditions imposed.

In terms of infrastructure and teaching and learning facilities provided, UTHM have been recognized to fulfill the standard required accreditation bodies. In addition, the rapid development of the UTHM campus will now ensure the comfort of students with various facilities provided including libraries, residential colleges, cafeterias, sports activities, wireless internet connection, and various other amenities.

I hope that as a new Diploma student in UTHM, you will use this proforma as a guide and reference to facilitate you to plan and subsequently complete your diploma study program with excellence.

Wishing You Success.

"WITH WISDOM WE EXPLORE"
"VISION OF COMMON PROSPERITY"

TS. DR. MOHD SHAHIR BIN YAHYA
Dean
Centre for Diploma Studies (CeDS)
Universiti Tun Hussein Onn Malaysia

Vision

To be a global technical university in sustainable technology and transportation

Mission

Provide technical solution for industry and community based on tauhidic paradigm

Education Philosophy of University

UTHM education and training, founded on the tauhidic paradigm, strive to produce competent, professional and entrepreneurial graduates, driven by advanced technologies for global development.

Logo of University

The logo of UTHM displays a proton, a book, a tiered mortar board (levels of learning), a book-rest and a shield.

Symbolism:
- Red — Bravery
- Blue — Collaboration
- Silver — Quality/ Prestige
- Book-rest — Knowledge
- Proton — Science and Technology
- Book — Knowledge
- Mortar board — Levels of study
- Circle — Resilient and related to global characteristics
- Shield — Confidence

The whole concept of the logo represents UTHM as a learning institution that supports knowledge expansion and development at all levels of study in science and technology.

Blue represents the close relationship among UTHM community in ensuring successful and resilient implementations of the University programmes as well as its education and research activities that are carried out for the benefit of mankind.

Red symbolises the adventurous nature of UTHM in exploring new fields to establish itself as a leader in the applications of science and technology. Thus, this reflects the spirit and self-esteem of the UTHM community.

Chancellor

Duli Yang Amat Mulia Tunku Mahkota Ismail Ibni Sultan Ibrahim
Pemangku Raja
D.K., SPMJ, P.I.S

Board of Directors of University

Chairman

YBhg. Dato' Sri Ibrahim bin Ahmad

Members

YBhg. Prof. Ts. Dr. Ruzairi bin Abdul Rahim
Vice Chancellor, Universiti Tun Hussein Onn Malaysia

YB. Dato' (Dr.) Haji Nooh bin Gadot
Advisor, Majlis Agama Islam Johor

YBhg. Dato' Dr. Mohd. Padzil bin Hashim
Putra Business School, Universiti Putra Malaysia

YBhg. Dato' Seri Dr. Ir. Haji Abdul Rashid bin Maidin
Managing Director, Pusat Bertauliah Akademik Profesional Koperasi Serbaguna
Anak-anak Selangor Berhad (KOSAS)

YBrs. Dr. Sharifah Adlina binti Syed Abdullah
Ministry of Finance Malaysia

YBrs. Mr. Shahril Anwar bin Mohd Yunos
Managing Partner, Virtus Capital Partners Sdn. Bhd.

YBrs. Mdm. Elain Lockman
Chief Executive Officer and Co-Founder, Ata Plus Sdn. Bhd.

YBrs. Ts. Zainab binti Ahmad
Director-General, Polytechnic and Community College Education Department,
Ministry of Higher Education Malaysia

YBrs. Prof. Dr. Yusri bin Yusof
Professor, Universiti Tun Hussein Onn Malaysia

Alternate Member

YBrs. Ts. Haji Mohamad Amin bin Hamat
Deputy Chief Director, Ministry of Higher Education

Secretary

YBrs. Mr. Abdul Halim bin Abdul Rahman
Registrar/Chief Operating Officer (COO), Universiti Tun Hussein Onn Malaysia

Members of Senate

Chairman

YBhg. Prof. Ts. Dr. Ruzairi bin Abdul Rahim
Vice Chancellor

Members

Prof. Ts. Dr. Azme bin Khamis
Deputy Vice Chancellor (Academic and International)

Prof. Dr. Mohd Shahir Shamsir bin Omar
Deputy Vice Chancellor (Research and Innovation)

Prof. Sr. Ts. Dr. Lokman Hakim bin Ismail
Deputy Vice Chancellor (Student Affairs and Alumni)

Assoc. Prof. Ts. Dr. Mohd Kamarulzaki bin Mustafa
Provost UTHM Pagoh Campus

Prof. Ir. Dr. Md Saidin bin Wahab
Assistant Vice Chancellor / Chief Digital Officer (CDO) (Digitalization and Infrastructure)

Assoc. Prof. Dr. Mas Fawzi bin Mohd Ali
Assistant Vice Chancellor (Strategic Planning and Quality)

Prof. Dr. Shahruddin bin Mahzan @ Mohd Zin
Dean, Centre for Graduate Studies

Prof. Ir. Ts. Dr. Mohd Irwan bin Juki
Dean, Faculty of Civil Engineering and Built Environment

Assoc. Prof. Dr. Rosli bin Omar
Dean, Faculty of Electrical and Electronic Engineering

Assoc. Prof. Ir. Ts. Dr Bukhari bin Manshor
Dean, Faculty of Mechanical and Manufacturing Engineering

Prof. Dr. Wan Fauzi@Fauziah binti Wan Yusoff
Dean, Faculty of Technology Management and Business

Assoc. Prof. Ts. Dr. Abdul Rasid bin Abdul Razzaq
Dean, Faculty of Technical and Vocational Education

Ts. Dr. Azizul Azhar bin Ramli
Dean, Faculty of Computer Science and Information Technology

Assoc. Prof. Dr. Mohamad Zaky bin Noh
Dean, Faculty of Applied Science and Technology

Assoc. Prof. Ts. Dr. Jumadi bin Abdul Sukor
Dean, Faculty of Engineering Technology

Ts. Dr. Mohd Shahir bin Yahya
Dean, Centre for Diploma Studies

Assoc. Prof. Dr. Khairul Azman bin Mohamad Suhaimy
Dean, Centre for General Studies and Co-curricular

Dr. Hj. Azmi bin Abdul Latiff
Dean, Centre for Language Studies

Prof. Dr. Erween bin Abdul Rahim
Director, Centre for Academic Development and Excellence

Assoc. Prof. Ts. Dr. Razali bin Hassan
Director, Malaysia Research Institute for Vocational Education and Training

Assoc. Prof. Dr. Amran bin Harun
Institute for Social Transformation and Regional Development (TRANSFORM)

Prof. Ts. Dr. Aeslina binti Abdul Kadir
Faculty of Civil Engineering and Built Environment

Prof. Dr. Mohammad Faiz Liew bin Abdullah
Faculty of Electrical and Electronic Engineering

Prof. Dr. Yusri bin Yusof
Faculty of Mechanical and Manufacturing Engineering

Prof. Dr. Zawati binti Harun
Faculty of Mechanical and Manufacturing Engineering

Prof. Dr. Abdul Talib bin Bon
Faculty of Technology Management and Business

Prof. Ts. Dr. Rosziati binti Ibrahim
Faculty of Computer Science and Information Technology

Prof. Dr. Abdul Mutalib bin Leman
Faculty of Engineering Technology

Prof. Dr. Nazri bin Mohd Nawi
Director, Centre of Information Technology

Ir. Ts. Dr. Raha binti Abdul Rahman
Industry Fellow

Mr. Abdul Halim bin Abdul Rahman
Registrar / Chief Operating Officer (COO) / Secretary of Senate

Mr. Norzaimi bin Hamisan
Bursar / Chief Financial Officer (CFO)

Mdm. Zaharah binti Abd Samad
Chief Librarian

Mdm. Norliah binti Yaakub
Legal Advisor

Centre for Diploma Studies

Centre Vision

Excellent in providing multidisciplinary education in science and technology

Centre Mission

Producing graduates who contribute to national development through a holistic academic program

Diploma programmes had been offered in UTHM since the establishment of Pusat Latihan Staf Politeknik (PLSP) in 1994. It started with only three programmes which are managed by the respective departments. All were transferred to the corresponding faculties when Kolej Universiti Teknologi Tun Hussein Onn (KUiTTHO) was established in 2001.

The establishment of the Centre for Diploma Studies was announced by the Vice Chancellor on the 1st of August 2009. This enabled all the diploma programmes to be centrally managed under one roof which would increase the competitiveness of the programmes offered.

