UNIVERSITI TENAGA NASIONAL

The Energy University

POSTGRADUATE STUDENT HANDBOOK
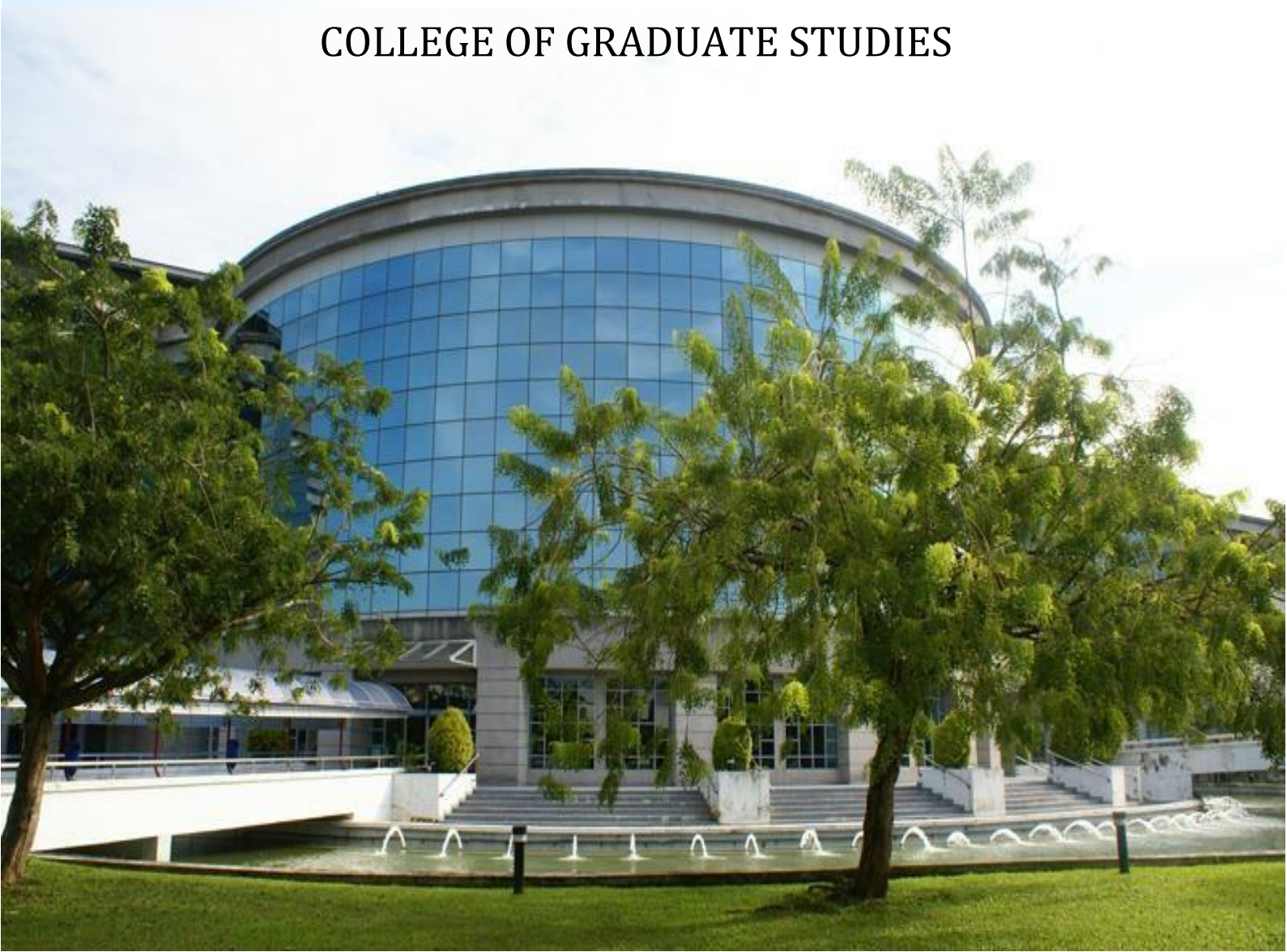
COLLEGE OF GRADUATE STUDIES

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MESSAGE FROM THE DEAN

Let me extend my warm welcome to College of Graduate Studies (COGS) UNITEN.

This college offers postgraduate studies in Engineering, Computer Science, Information Technology, Accounting, Finance and Business Management. All our sixteen programmes, which include mixed-mode, full-research, and coursework programmes are accredited by Malaysia Qualifications Agency and are approved programmes under the Ministry of Higher Education Malaysia.

We provide quality education through teaching and research excellence piloted by our high calibre and experienced academic staff from our three main colleges, i.e. College of Engineering, College of Computing and Informatics and College of Business Management and Accounting. Our lecturers perform research and consultancy that are in keeping with the current needs of business and are in line with the vision and objectives of UNITEN. They are closely connected to both local and international industries as well as academic institutions.
You have a wide range of opportunities to select research projects provided by our well-established and recognized five research institutes: -
•   Institute of Power Engineering (IPE)
•   Institute of Sustainable Energy (ISE)
•   Institute of Energy Infrastructure (IEI)
•   Institute of Energy Policy and Research (IEPRe)
•   Institute of Informatics and Computing in Energy (IICE)

You can also propose your own individual research projects in consultation with the relevant college lecturers.
This handbook is produced to assist you in planning your studies at UNITEN. The handbook lists down the synopses of each programme and its structure. The assessment methods and the graduation requirements are also included in the handbook. It is good for you to familiarize yourself with the requirements in order for you to complete your studies successfully.

Each program has its own programme coordinator who will assist you throughout your journey at UNITEN. The college support staff info is also listed in the handbook and they will assist you in regards to administration of the programme.

We strongly encourage you to get involved with Graduate Activity Club. The club conducts presentations and industrial visits, promotes the 3 Minute Thesis competition, hosts Coffee Hour Sessions, and serves as the conference's secretariat for our iGRAD conference.

Through the UNITEN mobility programme, you can have the opportunity to learn about the research techniques (best practices) in other nations to widen your research horizons and strengthen your linkages.
Our goal is to produce graduates who will not only be knowledgeable but also skilful, autonomous, highly driven, and professional, making them valuable assets to any organisation. COGS will provide you with the tools you need to soar higher in your life. On behalf of COGS, I wish you all the very best.

Your Dean,

Agi

UNIVERSITI TENAGA NASIONAL – THE BACKGROUND

Universiti Tenaga Nasional is a unique institution providing academic programmes and consultancy services on campus. Its programmes are focused on engineering, information technology, business management and other related areas. In addition, Universiti Tenaga Nasional prepares its graduates not just to become professionals but also hone them to become well-rounded individuals with a broad intellectual outlook. Universiti Tenaga Nasional is one of the first private universities to be set up in Malaysia and is wholly owned by Tenaga Nasional Berhad (TNB), one of the leading electric utility companies in South-East Asia.

Universiti Tenaga Nasional commenced operation in 1976 as Institute Latihan Sultan Ahmad Shah (ILSAS), which served for many years as the corporate training institute for Tenaga Nasional Berhad (TNB) and its predecessor, Lembaga Letrik Negara. In 1994, ILSAS was transformed into an institute of higher learning and renamed Institut Kejuruteraan Teknologi Tenaga Nasional (IKATAN). The institute offered academic programmes at undergraduate and graduate levels through twinning arrangements with universities – both local and overseas. In 1997, IKATAN became Universiti Tenaga Nasional to meet the national aspiration towards making Malaysia a centre for educational excellence.

Though relatively new as a university, Universiti Tenaga Nasional has been able to accelerate its infrastructure development to international standards as a result of firm support and commitment from TNB, its holding company. The number of academic programmes is being increased in line with its commitment to serve the needs of Malaysia and other countries that look to Malaysia to meet their requirements for tertiary education.

The Universiti Tenaga Nasional main campus is about 25 kilometres south of Kuala Lumpur and is easily accessible via a number of highways. Nestled on a 214 hectare site of gently sloping land amid lush greenery and yet not too far from the commercial and cultural activities of Kuala Lumpur, the modern campus provides an ideal setting for academic fulfilments and intellectual growth.

The campus is strategically located within the Multimedia Super Corridor (MSC). It is close to Cyberjaya, the hub of major MSC activities and is next to Putrajaya, the Malaysian Government's new administrative centre.

Vision
"A leading global energy university that shapes a sustainable future"

Mission
"We strive to advance knowledge and learning experience through research and innovation that will best serve human society"

Aspiration
"To become a globally competitive, energy-focused university"

Tagline
"Creative, Innovative & Energetic"

PUTRAJAYA CAMPUS

The UNITEN Putrajaya campus, in effect, began to take shape in 1995 involving three stages of development and construction covering an area of 483 acres. Its close proximity to the Multimedia Super Corridor (MSC) and the federal administrative centre Putrajaya simply added to UNITEN's air of auspiciousness.

According to Dr. Tajul Arus bin Noh, the first Rector of UNITEN, "The university's primary mission is to provide quality education and training in engineering, information technology, business and related fields for Malaysians and other nationals." By 1999, student enrolment in this state-of-the-art teaching and learning environment had reached an impressive 5,000.

About a year later, on 29 June 2000, the Malaysia Prime Minister, Tun Dr. Mahathir Mohamad officially opened the UNITEN Putrajaya campus. This further spurred the university to reach greater heights which saw it move from strength to strength consolidating its stature as a university of choice. That same year also saw the first intake of students in UNITEN's very own bachelor's degree programme.

College Of Graduate Studies

At COGS, we manage Postgraduate Programmes for our students in collaboration with our partner colleges including College of Engineering (COE), College of Computing & Informatics (CCI), College of Business Management & Accounting (COBA) and College of Energy Economics & Social Sciences (CES).

Why Postgraduate at UNITEN?

- Top class lecturers with international recognition
- Students exposed to corporate and industrial specialist
- Strong research collaborations with other higher learning institutions and industries.