It is the aim of the Centre for Diploma Studies to offer diploma programmes at UTHM which are going to be the main choice of applicants. Students are expected to show academic excellence as well as participating in co-curriculum activities which will further develop their potential in order to achieve the quality needed to fulfil the global occupational market. In addition, graduates of these programmes also have the wides opportunity to further their studies at Bachelor's Degree level at various faculties in UTHM.

Now, the Centre for Diploma Studies, offer seven (7) diploma programmes which are managed by five (5) departments and is led by a Dean who is assisted by three (3) Deputy Deans. The organizational chart of the Centre for Diploma Studies is shown in the next page:

Ts Dr Mohd Shahir bin Yahya
Dekan

Pn Nor Suraya binti Abdul Samad
Pembantu Setiausaha Pejabat
Setiausaha Dekan

Cik Norfaizah binti Sai
Penolong Pendaftar Kanan
Bahagian Pentadbiran

Dr Muhammad Faizal bin Ismail
Timbalan Dekan
Akademik

Ts Dr Hazlini binti Dzinun
Timbalan Dekan Pembangunan,
Penyelidikan dan Penerbitan

Pn Ziana binti Che Ros
Timbalan Dekan Hal Ehwal
Pelajar dan Alumni

Pn Siti Nurfaridah binti Fakri
Pembantu Tadbir
Setiausaha Timbalan Dekan

Pn Latifah binti Mohd Nasir
Penolong Pegawai Tadbir Kanan
Ketua Unit Akademik

En Zainizan bin Md Esa
Penolong Pegawai Tadbir
Ketua Unit Pentadbiran dan
Kewangan

Ts Dr Norhayati binti Ngadiman
Ketua Jabatan
Jabatan Kejuruteraan Awam

Dr Noor Azizah binti Sidek
Ketua Jabatan
Jabatan Kejuruteraan Mekanikal

Ts Mohd Hatta bin
Mohamed Ali @ Md Hani
Ketua Jabatan
Jabatan Teknologi Maklumat

En Razali bin Ahmad
Pembantu Tadbir Kanan
Hal Ehwal Pelajar dan Alumni

En Dorazi bin Md. Noh
Pembantu Tadbir Kanan
Kewangan

Ts Mohd Sabani bin Mohd
Ketua Jabatan
Jabatan Kejuruteraan Elektrik

Dr Dilaeleyana binti
Abu Bakar Sidik
Ketua Jabatan
Jabatan Sains dan Matematik

Cik Nur Ainaa binti Ali
Pembantu Tadbir
Akademik

Cik Siti Nur Hasanah
binti Hasan
Pembantu Tadbir
Pentadbiran

En Muhammad Firdaus bin Yaacob
Pembantu Tadbir
Pembangunan, Penyelidikan
dan Penerbitan

En Azwan bin Roslee
Pembantu Operasi

HEPA – Hal Ehwal Pelajar dan Alumni

CeDS Organization Chart

Centre External Examiner and Industrial Advisor

Department of Information Technology

Programme External Examiner

Prof. Ts. Dr. Azham bin Hussain
PhD Computer Science (University of Salford), MSc. Information Technology (UUM), BSc. Computer Science (UTM)

Programme Industrial Advisor

Mr. Hairil Izwan bin Isamuddin
Country Manager (Malaysia, Brunei, Indonesia)
CompTIA

Staff Directory

Administration

Dean
Ts. Dr. Mohd Shahir bin Yahya
Ph.D (Mechanical Engineering)(UTHM), M. Eng. (Mechanical & Manufacturing)(UPM), B. Eng. (Mechanical Engineering)(UTM)

Deputy Dean (Academic)
Dr. Muhammad Faizal bin Ismail
PhD. (Electrical Engineering)(UTM), M. Eng. (Electrical Engineering)(UTM), B. Eng. (Hons) (Electrical Engineering - Telecommunication.) (UTM)

Deputy Dean (Student Affairs and Alumni)
Hjh. Ziana binti Che Ros
M. Eng (Electrical Engineering)(UTHM), B. Eng. (Hons)(Electrical Engineering.) (UTM), Diploma (Electrical Engineering)(UiTM)

Deputy Dean (Development , Research and Publication)
Ts. Dr. Hazlini binti Dzinun
PhD (Gas Engineering)(UTM), M. Eng. (Civil Engineering – Environment)(UTM), B. Eng. (Hons)(Chemical Engineering.) (UTM)

Office Secretary
Nor Suraya binti Abdul Samad
BSc. (Computer Mathematics) (UiTM), Dip. (Computer Science)(UiTM)

Administrative Assistant (Deputy Dean Secretary)
Siti Nurfaridah binti Fakri
Dip. (Hotel & Catering Management) (Politeknik Sultan Ibrahim)

Senior Assistant Registrar
Cik Norfaizah binti Sai
BSc. Human Resources (UPM)

Assistant Administrative Officer (Academic)
Latifah binti Mohd Nasir
Dip.(International Business) (Politeknik Shah Alam)

Assistant Administrative Officer (Administrative and Finance)
Zainizan bin Md Esa
Dip. (Islamic Management & Administration) (Kolej Tek. Islam Antarabangsa Melaka)

Administrative Assistant (Clerical & Operation) Student Affairs and Alumni
Razali bin Ahmad

Administrative Assistant (Clerical & Operation) Administrative and Finance
Dorazi bin Md Noh

Administrative Assistant (Clerical & Operation) Administrative
Siti Nur Hasanah binti Hasan

Administrative Assistant (Clerical & Operation) Academic
Nur Ainaa binti Ali

Administrative Assistant (Clerical & Operation) Academic
Muhammad Firdaus bin Yaacob

General Office Assistant
Azwan bin Roslee

Department of Information Technology

Academic Staff

Head of Department
Ts. Mohd Hatta bin Mohamed Ali @ Md Hani
P. Tech., MSc. Information Technology (UiTM), BSc. Software Engineering (UPM), Dip. Computer Science (UPM), Post Graduate Diploma in Higher Education (UTHM)

Assoc. Prof. Miswan bin Surip
MSc. Computer Science (Salford Manchester), BSc. Computer Science (UPM)

Ts. Dr. Noordiana binti Kasim @ Kassim
P. Tech., PhD. Mechanical Engineering (UTHM). MSc. Mechanical Engineering (UTHM), BSc. Information Studies (UiTM), Post Graduate Diploma in Higher Education (UTHM)

Ts. Rafizah binti Mohd Hanifa
P. Tech., MSc. Information Technology (UUM), BSc. Computer Science (USM), Post Graduate Diploma in Higher Education (UTHM)

Ts. Dr. Shelena a/p Soosay Nathan
P. Tech., PhD. Information Technology (UUM), MSc. Information Technology (UUM), BSc. (Information Technolgy) (UUM), Post Graduate Diploma in Higher Education (UTHM)

Dr. Hazwani binti Rahmat
PhD Software Engineering (UPM), MSc. Computer Science (UPM), BSc. Information Technology (UTHM), Dip. Information Technology (KUITTHO)

Dr. Muhamad Hanif bin Jofri
PhD Information Technology (UTHM), MSc. Information Technology (UTHM), BSc. Information Technology (UTHM)

Dr. Syarizul Amri bin Mohd Dzulkifli
PhD Information Technology (UTHM), MSc. Information Technology Management (UTM), BSc. Computer (UTM)

Dr. Zuraida binti Ibrahim
PhD. Educational Technology (UTHM), MA Visual Communication and New Media (UiTM), BSc. Information Technology (UKM)

Ts. Mazniha binti Berahim
P. Tech., MEd. Mathematic (UTM), BSc. Computer Science (UTM), Dip. Information Technology (UTM), Post Graduate Diploma in Higher Education (UTHM)

Ts. Rosni binti Ramle
P. Tech., MSc. InformationTechnology (UiTM), BSc. Business Computing (UiTM), Post Graduate Diploma in Higher Education (UTHM)

Hj. Hannes bin Masandig
MSc. Information Technology (UiTM), Adv. Dip. Mechanical Engineering (UiTM),
Dip. Mechanical Engineering (UTM)

Abdul Halim bin Omar
MSc. Information Technology (UTHM), BSc. Information Technology (UTHM)

Bakhreza binti A. Talip
MSc. Interaction Design (University of Queensland), BSc. Computer Science (UTM)

Fawwaz bin Mohd Nasir
MPhil. Computer Science (UTM), BSc. Computer Science (UTM)

Juliana binti Mohamed
MSc. Information Technology (UTHM), BSc. Multimedia (UUM)

Mariam binti Abdul Hamid
MSc. Management Information System (UiTM), BSc. Information Technolgy (UiTM), Post
Graduate Diploma in Higher Education (UTHM)

Mohd Firdaus bin Mohd Herrow
MA. Art and Design (Visual Communication & New Media) (UiTM), BA. Photography &
Creative Imaging (UiTM), Dip. Art and Design (Industrial Design) (UiTM)

Mohd Suhaimi bin Md. Yasin
MA.Phil (Seni Kreatif)(UMS), BA.Hons (Seni Kreatif) (UMS)

Mokhtar bin Yahya
MA. Art and Design (Design Technology) (UiTM), BA. Art and Design (Industrial Design)
(UiTM), Dip. Art and Design (Industrial Design) (UiTM)

Rosfuzah binti Roslan
MSc. Computer (UTM), BSc. (Computer) (UTM), Dip. (Computer Science) (UTM)

Technical Staff

Mohd Niza bin Shamsudin
Dip. Electronic Engineering (Politeknik Ibrahim Sultan), Cert. Electric and Electronic
Engineering (Politeknik Kota Melaka)

Muhd Amin bin Saad
Dip. Electronic Engineering (Komputer) (Politeknik Sultan Idris Shah Selangor)

Ammirul Daniel bin Azizan
Dip. Electronic Engineering (Komunikasi) (Politeknik Ibrahim Sultan)

Programme Name

Diploma in Information Technology (DAT)

Programme Aims

To produce a semi-professional workforce in solving ICT problems whether in the public, private or self-employed sectors. The program also prepares students to continue their studies to a bachelor's degree at a local or foreign university.

Programme Educational Objectives (PEO)

PEO 1   Demonstrate knowledge, understanding, and cognitive skills in the field of Information Technology.

PEO 2   Demonstrate functional work skills related to Information Technology.

PEO 3   Demonstrate personal and entrepreneurial skills in the field of Information Technology.

PEO 4   Demonstrate ethics and professionalism in Information Technology.

Programme Learning Outcomes (PLO)

PLO 1   Demonstrate systematic comprehension of a broad range of technical and theoretical knowledge and skills within Information Technology.

PLO 2   Identify, interpret, design, apply and evaluate general concepts, theory and/or operational principles within a well-defined context of Information Technology.

PLO 3   Apply a limited range of practical skills, essential tools, methods and procedures in Information Technology.

PLO 4   Collaborate effectively as member of a diverse Information Technology team.

PLO 5   Communicate effectively in both verbal and written among computing community and society.

PLO 6   Use a broad range of information, media and technology applications.

PLO 7   Demonstrate skills to use and interpret numerical and graphical data.

PLO 8   Demonstrate effective leadership, autonomy and responsibility as an individual and in diverse teams.

PLO 9   Recognize self-directed lifelong learning and professional pathways to enrich Information Technology knowledge and competencies.

PLO 10   Demonstrate an awareness of management and technopreneurship practices in Information Technology.

PLO 11   Demonstrate compliance with organizational and professional ethics and apply sustainable practices in the context of Information Technology work and social environment.

Curriculum Structure

Table 1: Summary of Curriculum for Diploma in Information Technology

Year	Semester	Course Code	Courses	Credit	Total
1	Special	UQU 10403	Introduction to Nationhood and Development of Malaysia	3	7
		UQI 10402 / UQI 11502	Introduction to Islamic Studies / Moral Studies	2	
		UWB 10*02	Foreign Language	2	
	I	UHB 10302	English for Academic Survival	2	18
		UQ* 1***1	Co-Curriculum 1	1	
		DAN 20103	Business and Entrepreneurship	3	
		DAT 13303	Computer Algorithm	3	
		DAT 10303	Fundamentals of Operating System	3	
		DAT 10503	Introduction to Information Technology	3	
		DAT 11403	Multimedia Concept	3	
	II	UHB 20302	Academic Communication	2	19
		UQ* 1***1	Co-Curriculum 2	1	
		UQI 11402	Philosophy and Current Issues	2	
		DAT 10603	Principles of Programming	3	
		DAT 10703	Computer Architecture	3	
		DAT 10803	System Analysis and Design	3	
		DAT 10203	Discrete Mathematics	3	
		DAT 10102	Human Computer Interaction	2	
2	I	UHB 30502	English for Workplace	2	17
		DAT 20103	Database	3	
		DAT 21303	Web Development	3	
		DAT 20303	Object-oriented Programming	3	
		DAT 20603	Management Information System	3	
		DAT 20503 / DAT21403	Mobile Computing / 3D Modelling and Animation	3	
	II	DAT 20102	Occupational Safety and Health	2	17
		DAT 20703	Data Communications and Networking	3	
		DAT 21104	Diploma Project	4	
		DAT 21502	Information Technology Professional Ethics	2	
		DAT 20803 / DAT 21003 / DAT 21103	Cyberpreneurship / Artificial Intelligence / Visual Programming	3	
		DAT 20803 / DAT 21003 / DAT 21103	Cyberpreneurship / Artificial Intelligence / Visual Programming	3	
3	I	DAT 30112	Industrial Training	12	12
			Overall Total Credit		**90**

University Courses

Table 2: Summary of University Courses

Year	Semester	Course Code	Courses	Credit	Total
	Special	UQU 10403	Introduction to Nationhood and Development of Malaysia	3	7
		UQI 10402 / UQI 11502	Introduction to Islamic Studies / Moral Studies	2	
		UWB 10*02	Foreign Language	2	
1	I	UHB 10302	English for Academic Survival	2	3
		UQ* 1***1	Co-Curriculum 1	1	
	II	UHB 20302	Academic Communication	2	5
		UQ* 1***1	Co-Curriculum 2	1	
		UQI 11402	Philosophy and Current Issues	2	
2	I	UHB 30502	English for Workplace	2	2
Overall Total Credit					**17**

Synopsis of University Courses

UQU 10403 Introduction to Nationhood and Development of Malaysia

Synopsis

This course discusses History and Politics, Malaysian Constitution, National Administrative System and Structure, Society and Unity, National Development as well as Religion and Beliefs. This course aims to produce graduates who have a national identity and a spirit of superior patriotism. Teaching and learning will be implemented in the form of lectures, assignments, examinations and learning experiences.

References

1. Modul Pengantar Kenegaraan dan Pembangunan Malaysia, (2018). Parit Raja: Penerbit UTHM
2. Mardiana Nordin dan Hasnah Hussin. (2014). Pengajian Malaysia. Shah Alam: Oxford Fajar
3. Mohamed Suffian Hashim. (1994). Mengenal Perlembagaan Malaysia. Edisi Kedua. Kuala Lumpur: Dewan Bahasa dan Pustaka.
4. Nazaruddin Haji Mohd Jail, Ma'rof Redzuan, Asnarulkhadi Abu Samah dan Ismail Hj Mohd Rashid. (2004). Pengajian Malaysia: Kenegaraan dan Kewarganegaraan.
5. Nazri Muslim. (2015). Islam dan Melayu: Tiang Seri Hubungan Etnik di Malaysia. Bangi: Penerbit UKM.

UQI 10402 Islamic Studies

Synopsis

This course explains about Islamic concept as ad-deen. It discusses the study of al-Quran and al-Hadith, Sunnism, schools of Islamic theology, development of schools of Fiqh, principles of muamalat, Islamic Criminal Law, Islamic work ethics, issues in Islamic family law and current issues.

References

1. Nik Kamal Wan Mohammed dan Lain-lain (2018), Modul Pembelajaran Pengantar Pengajian Islam (UQI10402), cetakan keempat 2018, Batu Pahat: Penerbit UTHM.
2. Roziah Sidik (2011), Pengajian Islam, Selangor: Oxford Fajar.   (BP42 .R69 2011)
3. Al-Anjari, Fouzi (2013), Al-Asya'irah: Akidah Sebenar Ahli Sunnah Wal Jamaah, Seremban: Creative Publika. (BP166.14 .A54 2013)
4. Mohd Fauzi Mohd Amin (2011), Pemerkasaan Fardhu Kifayah berteraskan al-Quran dan al-Sunnah, Negeri Sembilan: USIM. (BP130.8 .P45 2011)
5. Azzam, Abdul Aziz Muhammad (2010), Fiqh Muamalat: Sistem Transaksi dalam Fiqh Islam, Jakarta: Amzah. (BP158.C59 .A99 2010)

UQI 11502 Moral Studies

Synopsis

This course explains about the introduction to moral concepts, moral aspects and their importance in daily life. Western moral theory as well as the pure values of the great religions of the world. Morality in various fields of employment, ethics in science and technology and finally current moral issues.