Vision
To be the leading graduate college that offers energy & sustainability related programmes in the fields of engineering, IT and business

Mission
We strive to provide the highest standards of academic excellence in graduate studies through research innovation and industrial collaboration

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Our People

NO.	DESIGNATION	NAME
1.	Dean	**Prof. Ir. Dr. Agileswari A/P Ramasamy**
2.	Deputy Dean (Academic, Quality & Student Affairs)	**Assoc. Prof. Dr. Jawaid I. Inayat-Hussain**
3.	Deputy Dean (External Relations & Business Development)	**Dr. Nasrudin Bin Baidi**
4.	Head of Department (Engineering & Interdisciplinary Programs) Program Coordinator - PhD Engineering	**Ir. Dr. Noor Shamsiah Othman**
5.	Head of Department (Information Technology) Program Coordinator - PhD ICT - Master of Science in Information Technology - Master in Information Technology	**Ts. Dr. Hairoladenan Kasim**
6.	Head of Department (Business & Management)	**Dr. Mohd Rizuan Abdul Kadir**
7.	Program Coordinator - Master of Science in Mechanical Engineering	**Ir. Dr. Mohd Rashdan Bin Isa**
8.	Programme Coordinator - PhD Industrial Science - Master Industrial Science - Master of Science in Civil Engineering - Master in Structural Engineering	**Dr. Wong Leong Sing**
9.	Programme Coordinator - Master of Science in Electrical Engineering - Master in Electrical Engineering - Master of Communications System Engineering (C)	**Dr. Renuga Verayiah**
10.	Programme Coordinator - PhD Business Management	**Dr. Mohammad Khudari**
11.	Programme Coordinator - Master in Energy Management	**Dr. Zeittey Karmilla Kaman**
12.	Programme Coordinator - Master of Business Administration (I) - Master of Business Administration (II)	**Dr. Vathana Bathmanathan** **Dr. Noraini Bt Ismail**
13.	Programme Coordinator - Master in Engineering Management	**Puan Azura Onn**

14. Programme Coordinator

    -    Master of Science in Accounting   **Dr. Azleen Binti Ilias**

    -    Master of Science in Finance   **Mdm. Siti Fara Fadila Binti Abd. Razak**

    -    Master of Science in Management   **Dr. Mafuzah Binti Mohammad**

15. Quality Manager   **Dr. Shaharina Mokhtar**

16. Senior Lecturer   **Dr. Juraifa Jais**

17. Senior Lecturer   **Ts. MahlMahlindayu Binti Tarmidi @ Tokhid,**

18. Deputy Registrar   **Puan Mazita Mohd Noor**

19. Executive (Viva voce)   **Puan Noraida Mohammad Anuar**

20. Executive (Student Affairs and liaison)   **Pn. Nurul Fatihah Mohd Nadzri**

21. Admin Executive   **Puan Nadiah Mohd Halim**

22. Admin Assistant   **Pn. Nurhanif Najwa Firdaus**

23. Admin Assistant   **Pn. Intan Suria Abdul Rahman**

ORGANISATIONAL STRUCTURE COLLEGE OF GRADUATE STUDIES
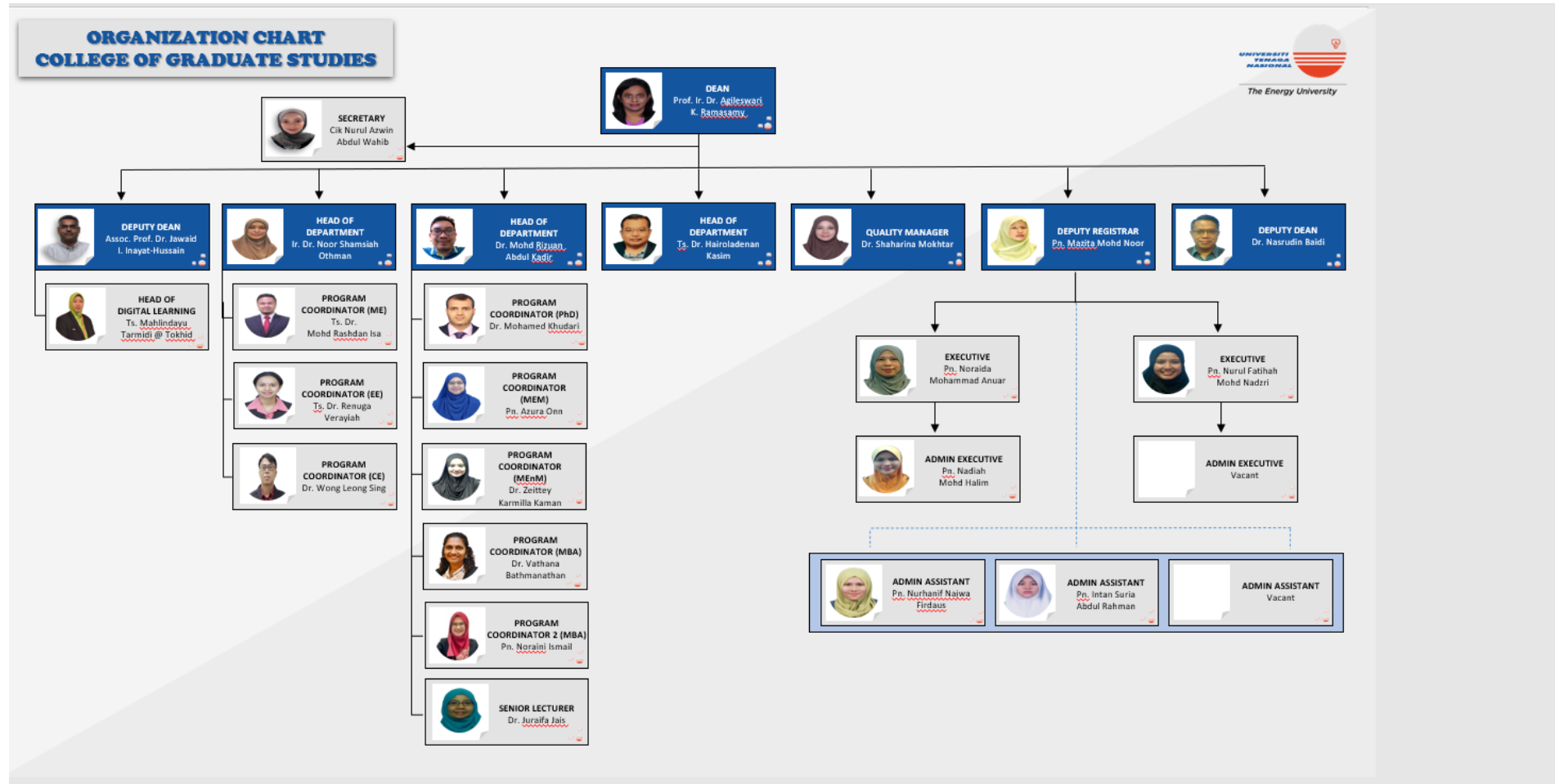
DEPARTMENT OF ENGINEERING & INTERDISCIPLINARY PROGRAMS