References

1. Eow Boon Hin. 2008. Moral Education. Longman. (LC268.E48 2008)

2. Ahmad Khamis. 1999. Etika Untuk Institusi Pengajian Tinggi. Kuala Lumpur. Kumpulan Budiman. (LC315.M3.A35 1999)
3. Mohd Nasir Omar. 1986. Falsafah Etika; Perbandingan Islam dan. Kuala Lumpur. JPM.

UQI 11402 Philosophy and Current Issues

Synopsis

This course covers the relationship of philosophy with the Philosophy of National Education and Rukunegara. The use of philosophy as a tool to purify the culture of thought in life through art and thinking methods as well as human concepts. The main topics in philosophy namely epistemology, metaphysics and ethics are discussed in the context of current issues. Emphasis is given to philosophy as the basis for inter-cultural dialogue and fostering common values. At the end of this course, students will be able to see the disciplines of knowledge as a comprehensive body of knowledge and related to each other.

References

1. Al-Attas, S.M. Naquib. (1991). The Concept of Education in Islam. Kuala Lumpur: ISTAC.
2. Al-Farugi, I.R. (1994). Al-Tawhid: Its Implications for Thought and Life, (2nd Ed.). Herndon: IIIT.
3. Phillips, D.C. (Ed.) (2014). Encyclopaedia of Educational Theory and Philosophy, (1st Ed.). SAGE Publication.
4. Dzulkifli, A.R. & Rosnani, H. (2019) Pentafsiran Baharu Falsafah Pendidikan Kebangsaan dan Pelaksanaannya Pasca 2020. Kuala Lumpur: IIUM Press.
5. Hospers, J. (1997). An Introduction to Philosophical Analysis, (4th Ed.). London: Routledge.

UHB 10302 English for Academic Survival

Synopsis

This course focuses on developing students' acquisition of English language skills required for higher education. This course assists students to read, write, listen and speak effectively and to become informed, literate and lifelong learners. By the end of the course, students should be able to use English for a wide range of personal and academic activities in the context of tertiary education.

References

1. Clark, R. C. (2004). Graphics learning: Proven guidelines for planning and evaluating visuals in training materials. San Fransisco, CA: Pfeiffer. LB1043.5 .C52 2004
2. Dunne, E. (1994). Talking and learning in groups. London: Routledge. LC6519 .D86 1990 N1
3. Galanes, G. J. (2013). Effective group discussion: Theory and practice (14th Ed.). New York: McGraw-Hill. HM736 .G34 2013
4. Greasley, P. (2011). Doing essays and assignments: Essential tips for students. Thousand Oaks, CA: Sage Publication. LB1047.3 .G73 2011
5. Lim, P. L. (2014). Listening & notetaking skills 2 (4th Ed.). Boston: National Geographic Learning. PE1128 .L55 2014

UHB 20302 Academic Communication
Prerequisite Course: UHB 10302 English for Academic Survival

Synopsis

This course introduces students to critical reading and writing skills. Students are expected to read and respond critically to academic materials. This course will also provide opportunities for students to develop their academic writing skills in producing technical papers.

References

1. Anderson, P.V. (2014). Technical communication: a reader-centered approach. Boston: Cengage Learning.PE1475 .A52 2014
2. Fairbairn, Gavin J. (2011). Reading, Writing and Reasoning; A Guide for Students. Maidenhead: Open University Press, 2011. LB2395 .F34 2011
3. Jordan, R. R. (2003). Academic Writing Course; study skills in English (3rd Ed.). Essex: Longman. PE1408 .J67 2003.
4. Langan, John. (201I). College Writing Skilts (8th Ed.). New York: McGraw-Hill. PE1471 .L36 2011.
5. Lewis, Jill. (2002). Reading for Academic Success: Reading and Strategies. Boston: Houghton Mifflin. LB2395.3 .L48 2002.

UHB 30502 English for Workplace

Prerequisite: UHB 20302 Academic Communication

Synopsis

This course employs a task-based learning approach and focuses on developing students' delivery of speech in oral interactions and job interviews. Particular emphasis will be given to promote the mastery of self-directed learning, teamwork, research, reasoning and creativity. This course also enables students to acquire the knowledge skills necessary for conducting and participating in meetings, which include writing of meeting documents and event proposals based on specific themes. Students will also be exposed to interview techniques.

References

1. Allen, J. G. (2004). The complete Q and A job interview book (4th Ed.). Hoboken, NJ: John Wiley. HF5549.5.16. A44 2004.
2. Corfield, R. (2008). Preparing the perfect job application: Application forms and letters made easy. New Delhi: Kohan Page. HF5383 .C67 2008.
3. Haynes, M. E. (2009). Meeting skills for leaders: Make meetings more productive (4th Ed.). Rochester, NY: Axzo Press. HD30.3 .H39 2009.
4. Wendleton, K. (2014). Mastering the job interview and winning the game (5th Ed.). Boston: Cengage Learning. HF5549.5.I6 .W46 2014.
5. Wrathall, J. (2011). Event management: Theory and practice. North Ryde, N.S.W: McGraw-Hill. GT3405 .W72 201.

UWB 1**02 Foreign Language

Synopsis

This course is designed for students to learn the basic foreign language. Students are exposed to the skills of listening, reading, speaking, and writing with basic vocabulary, grammar, and structure. Students are also exposed to the real daily situations which will help them to communicate using foreign language.

References

1. Booth, Trudie Maria, 2008. French Verbs Tenses. Mc Graw-Hill. Call no.: P 2271, U66 2008.
2. Lim Hong Swan, Yeoh Li Cheng, 2010. Mandarin Made Easy Through English. Batu Pahat: Penerbit UTHM. PL1129.E5 .L554 2009
3. Mohd Hisyam Abdul Rahim; Ahmad Sharifuddin Mustapha; Mohd Zain Mubarak. 2008. Bahasa Arab UMR 1312. Batu Pahat: Penerbit UTHM. PJ6115 .M445 2008
4. Surie Network, (2000): Minna no Nihongo: Kaite Oboeru, Tokyo: 3A Corporation. PL539.3 M56 2000
5. Gabriele Kopp, Siegfried Büttner, 2004. Planet 1: Deutsch für Jugendliche: Kursbuch. Ismaning: Germany: Hueber Verlag. PF3129. K664 2004

UQ* 101 Co-Curriculum I**

Synopsis

The course offers various form of activities for student of Bachelor's Degree and Diploma. Eight fields of activities offer are Public Speaking, Entrepreneurship, Sports, Community Services, Volunteership, Leadership, Culture and Innovation

UQ* 101 Co-Curriculum II**

Synopsis

The course offers various form of activities for student of Bachelor's Degree and Diploma. Eight fields of activities offer are Public Speaking, Entrepreneurship, Sports, Community Services, Volunteership, Leadership, Culture and Innovation.

Synopsis of Centre Courses

DAN 20103 Business and Entrepreneurship

Synopsis

This course aims nurturing an entrepreneurial culture among students and exposed them to the basics of entrepreneurial concept, entrepreneurial attributes as well as the development of creative and innovative skills that allow them to identify business opportunities and non-business. This course is designed to ensure students gain knowledge and skill related to fundamental of business and entrepreneurship such as introduction to entrepreneurship, business ownership, regulations and support services, business environment asessment, marketing plans, operational plans, financial planning and business management plans.

References

1. Norliza Ghazali & Raudah Mohd Adnan: *Perniagaan dan Keusahawanan,* Penerbit UTHM, 2016
2. UiTM Entrepreneurship Study Group (2011). Engineering Entrepreneurship. Prentice Hall. (HB615.F86 2004)
3. Ariffin, S, Hamidon, S (2017). Introduction to Entrepreneurship. Oxford Fajar, Kuala Lumpur
4. Bessant J. Tidd, Joseph. (2011). Innovation and Entrepreneurship. 2nd ed. West Sussex: Wiley. (HD53.B48 2011)
5. Oxford Fajar (2013). Third Edition. Entrepreneurship. Sarimah Hanim Aman Shah & Cecilia Soon Teik Lan.