The Department of Engineering & Interdisciplinary Programs at the College of Graduate Studies offers opportunities for postgraduate studies in Civil Engineering, Electrical, Electronics & Communications Engineering and Mechanical Engineering disciplines. The postgraduate programs available at this department are listed below, and these programs have been accredited by the Malaysian Qualifications Agency (MQA).

Doctor of Philosophy (Engineering) – Full Research (Structure A).
Master of Science in Civil Engineering – Full Research (Structure A).
Master of Science in Electrical Engineering – Full Research (Structure A).
Master of Science in Mechanical Engineering – Full Research (Structure A).
Master in Electrical Engineering – Mixed-Mode (Structure B).
Master in Structural Engineering – Coursework (Structure C).

These programs are supported by the faculty members of the College of Engineering, which also provide the required research and computational facilities. Drawing upon the diverse interest and experience of the faculty members, these programs are designed to enhance the knowledge and skills of engineers and scientists who will lead the way to technological improvements that will benefit the society at large. We hope you will find your postgraduate studies rewarding, and we wish you all the success in your professional and personal life.

Programme Synopses

Doctor of Philosophy (Engineering) *(Structure A)*
Doctor of Philosophy (Engineering) is a full research program where candidates are given unique opportunity to follow their interest in a specialized area of research (including major research areas of electrical, electronics, mechanical and civil engineering) for 3-7 years and make an important academic contribution to the knowledge of chosen research area. Prospective candidates are future researchers/ academicians in universities and/or research institutions, R&D Engineers, Engineering Specialists and Technopreneurs.

Duration
Duration for the Doctor of Philosophy (Engineering) programme is 3 years to 7 years for full-time and 4 years to 7 years for part-time.

Master of Science in Civil Engineering *(Structure A)*
Master of Civil Engineering (Structure A) is a full research program where candidates are given unique opportunity to follow their interest in a specialized area of research of Civil Engineering for 2-4 years and make an important academic contribution to the knowledge of chosen research area. Prospective candidates are future researchers/ academicians in universities and/or research institutions, R&D Engineers, Engineering Specialists and Technopreneurs.

Duration
Duration for the Master of Civil Engineering programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master of Science in Electrical Engineering *(Structure A)*
Master of Electrical Engineering (Structure A) is a full research program where candidates are given unique opportunity to follow their interest in a specialized area of research of Electrical/Electronic Engineering for 2-4 years (depending on the study mode either fulltime or part-time) and make an important academic contribution to the knowledge of chosen research area. Prospective candidates are future researchers/ academicians in universities and/or research institutions, R&D Engineers, Engineering Specialists and Technopreneurs.

Duration
Duration for the Master of Electrical Engineering programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master of Science in Mechanical Engineering *(Structure A)*

Master of Mechanical Engineering (Structure A) is a full research program where the candidates are given a unique opportunity to pursue their interest in a specialized area of research in the Mechanical Engineering discipline for 2-4 years, and where the candidates can make an important academic contribution to the knowledge of the chosen research area. Prospective candidates are future researchers/ academicians in universities and/ or research institutions, R&D Engineers, Engineering Specialists and Technopreneurs..

Duration

Duration for the Master of Mechanical Engineering programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master in Electrical Engineering *(Structure B)*

Master of Electrical Engineering (Structure B) is a half research program where candidates are given unique opportunity to follow their interest in a specialized area of research of Electrical Engineering for / Communication Systems 1 – 2 years and make an important academic contribution to the knowledge of chosen research area. This research will be accomplished in the form of Dissertation which contributes to 20 credit hours.

Apart from that the student will be attending 7 post graduate classes in which 3 courses are core courses and 4 are electives courses amounting to 21 credit hours where the students will be learning advanced technical courses in the field of electrical power and communications systems.

Duration

Duration for the Master of Electrical Engineering programme is 1 year to 3 years for full-time and 2 years to 4 years for part-time.

Master in Structural Engineering *(Structure C)*

Master of Structural Engineering (Structure C) is a quarter research program of which candidates are given unique opportunity to follow their interest in a specialized area of research in Structural Engineering for 2 semesters worth 10 credit hours. Apart from that, the students will be attending 10 post graduate classes which comprise of 7 core courses and 3 elective courses with a total 30 credit hours whereby the students will be learning advanced technical courses in the field of structural engineering.

Duration

Duration for the Master of Structural Engineering programme is 1 year to 3 years for full-time and 2 years to 4 years for part-time.

Programme Structures

Table 1: Master in Electrical Engineering

Year	Semester	Code	Courses	Credit Hours
1	**Semester I**	UNIM513	Core I: Research Methodology	3
		EECM623	Core II: Advanced Artificial Intelligence	3
		EEEM523	Core III: Project Management	3
		***	Elective I	3
			Total Credit Hours	**12**
	Semester II	***	Elective II	3
		***	Elective III	3
		***	Elective IV	3
			Total Credit Hours	**9**
2	**Semester III**	EPRM520	Core IV: Research Project- Dissertation	20
			Total Credit Hours	**20**
	Semester IV	EPRM520	Core IV: Research Project- Dissertation	
			Total Credit Hours	**0**
***	**Elective I, II, III and IV (Choose the Electives I, II, III and IV based on the listed subjects for Communication Systems Engineering or Electrical Power Engineering)**	CSEM513	Optical Fiber Communication	3
		EECM523	Adv. Applied Telecommunication Systems	3
		EECM633	Data Network Design and Analysis	3
		EECM553	Antennas Technology for Wireless Communications	3
		ESEM503	Advanced Digital Signal Processing	3
		EEEM513	Engineering Diagnostics Tools	3
		EEPM593	Power Conversion Systems	3
		EEPM513	Power Systems Steady State Analysis	3
		EEPM543	High Voltage Engineering	3
		EEPM553	Power Systems Operation & Planning	3
		EEPM563	Power Systems Protection	3
		EEPM583	Renewable Energy Sources	3
			Total	**41**

Table 2: Master in Structural Engineering (Structure C)

Year	Semester	Code	Courses	Credit Hours
1	**Semester I**	UNIM513	Research Methodology	3
		CESM543	Advanced Reinforced Concrete Design	3
		CESM623	Construction Materials, Assessment & Rehabilitation	3
		CESM613	Structural Dynamics & Stability	3
			Total Credit Hours	**12**
	Semester II	CESM523	Construction Management	3
		CESM513	Advanced Structural Analysis & Finite Element Method	3
		CESM563	Design of Tall Buildings	3
		***	Elective I	3
		CERP610	Project	10
			Total Credit Hours	**22**
2	**Semester III**	***	Elective II	3
		***	Elective III	3
		CERP610	Project	
			Total Credit Hours	**6**
***	**Elective I, II & III to be chosen from the list of the 5 subjects**	CEGM563	Hydraulic, Offshore & Energy Structures	3
		CESM593	Advanced Concreate Technology	3
		CEGM553	Advanced Foundation Engineering	3
		CESM573	Advanced Steel Design	3
		CESM583	Fire Safety Engineering Design of Structures	3
			Total	**40**

DEPARTMENT OF BUSINESS AND MANAGEMENT

At the Department of Business Management, our goal has always been to provide a high-quality education that enables students to reach their full potential in the workplace. The programme was designed to generate graduates who are skilled problem solvers in business and management, as well as professionals with strong ethical beliefs.

Our academics lead students in an active learning environment to boost their learning experience. They come from various backgrounds and are actively involved in research and consulting. The business courses place a strong focus on developing soft skills such as critical thinking, problem-solving, communication, and teamwork.

Programme Synopses

Doctor of Philosophy in Business Management *(Structure A)*
Doctor of Philosophy programme in Business Management gives the opportunities to the candidates to do scientific research and strengthen their academic portfolios and careers. Experts and high-rank academicians from various fields in Business, Finance, Economics and Accounting are available to guide the PhD candidates towards research excellence.

Duration
Duration for the Doctor of Philosophy in Business Management programme is 3 years to 7 years.