DAT 20102 Occupational Safety and Health

Synopsis

This course introduces students to knowledge and skills in occupational safety and health in workplace. The scope of study includes Health, Safety and Environment Managements: introduction to OSH, OSHA 1994 (Act 514), FMA 1967, EQA 1974, occupational safety and health management system, safety, health and environment culture; Risk Management and Assessment: introduction to risk management, risk assessment techniques, HIRARC; Physical Injury & Controls: introduction to physical injury, construction work, electrical work, mechanical work, chemical work; Health Hazards: introduction to health hazards & hygiene, chemical hazards, physical hazards, biological hazards, hygiene; Accident Investigation & Reporting: introduction, accident investigation, investigations and causes of incident, incident analysis and data collection method.

References

1. Burke, R. J., Clarke, S., & Cooper, C. L. (2011). Occupational Health and Safety. Gower. ISBN: 978-0-566-08983-1. Call number: RC967 .O32 2011.
2. Saad, A. (2011). Occupational Safety and Health Management. Penerbit Universiti Sains Malaysia. ISBN: 978-9-8386-1441-2. Call number: T55 .A48 2011.
3. Kelloway, E. K., Francis, L., & Gatien, B. (2020). Management of Occupational Health and Safety (8th ed.). Nelson. ISBN: 978-0-17-689301-9.
4. Leeth, J. D. (2012). OSHA's Role in Promoting Occupational Safety and Health. Now. ISBN: 978-1-60198-630-6. Call number: T55 .L43 2012.
5. Goetsch, D. L. (2019). Occupational Safety and Health for Technologists, Engineers, and Managers (9th ed.). Pearson. ISBN: 978-0-13-469581-5.
6. Bahari, I. (2006). Pengurusan Keselamatan dan Kesihatan Pekerjaan (2nd ed.). McGraw-Hill. ISBN: 978-9-8332-1935-3. Call number: T55 .I85 2006.

Synopsis of Programme Courses

DAT 10102 Human Computer Interaction

Synopsis

This course introduces students to the basic concepts of human-computer interaction. In addition, it will cover the basic theory and methods that exist in the field. The course will unfold by examining design and evaluation. Case studies are used throughout the course to exemplify the methods presented and to lend a context to the issues discussed.

References

1. Sharp, H., Preece, J., & Rogers, Y. (2019). Interaction Design: Beyond Human-Computer Interaction (5th ed.). Wiley. ISBN: 978-1-119-54725-9.
2. Smith-Atakan, S. (2006). Human-Computer Interaction. Thomson. ISBN: 978-1-84480-454-2. Call number: QA76.9.H85 .S64 2006.
3. Dix, A. (2011). Human-Computer Interaction (3rd ed.). Pearson Prentice-Hall. ISBN: 978-0-13-046109-4.

DAT 10203 Discrete Mathematics

Synopsis

This course introduces students to the rich mathematical structures that naturally describe much of the content of the computing area, many structure logical and mathematical thThis course introduces students to the rich mathematical structures that naturally describe much of the content of the computing area, many logical structures and mathematical thinking. It focuses on basic logic, sets, relations and functions, as well as graphs theory which integrates symbolic tools, graphical concepts, principles, proof techniques and numerical calculations to the Information Technology.

References

1. Rosen, K. H. (2019). Discrete Mathematics and its Applications (8th ed.). McGraw-Hill. ISBN: 978-1-259-67651-2.
2. Kwong, H. (2015). A Spiral Workbook for Discrete Mathematics. Open SUNY Textbooks. ISBN: 978-1-942341-16-1.
3. Levin, O. (2019). Discrete Mathematics: An Open Introduction (3rd ed.). Open Textbook Library. ISBN: 978-1-79290-169-0.
4. Gallier, J. (2011). Discrete Mathematics. Springer. ISBN: 978-1-4419-8047-2.

DAT10303 Fundamentals of Operating System

Synopsis

The goal of this course is to introduce the key components of a typical operating system and its services. In addition, it also discusses the function of each manager and its role in coordinating system operational tasks.

References

1. Silberschatz, A., Gagne, G., & Galvin, P. B. (2021). Operating System Concepts (10th ed.). Wiley. ISBN: 978-1-119-80036-1.
2. Stallings, W. (2018). Operating Systems: Internals and Design Principles (9th ed.). Pearson. ISBN: 978-1-292-21429-0.
3. Davis, W. S., Rajkumar, T. M., & Madabhusi, S. (2012). Operating Systems: A Systematic View (7th ed.). Pearson. ISBN: 978-0-273-76399-4.

4. Deitel, H. M., Deitel, P. J., & Choffnes, D. R. (2004). Operating Systems (3rd ed.). Pearson. ISBN: 978-0-13-124696-6. Call number: QA76.76.O63 .D44 2004.
5. Nutt, G. J. (2004). Operating Systems: A Modern Perspective (3rd ed.). Pearson. ISBN: 978-0-201-77344-6. Call number: QA76.76.O63 .N884 2004.

DAT 10503 Introduction to Information Technology

Synopsis

This course introduces students to information technology, computer hardware, computer software, file and data management, information systems, telecommunications, telecommunications technology, the internet and current issues involving information technology.

References

1. Williams, B. K., & Sawyer, S. C. (2014). Using Information Technology (11th ed.). McGraw Hill Education. ISBN: 978-1-259-25566-3.
2. Brown, C. V., DeHayes, D. W., Hoffer, J. A., Martin, E. W., & Perkins, W. C. (2014). Managing Information Technology (7th ed.). Pearson. ISBN: 978-1-292-02346-5.
3. Snyder, L., & Henry, R. L. (2018). Fluency with Information Technology: Skills, Concepts, & Capabilities (7th ed.). Pearson. ISBN: 978-0-13-444939-5.
4. Information Technology for Business (2nd ed.). (2011). Cengage Learning. ISBN: 978-9-81-435239-0. Call number: HD30.2 .I55 2011.
5. Gibbs, W. J., & Fewell, P. J. (2009). Microsoft Office for Teachers (3rd ed.). Pearson. ISBN: 978-0-13-158970-4.

DAT 10603 Principles of Programming

Synopsis

This course introduces students to the basic concepts of Computer Science and Programming. At the end of the term, students are expected to be fairly good at basic concepts in Computer Science and proficient in computer programming using the imperative paradigm. The focus of the course will be on general programming principles/techniques, whereas C will be the language to implement these concepts. Key procedural programming topics like variables, arrays, strings, functions, and pointers/references will be covered in detail.

References

1. Mohd Hanifa, R., Mohamad, S., & Ramle, R. (2018). Learning Module: DAT10603 Principles of Programming. Penerbit UTHM.
2. Yadav, S. P. (2020). Programming in C (2nd ed.). I.K. International. ISBN: 978-9-38-676886-5.
3. Pal, M. (2013). C Programming: Including Numerical and Statistical Methods. Alpha Science. ISBN: 978-1-84265-758-4. Call number: QA76.7 .P34 2013.
4. McGrath, M. (2018). C Programming in Easy Steps (5th ed.). In Easy Steps. ISBN: 978-1-84078-840-2.
5. Tan, H. H. (2012). C Programming: A Q&A Approach. McGraw-Hill Education (Asia). ISBN: 978-0-07-131116-8.

DAT10703 Computer Architecture

Synopsis

This course introduces students to the fundamental of computer architecture, computer components and functions, data representation in computer systems, arithmetic logic operation, digital logic, input and output, memory organization and set instruction.

References

1. Clements, A. (2014). Computer Organization and Architecture: Themes and Variations. Cengage Learning. ISBN: 978-1-111-98704-6. Call number: QA76.9.C643 .C63 2014.
2. Hennessy, J. L., & Patterson, D. A. (2019). Computer Architecture: A Quantitative Approach (6th ed.). Morgan Kaufmann Publishers. ISBN: 978-0-12-811905-1.
3. Null, L., & Lobur, J. (2019). The Essentials of Computer Organization and Architecture (5th ed.). Jones & Bartlett Learning. ISBN: 978-1-284-12304-3.
4. Shiva, S. G. (2014). Computer Organization, Design, and Architecture (5th ed.). CRC Press. ISBN: 978-1-4665-8554-6. Call number: TK7885 .S59 2014.
5. Stallings, W. (2022). Computer Organization and Architecture: Designing for Performance (11th ed.). Pearson Education Limited. ISBN: 978-1-292-42010-3.