Master of Science in Management *(Structure A)*
MSc in Management programs provide training and experience in management research in order to familiarize the candidates with the methods, ideal and objectives of independent investigation. Candidates will be engaged in a significant research investigation of a specific inquiry resulting in the production of thesis.

Duration
Duration for the Master of Science in Management programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master of Science in Accounting *(Structure A)*
MSc in Accounting is a programme designed for professional and academics seeking career advancement in accounting, finance, and other business-related areas. The programme comprises taught courses and a thesis. Students are required to produce an accounting related thesis that demonstrates students understanding on the theoretical foundations, ethical judgments, and critical and strategic thinking ability of emerging accounting issues.

Duration
Duration for the Master of Science in Accounting programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master of Science in Finance *(Structure A)*
MSc in Finance programme is particularly relevant for those interested in pursuing a career in investment banking, financial research and financial trading. The programme is specifically designed for those who are interested to become researchers, academics and consultants in a variety of business and management disciplines. In exceptional circumstances graduates from other disciplines can be considered.

Duration
Duration for the Master of Science in Finance programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master of Business Administration (Structure C)

The Master of Business Administration (MBA) programme is poised to nurture students in the art and science of managing people and ideas while helping them build the confidence to strategically elevate their organizations. The curriculum is designed to meet the current and future needs of professionals aiming to achieve more in their business endeavors. Among the value-added features of this programme are **industrial speakers, a business simulation game, Harvard case studies, a project focused on leadership, blended learning, and industry collaborations**.

Duration

The MBA offers two study duration options. There is a 1-year programme structure and a 2-year programme structure for full-time students. The duration for part-time students ranges from 3 to 4 years.

Master in Engineering Management (Structure C)

A Master's in Engineering Management (MEM) is a specialized degree that blends the technical depth of engineering with the broad principles of business management. This program is specifically designed for engineers who aspire to hold leadership roles or start their own ventures in technology-related businesses. MEM programme includes a final project or thesis which allows students to apply their knowledge to real-world problems or conduct research on a relevant topic.

Duration

MEM offers two types of study durations. There are 1 year programme and 2 year programme for full-time students. The duration for part-time students will be 3 years to 4 years.

Master in Energy Management (Structure C)

Master of Energy Management is a program designed to nurture students to appreciate the energy business environment together with the fundamental economic and technological concept in energy industries, participants will gain the ability to develop and implement strategies to address major issues in energy industries including energy applications, regulations and policies, besides strengthening their ability to live and work in energy environment and immediate futures needs of professional who wish to achieve business and technological fundamentals and practical understanding of energy management.

Duration

Duration for the Master of Energy Management programme is 1 year to 3 years for full-time and 2 years to 4 years for part-time.

Programme Structures

Table 3: Master of Business Administration (**1 year programme structure)**

Semester	Code	Courses	Credit Hours
Semester I	MBAM613	Organizational Analysis and Behavior	3
	MBEM613	Contemporary Issues in Managerial Economics	3
	MFAM613	Accounting and Finance for Business Decision	3
	MBIM613	Managing Information Systems	3
	MBRM613	Business Research Method	3
		Total Credit Hours	**15**
Semester II	MBAM643	Strategic Management for Future Leaders	3
	MBAM623	Human Capital Management	3
	MBKM613	Marketing Management: The Digital Era	3
	MBAM633	Operations Management in Competitive Age	3
	MBRM623	Business Project 1	3
		Total Credit Hours	**15**
Semester III (Short)	MBIM623	Business Analytics	4
	MBRM624	Business Project 2	3
	***	Elective	3
		Total Credit Hours	**10**
		Total	**40**

Master of Business Administration **(2 years programme structure**)

Semester	Code	Courses	Credit Hours
Semester I	MBAM613	Organizational Analysis and Behavior	3
	MBIM613	Managing Information Systems	3
	MBRM613	Business Research Method	3
		Total Credit Hours	**9**
Semester II	MBAM643	Strategic Management for Future Leaders	3
	MBAM633	Operations Management in Competitive Age	3
	MBRM623	Business Project 1	3
		Total Credit Hours	**9**
Semester III	***	Elective	3
		Total Credit Hours	**3**
Semester IV	MBEM613	Contemporary Issues in Managerial Economics	3
	MFAM613	Accounting and Finance for Business Decision	3
		Total Credit Hours	**6**
Semester V	MBRM624	Business Project 2	**4**
	MBAM623	Human Capital Management	**3**
	MBKM613	Marketing Management: The Digital Era	**3**
		Total Credit Hours	**10**
Semester VI	MBIM623	Business Analytics	**3**
		Total Credit Hours	**3**
		Total	**40**

Master of Business Administration ODL (1 year programme structure)

Semester	Code	Courses	Credit Hours
Semester I	MIOM733	Business Analytics	3
	MBOM723	Human Capital Management	3
	MBOM733	Strategic Management for Future Leaders	3
	MROM723	Business Research Method	3
	****	Elective	3
		Total Credit Hours	**15**
Semester II	MBOM713	Organizational Analysis and Behavior	3
	MFOM713	Accounting and Finance for Business Decision	3
	MPOM723	Business Project 1	3
	MIOM713	Managing Information Systems	3
	MEOM713	Contemporary Issues in Managerial Economics	3
		Total Credit Hours	**15**
SSemester III	MPOM734	Business Project 2	4
	MMOM713	Marketing Management: The Digital Era	3
	MOOM723	Operations Management in Competitive Age	3
		Total Credit Hours	**10**
		Total	**40**

Master of Business Administration ODL (2 year programme structure)

Semester	Code	Courses	Credit Hours
Semester I	MBOM723	Human Capital Management	3
	MBOM733	Strategic Management for Future Leaders	3
	MROM723	Business Research Method	3
		Total Credit Hours	**9**
Semester II	MPOM723	Business Project 1	3
	MIOM713	Managing Information Systems	3
	MEOM713	Contemporary Issues in Managerial Economics	3
		Total Credit Hours	**9**
Semester III	MOOM723	Operations Management in Competitive Age	3
		Total Credit Hours	**3**
Semester IV	MIOM733	Business Analytics	3
	MPOM734	Business Project 2	4
	****	Elective	3
		Total Credit Hours	**10**
Semester V	MFOM713	Accounting and Finance for Business Decision	3
	MBOM713	Organizational Analysis and Behavior	3
		Total Credit Hours	**6**
Semester VI	MMOM713	Marketing Management: The Digital Era	3
		Total Credit Hours	**3**
		Total	**40**

Table 4: Master in Engineering Management **(1 year programme structure)**

Semester	Code	Courses	Credit Hours
Semester I	MBEM613	Contemporary Issues in Managerial Economics	3
	MFAM613	Accounting and Finance for Business Decision	3
	MBIM613	Managing Information Systems	3
	MERM613	Engineering Research Methods	3
	MEPM613	Project Management	3
		Total Credit Hours	**15**
Semester II	MBAM643	Strategic Management for Future Leaders	3
	MBAM623	Human Capital Management	3
	MBKM613	Marketing Management: The Digital Era	3
	MBAM633	Operations Management in Competitive Age	3
	MERM623	Engineering Project 1	3
		Total Credit Hours	**15**
Semester III (Short)	MERM624	Engineering Project 2	4
	MEPM633	Energy Project and Risk Assessment	3
	***	Elective	3
		Total Credit Hours	**10**
		Total	**40**

Master in Engineering Management **(2 years programme structure)**

Semester	Code	Courses	Credit Hours
Semester I	MBIM611	Managing Information Systems	3
	MFAM613	Accounting and Finance for Business Decision	3
	MERM613	Engineering Research Methods	3
		Total Credit Hours	**9**
Semester II	MBAM623	Human Capital Management	3
	MBAM633	Operations Management in Competitive Age	3
	MERM623	Engineering Project 1	3
		Total Credit Hours	**9**
Semester III	MBEM612	Contemporary Issues in Managerial Economics	3
	MEPM613	Project Management	3
	MERM624	Engineering Project 2	4
	MEPM633	Energy Project and Risk Assessment	3
		Total Credit Hours	**13**
Semester IV	MBAM643	Strategic Management for Future Leaders	3
	MBKM613	Marketing Management: The Digital Era	3
	***	Elective	3
		Total Credit Hours	**9**
		Total	**40**

Table 5: Master in Energy Management

Year	Semester	Code	Courses	Credit Hours
1	Semester I	EMCM 613	Energy Economics	3
		EMSM 613	Energy Management Application	3
	Semester II	EMCM 623	Energy Informatics	3
		EMCM 633	Energy Research Method	3
	Semester III (Short)	EMSM 623	Energy Sustainability	3
		EMSM 633	Energy Supply Chain Management	3
2	Semester IV	EMSM 641	Seminar on Current Issues in EnergyIndustries	1
		EMPM606	Energy Management Research Project	6
		EMSM 643	Energy Efficiency & Risk Management	3
	Semester V	EMCM 653	Energy Regulations and Corporate SocialResponsibility	3
		EMCM 643	Accounting and Valuation for Energy	3
	Semester IV (Short)	EMEM 653	Energy Project Management	3
		Elective (Choose 1 course only; 3 credit hours each)		3
		EMEM 623	Energy and Resources Management	
		EMEM 633	Environmental Impact Assessment	
		EMEM 643	Renewable Energy Technologies	
		EMEM 613	Energy Marketing & Sustainable Consumption	
			Total	**40**

DEPARTMENT OF INFORMATION TECHNOLOGY

Computing and IT is one of the fastest-growing industries in the world today, and it is also one among the most diverse fields, with the likelihood of finding work in a whole host of different industries, from game design and development to social media, government, and business. Software, technology, data, and computer networks are also present in most aspects of everyday life. A postgraduate degree in Computing and IT can offer you the chance to be creative, broaden your horizons, and create a skill set that is uniquely yours. The modern world is technology-based, and the demand for qualified professionals who know how to interpret, create, and manage these systems is constantly increasing.