DAT 10803 System Analysis and Design

Synopsis

This course introduces students to the concepts, skills, methodologies, techniques, tools, and perspectives essential to systems analysts. The practical component is object oriented and use-case driven, requiring students to go through the steps of system analysis and design to solve a real-life business problem.

References

1. Roslan, R., & Bahruddin, I. A. (2013). Learning Module: System Analysis and Design. Penerbit UTHM.
2. Dennis, A., Wixom, B. H., & Roth, R. M. (2022). Systems Analysis and Design (8th ed.). Wiley. ISBN: 978-1-119-80378-2.
3. Tilley, S. (2020). Systems Analysis and Design (Shelly Cashman Series) (12th ed.). Cengage. ISBN: 978-0-357-11781-1.
4. Wasson, C. S. (2016). System Analysis, Design, and Development: Concepts, Principles, and Practices (2nd ed.). John Wiley & Sons. ISBN: 978-1-118-96715-7. Call number: QA76.9.S88. W37 2016.
5. Kendall, K. E., & Kendall, J. E. (2020). System Analysis and Design (10th ed.). Pearson. ISBN: 978-1-292-28145-2.

DAT 11403 Multimedia Concept

Synopsis

This course introduces students to the multimedia concept, applications and techniques. Topics covered include an introduction to multimedia, multimedia project development, and multimedia component: text, audio, graphic, animation and video. Multimedia documentation and hypermedia, and application will also be discussed.

References

1. Guzdial, M., & Ericson, B. (2010). Introduction to Computing and Programming in Python: Multimedia Approach (2nd ed.). Prentice Hall. ISBN: 978-0-13-606023-9.
2. Campbell, J. T. (2018). Web Design: Introductory (6th ed.). Cengage. ISBN: 978-1-337-27793-8.
3. Vaughan, T. (2014). Multimedia: Making It Work (9th ed.). McGraw-Hill. ISBN: 978-0-07-183288-5.
4. Guan, L., He, Y., & Kung, S. Y. (2012). Multimedia Image and Video Processing (2nd ed.). CRC Press. ISBN: 978-1-4398-3086-4. Call number: QA76.575 .M853 2012.
5. Savage, T. M., & Vogel, K. E. (2014). An Introduction to Digital Multimedia (2nd ed.). Jones & Bartlett Learning. ISBN: 978-1-4496-8839-4. Call number: QA76.575 .S28 2014.

DAT 13303 Computer Algorithm

Synopsis

This course will focus on algorithm design in problem solving using textual and graphical representations. It will also introduce students to the techniques for problem solving using the modular approach. Students are expected to develop the ability to define and analyse problems and design efficient algorithmic solutions.

References

1. Panneerselvam, R. (2016). Design and Analysis of Algorithms (2nd ed.). PHI Learning. ISBN: 978-8-1203-5164-6. Call number: QA9.58.P36 2016.
2. Backhouse, R. (2011). Algorithmic Problem Solving. Wiley. ISBN: 978-0-470-68453-5. Call number: QA76.9.A43 .B32 2011.

DAT 20103 Database

Synopsis

This course introduces students to the fundamental of data management concepts and database systems. It includes representing information with the relational database model, and manipulating data with the interactive structured query language (SQL). Students will also develop, and manage the database's security, integrity and privacy issues.

References

1. Mohamed Dahlan, H., Che Hussin, A. R., Selamat, M. H., Othman, M. S., Zakaria, N. H., Ibrahim, R., & Bahari, M. (2011). Sistem Pangkalan Data (2nd ed.). Penerbit UTM. ISBN: 978-9-8352-0778-5. Call number: QA76.9 .S57 2011.
2. Coronel, C., & Morris, S. (2019). Database Systems: Design, Implementation, and Management (13th ed.). Cengage. ISBN: 978-1-337-62790-0.
3. Connolly, T. M., & Begg, C. E. (2015). Database Systems: A Practical Approach to Design, Implementation and Management (6th ed.). Pearson Education Limited. ISBN: 978-1-292-06184-9. Call number: QA76.9.D26 .C66 2015.
4. Powell, G. (2020). Database Modeling Step-by-Step. Auerbach. ISBN: 978-0-367-42217-2.

DAT 20303 Object Oriented Programming

Synopsis

This course exposes students to object and object-oriented programming (OOP) concepts. Topics that will be covered include the introduction to OOP, primitive and operator data type, basic to OOP, objects and classes as well as inheritance and polymorphism, overloading, templates and exception.

References

1. Farrell, J. (2022). Java Programming (10th ed.). Course Technology. ISBN: 978-0-357-67342-3.
2. Carrano, F. M. (2011). Imagine! Java: Programming Concepts in Context. Prentice Hall. ISBN: 978-0-13-147106-1. Call number: QA76.73.J38 .C37 2011.
3. Dean, J., & Dean, R. (2021). Introduction to Programming with Java: A Problem Solving Approach. McGraw Hill. ISBN: 978-1-260-59059-3.
4. Bravaco, R., & Simonson, S. (2010). Java Programming: From the Ground Up. McGraw Hill. ISBN: 978-0-07-352335-4. Call number: QA76.73.J38 .B73 2010.
5. Liang, Y. D. (2021). Introduction to Java Programming and Data Structures: Comprehensive Version (12th ed.). Pearson. ISBN: 978-1-292-40207-9.

6. Liang, Y. D. (2019). Introduction to Java Programming: Brief Version (11th ed.). Pearson Education Limited. ISBN: 978-1-292-22205-9.

DAT 20503 Mobile Computing

Synopsis

This course is intended to introduce students to the basics of mobile technology principles, and the theory involved in the development of mobile applications. Students will also be taught an introductory level of mobile application development using an open-source operating system.

References

1. Pattnaik, P., & Mall, R. (2016). Fundamentals of Mobile Computing (2nd ed.). PHI Learning Private Limited. ISBN: 978-8-1203-5181-3.
2. Marsicano, K., Gardner, B., Phillips, B., & Stewart, C. (2017). Android Programming: The Big Nerd Ranch Guide (4th ed.). Big Nerd Ranch. ISBN: 978-0-13-524512-5.
3. Smyth, N. (2017). Android Studio 3.0 Development Essentials: Android 8 Edition (Kindle). Payload Media. ISBN: 1-977540-09-0.
4. Boyer, R., & Mew, K. (2016). Android Application Development Cookbook (2nd ed.). Packt Publishing Limited. ISBN: 978-1-78588-619-5.
5. Key, S. (2015). Android Programming In a Day!: The Power Guide for Beginners in Android App Programming (2nd ed.). CreateSpace Independent Publishing Platform. ISBN: 978-1-5078-9374-6.
6. Griffiths, D., & Griffiths, D. (2021). Head First Android Development (2nd ed.). O'Reilly Media. ISBN: 978-1-4919-7405-6.

DAT 20603 Management Information System

Synopsis

This course introduces students to different types of management information systems in an organization. Students will be exposed to the information system used in assisting an organization, to address information management issues and make a decision.

References

1. Laudon, K. C., & Laudon, J. P. (2022). Management Information Systems: Managing the Digital Firm (17th ed.). Pearson. ISBN: 978-1-292-40328-1.
2. Sousa, K. J., & Oz, E. (2015). Management Information Systems (7th ed.). Cengage Learning. ISBN: 978-1-285-18613-9. Call number: HD30.213 .S69 2015.

DAT 20703 Data Communications and Networking

Synopsis

Students will learn the fundamentals of computer data communication and network technology based on reference model representation. This course provides the foundational understanding of network layers 1-3 that are applicable to routing and switching, plus other advanced technologies. This course also covers topics that ensure students can further understand the interactions and network functions, and their application in the real world.

References

1. Forouzan, B. A. (2021). Data Communications and Networking with TCP/IP Protocol Suite (6th ed.). McGraw-Hill. ISBN: 978-0-07-802209-8.
2. Stallings, W., & Case, T. (2013). Business Data Communications: Infrastructure, Networking and Security (7th ed.). Pearson. ISBN: 978-0-13-302389-3.

3. Stallings, W. (2014). Data and Computer Communications (10th ed.). Pearson. ISBN: 978-0-13-350648-8. Call number: TK5105 .S73 2014.
4. Comer, D. E. (2014). Computer Networks and Internets (6th ed.). Pearson. ISBN: 978-0-13-358793-7.
5. Tanenbaum, A. S., Feamster, N., & Wetherall, D. (2021). Computer Networks (6th ed.). Pearson. ISBN: 978-1-292-37406-2.
6. Odom, W. (2008). CCENT/CCNA ICND1 Official Exam Certification Guide (2nd ed.). Cisco Press. ISBN: 978-1-58720-182-0. Call number: QA76.3 .O368 2008.

DAT20803 Cyberpreneurship

Synopsis

This course is designed to provide students with the basic knowledge of entrepreneurship and cyberpreneurship as well as to increase students' interest to involve in cyber entrepreneurship. Besides that, it will increase the understanding and knowledge about cyber entrepreneurship encompassing commercialization, business idea creation, business proposal preparation, and financial and marketing strategies.

References

1. Kariv, D. (2011). Entrepreneurship: An International Introduction. Routledge. ISBN: 978-0-415-56120-4. Call number: HB615 .K37 2011.
2. Hisrich, R. D. (2014). Advanced Introduction to Entrepreneurship. Edward Elgar. ISBN: 978-1-78254-615-3. Call number: HB615 .H576 2014.
3. Kuratko, D. F. (2020). Entrepreneurship: Theory, Process, Practice (11th ed.). Cengage. ISBN: 978-0-357-03318-0.
4. Devinney, T. M., Markman, G. D., Pedersen, T., & Tihanyi, L. (2016). Global Entrepreneurship: Past, Present & Future. Emerald Group Publishing. ISBN: 978-1-78635-483-9.
5. Adam Khan, M. N. K. (2006). Cyberpreneurship. Pearson. ISBN: 978-9-8336-5583-0. Call number: HB615 .M52 2006.

DAT 21003 Artificial Intelligence

Synopsis

This course provides students with an introduction to artificial intelligence, emphasising the design of agents that act intelligently. The lesson focuses on agents that can reason from their stored knowledge, using logic-based and/or probability-based techniques as appropriate.

References

1. Russell, S. J., & Norvig, P. (2022). Artificial intelligence: A Modern Approach (4th ed.). Pearson Education Limited. ISBN: 978-1-292-40113-3.
2. Luger, G. F. (2009). Artificial Intelligence: Structures and Strategies for Complex Problem Solving (6th ed.). Pearson. ISBN: 978-0-321-54589-3. Call number: Q335 .L84 2009.
3. Bratko, I. (2012). Prolog Programming for Artificial Intelligence (4th ed.). Addison-Wesley. ISBN: 978-0-321-41746-6.
4. Turban, E., Sharda, R., & Delen, D. (2011). Decision Support and Business Intelligence Systems (9th ed.). Prentice Hall. ISBN: 978-0-13-610729-3. Call number: HD30.2 .D42 2007.
5. Moss, C. (1994). PROLOG++: The Power of Object-Oriented and Logic Programming. Addison-Wesley. ISBN: 978-0-201-56507-2.
6. Rich, E., Knight, K., & Nair, S. B. (2008). Artificial Intelligence (3rd ed.). McGraw Hill. ISBN: 978-0-07-008770-5. Call number: HD30.2 .R52 2008.

DAT 21103 Visual Programming

Synopsis

This course is intended to provide an introduction to Visual Studio.NET programming concepts through the use of high-level languages such as C#, VB.NET or ASP.NET. The students will learn how to define and solve problems before coding the program. The development of interfaces for portable devices is also covered.

References

1. Penberthy, W. (2015). Beginning ASP.NET for Visual Studio 2015. Wrox. ISBN: 978-1-119-07742-8. Call number: TK5105.8885.A26 .P46 2016.
2. Roslan, R., & Mohd Zain, N. A. (2016). DOT NET (.NET) Windows Form Application with Visual Studio. Universiti Tun Hussein Onn Malaysia. ISBN: 978-9-6707-6469-6. Call number: TK5105.8885.M57.R67 2016.
3. Conrod, P., & Tylee, L. (2019). Learn Visual Basic: 2019 Edition (16th ed.). Kidware Software. ISBN: 978-1-951077-10-5.

DAT 21104 Diploma Project

Synopsis

This course is designed to apply theoretical knowledge and improve student skills in the process of mastering problem solving and practise professionalism in managing a project.

References

1. Soosay Nathan, S., Berahim, M., & Mohd Hanifa, R. (2022). Learning Module: DAT 21104 Diploma Project. Penerbit UTHM.
2. Reynolds, G. W., & Stair, R. M. (2021). Principles of Information Systems (14th ed.). Cengage Learning. ISBN: 978-0-357-11241-0.
3. Tilley, S. (2020). Systems Analysis and Design (Shelly Cashman Series) (12th ed.). Cengage. ISBN: 978-0-357-11781-1.
4. Schwalbe, K. (2019). Information Technology Project Management (9th ed.). Cengage. ISBN: 978-1-337-10135-6.
5. Satzinger, J. W., Jackson, R. B., & Burd, S. D. (2015). Systems Analysis and Design in a Changing World (7th ed.). Cengage Learning. ISBN: 978-1-305-11720-4.
6. Kendall, K. E., & Kendall, J. E. (2020). System Analysis and Design (10th ed.). Pearson. ISBN: 978-1-292-28145-2.

DAT 21303 Web Development

Synopsis

This course introduces students to web programming. It covers, among others, mark-up language, client-side scripting and server-side scripting. Students will learn to create dynamic web pages using a combination of HTML, CSS and JavaScript, and apply essential programming language concepts when creating HTML forms.

References

1. Welling, L., & Thomson, L. (2017). PHP and MySQL Web Development (5th ed.). Addison-Wesley. ISBN: 978-0-321-83389-1.
2. Ahmed, R. (2021). Full Stack Web Development for Beginners. ISBN: 979-8-7389-5126-8.
3. Pressman, R. S., & Lowe, D. (2009). Web Engineering: A Practitioner's Approach. McGraw Hill. ISBN: 978-0-07-352329-3. Call number: TK5105.88813 .P73 2009.
4. Vaswani, V. (2005). How to do everything with PHP and MySQL. McGraw Hill. ISBN: 0072257954. Call number: QA76.73.P224 .V37 2005.

DAT 21403 3D Modelling and Animation

Synopsis

This course introduces students to 3D animation fundamental concepts of modelling, lighting, texturing, layout, timing and movement. Students will also develop the practical skills to generate design concepts and computer-based imagery, and produce a simple 3D animation sequence. By exploring the unique properties of 3D animation and the relationships that arise with other creative mediums, students will develop their knowledge and skills in making the best use of a range of models, platforms and techniques within a conceptual framework.

References

1. Boardman, T. (2013). Getting Started in 3D with 3ds Max: Model, Texture, Rig, Animate and Render in 3ds Max. Focal Press. ISBN: 978-0-240-82395-9. Call number: TR897.7 .B62 2013.
2. Murdock, K. L. (2020). Kelly L. Murdock's Autodesk 3ds Max 2021 Complete Reference Guide. SDC Publications. ISBN: 978-1-63057-334-8.
3. Georgenes, C., & Putney, J. (2011). Animation with Scripting for Adobe Flash Professional CS5 Studio Techniques. AdobePress. ISBN: 978-0-321-68369-4. Call number: TR897.7 .G46 2011.
4. Fullmer, D. L. (2013). 3D Design Basics. Fairchild Books. ISBN: 978-1-60901-098-0. Call number: NA2750 .F84 2013.
5. Cai, Y. (2013). 3D Immersive and Interactive Learning. Springer. ISBN: 978-981-4021-89-0. Call number: LB1028.3 .D55 2013.
6. Murdock, K. L. (2011). 3ds Max 2012 Bible. Wiley Publishing. ISBN: 978-1-118-02220-7. Call number: TR897.7 .M878 2011.

DAT 21502 Information Technology Professional Ethics

Synopsis

This course introduces students to information technology computer ethics, intellectual copyright, censorship issue, cyber safety, and cyber law in Malaysia for safe computing.

References

1. Kauffman, K. D., & Rybicki, E. (2022). Legal Ethics (4th ed.). Delmar. ISBN: 978-0-357-62054-0.
2. MacKinnon, B., & Fiala, A. (2018). Ethics: Theory and Contemporary Issues (9th ed.). Cenegage. ISBN: 978-1-305-95867-8.
3. Miller, K. W., & Taddeo, M. (Eds.). (2017). The Ethics of Information Technologies. Routledge. ISBN: 978-1-4724-3174-5. Call number: QA76.9.M65 .E83 2017.
4. Reynolds, G. W. (2019). Ethics in Information Technology (6th ed.). Cengage. ISBN: 978-1-337-40587-4.
5. Spinello, R. A. (2021). Cyberethics: Morality and Law in Cyberspace (7th ed.). Jones & Bartlett Learning. ISBN: 978-1-284-18406-8.

DAT 30112 Industrial Training

Prerequisite: Students must have completed at least 60% of total graduating credit.

Synopsis

Students are required to attend the practical training for 24 weeks, either in the government or private sector. During this period, they will be given assignments or projects, that are approved by the faculty and organisation in advance. The approved assignments or projects are related to their respective areas of specialisation.

References

1. Universiti Tun Hussein Onn Malaysia. (2020). Garis Panduan Latihan Industri Pelajar (Program Sarjana Muda dan Diploma) (5th ed.). UTHM.

Career and Further Education Prospect

Graduates of the program have a wide range of career opportunities. A conducive learning environment with an emphasis on practical skills allow graduates to have careers related to information technology as follows:

- application and web development
- database
- cyber security
- computer network
- cloud computing
- technical support
- analyst
- multimedia
- technical sales representative
- project manager
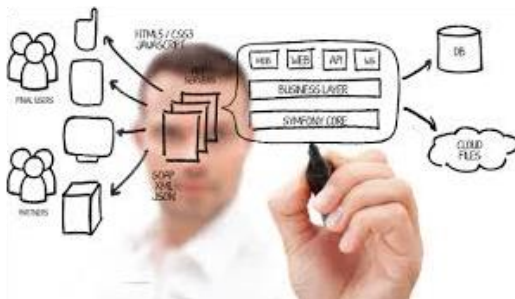
In addition, with the recognition that has been given by the Public Service Department and the Malaysian Qualifications Agency (MQA), graduates of this program are eligible to continue their studies to degree level, whether in or outside the State subject to the conditions set by the university admission applicable.

Education pathway in UTHM according to Malaysian Qualifications Framework as shown in the diagrams on the next page.

Further Education Pathway


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                        │     SPM     │
                        └─────────────┘
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│ Matriculation│ │IPTA/Polytechnic│ │  STPM  │      │  CeDS UTHM  │
│             │ │   Diploma   │ │         │      │             │
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│  Officer)   │       │  Educator)  │           │ Technology  │
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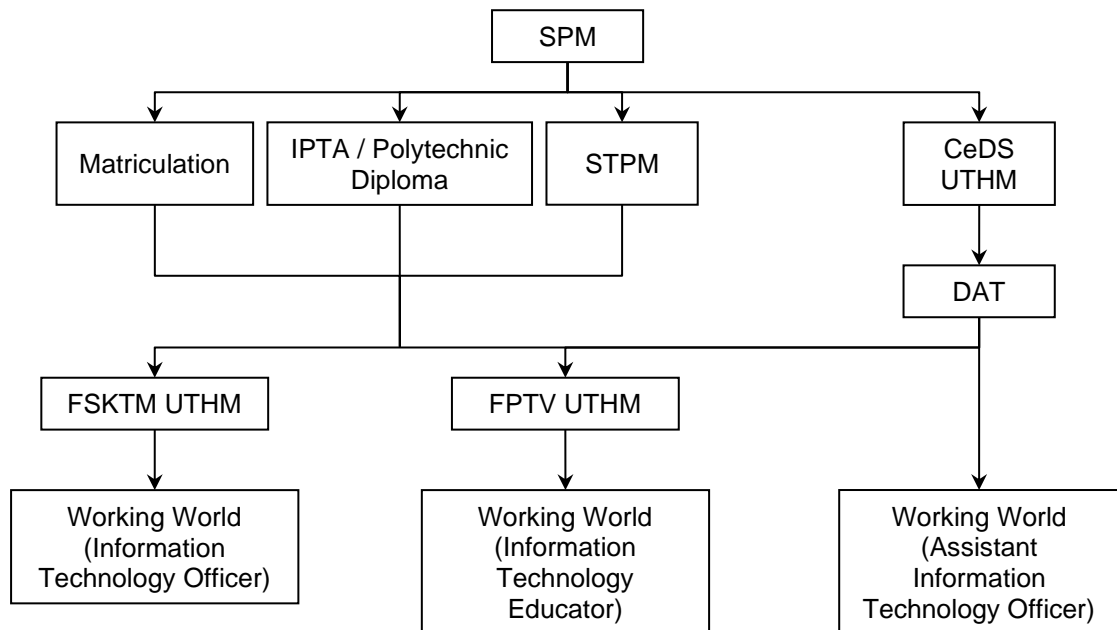
Abbreviations:
- CeDS – Centre for Diploma Studies
- DAT – Diploma in Information Technology
- FPTV – Faculty of Technical and Vocational Education
- FSKTM – Faculty of Computer Science and Information Technology
- SPM – Sijil Pelajaran Malaysia
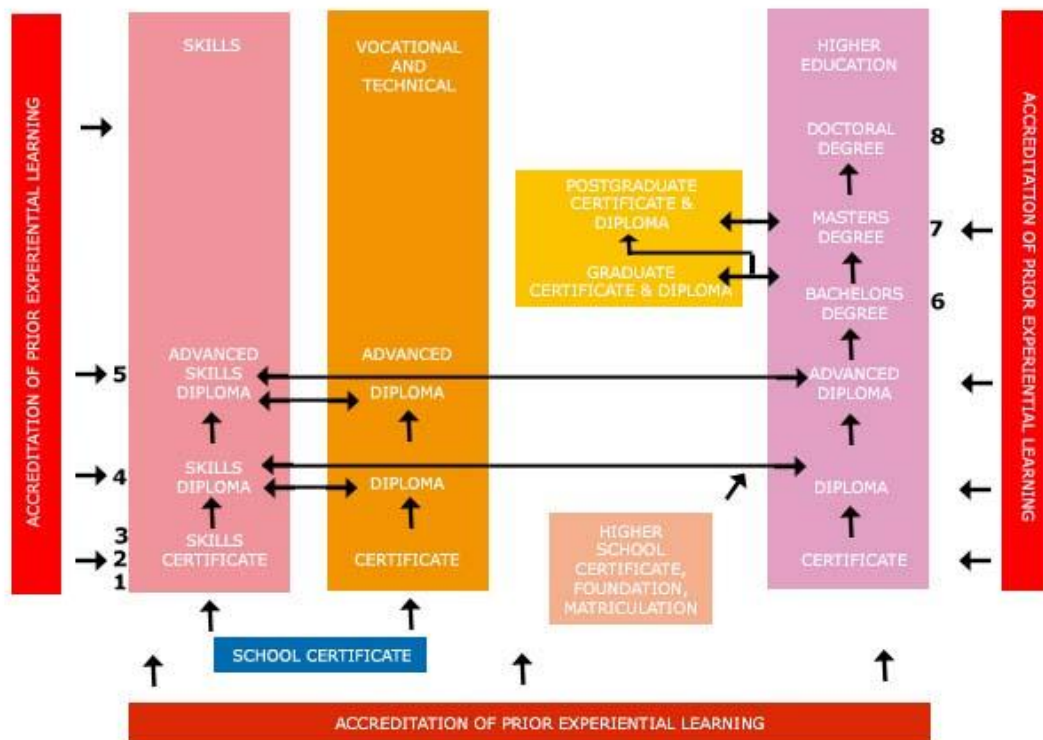- STPM – Sijil Tinggi Persekolahan Malaysia

Figure 1: Educational Pathway According to the Malaysian Qualification Framework

MALAYSIAN QUALIFICATIONS FRAMEWORK: QUALIFICATIONS AND LEVELS

MQF Levels	Sectors			Lifelong Learning
	Skills	Vocational and Technical	Higher Education	
8			Doctoral Degree	Accreditation of Prior Experiential Learning (APEL)
7			Masters Degree	
			Postgraduate Certificate & Diploma	
6			Bachelors Degree	
			Graduate Certificate & Diploma	
5	Advanced Diploma	Advanced Diploma	Advanced Diploma	
4	Diploma	Diploma	Diploma	
3	Skills Certificate 3	Vocational and Technical Certificate	Certificate	
2	Skills Certificate 2			
1	Skills Certificate 1			

Figure 2: Qualifications and Levels of Education According to the
Malaysian Qualification Framework

Centre for Academic Development and Training
Universiti Tun Hussein Onn Malaysia
86400 Batu Pahat, Johor Darul Ta'zim
www.uthm.edu.my