This postgraduate program in Computing and IT will equip students with a broad range of skills that will enable them to flourish in a number of IT positions. The curriculum is developed to address current industry needs and is targeted at building academic knowledge and practical skills in IT fields, drawing on best practises from Malaysia and overseas. If you want to work in senior IT positions in Academia, Data and Cloud Computing, Cybersecurity, Data Communications and Networking, Knowledge Management, Human-Computer Interaction and Visualization, Software Engineering, Systems or in many other fields, you should absolutely consider our postgraduate program to vastly improve your opportunities within those fields.

The College of Graduate Studies has developed Computing and IT program to earn a Ph.D. in ICT, as well as a Master of Information Technology (By Research), Master of Information Technology (By Coursework & Research), and Master of Software Engineering program. Our Programmes are accredited by Malaysian Qualification Agency (MQA).

Program Offered:

Program name	Duration	Key Research Areas
Phd in ICT	3 to 7 years	• Information Systems
		• Artificial Intelligence
Master of Science in Information Technology (By Research)	2 years – 3 years (Full time) 3 years – 4 years (Part time)	• Machine Learning • Human-Computer Interaction and Visualization • Knowledge Management • Cybersecurity • Data Communications and Networking
Master in Information Technology (By Coursework & Research)	1 years – 3 years (Full time) 2 years – 4 years (Part time)	• IT Governance • Advanced Project Management • Interactive Systems Design • Data Modeling • Software models
Master of Software Engineering.	2 years – 3 years (Full time) 2 years – 4 years (Part time)	• Software Quality

Programme Synopses

Doctor of Philosophy in Information & Communication Technology *(Structure A)*
The Doctor of Philosophy (PhD) in Information & Communication Technology (ICT) program is aimed at providing PhD Degree holders with the ability to develop a new/novel knowledge, and expand existing knowledge and application of computing solutions in the organization, society, and worldwide. It exposes the practitioners/researchers to advanced study and training in research, culminating in the submission of a thesis. This program intends to develop research capability, creativity, and ability to collate the results of the research work and to present them in a clear manner, as well as demonstrating knowledge of the literature of the subject.

Duration
Duration for the Doctor of Philosophy in Information & Communication Technology programme is 3 years to 7 years.

Master of Science in Information Technology *(Structure A)*
The MIT (Master in Information Technology) program aims at providing Master's Degree holders with advanced knowledge and skills in dealing with an organization's computing requirements and needs. This program intends to cater for both Computer Science and Information Technology graduates.
Duration
Duration for the Master in Information Technology programme is 2 years to 3 years for full-time and 3 years to 4 years for part-time.

Master in Information Technology *(Structure B)*
The MIT (Master of Information Technology) program aims at providing Master's Degree holders with advanced knowledge and skills in dealing with an organization's computing requirements and needs. This program intends to cater for both Computer Science and Information Technology graduates.

Duration
Duration for the Master of Information Technology programme is 1.5 years to 3 years for full-time and 2.5 years to 4 years for part-time.

Programme Structures

Table 6: Master in Information Technology

Semester	Subject Code	Courses	Credit Hours
Semester I	MITM773	MIS & Competitive Intelligence	3
	MITM653	IT Governence	3
	UNIM 523	Research Methodology in IT	3
	MITM632	Interactive Systems Design	2
		Total Credit Hours	**11**
Semester II	MITM643	Strategic Information Systems Planning	3
	MITM723	Data Analytics	3
	MITM743	Advanced Project Management	3
		Total Credit Hours	**9**
Semester III (Special Semester)	MPRM520	Project Dissertation	20
		Total Credit Hours	**20**
		TOTAL	**40**

Table 7: Academic Calendar Year 2024/2025 for Undergraduate & Postgraduate (Structure B & C) *

The Energy University

ACADEMIC CALENDAR YEAR 2024/2025
FOR UNDERGRADUATE & POSTGRADUATE (STRUCTURE B & C) *

Semester	Dates			Duration
Semester 1				
Classes	30-Sep-24	-	15-Nov-24	7 weeks
Convocation	16-Nov-24	-	17-Nov-24	2 days
Break (no classes)	18-Nov-24	-	24-Nov-24	1 week
Classes	25-Nov-24	-	10-Jan-25	7 weeks
Final Examination	13-Jan-25	-	26-Jan-25	2 weeks
Break between semester	27-Jan-25	-	9-Feb-25	2 weeks
Semester 2				
Classes	10-Feb-25	-	28-Mar-25	7 weeks
Break (no classes)	29-Mar-25	-	6-Apr-25	1 week
Classes	7-Apr-25	-	23-May-25	7 weeks
Final Examination	26-May-25	-	12-Jun-25	2 weeks
Break between semester	13-Jun-25	-	29-Jun-25	2 weeks
Special Semester				
Classes	30-Jun-25	-	15-Aug-25	7 weeks
Final Examination	18-Aug-25	-	30-Aug-25	2 weeks
Break between semester	31-Aug-25	-	14-Sep-25	2 weeks

Notes: (*) All dates are subject to change

Table 8: Academic Calendar Year 2024/2025 for Postgraduate (Structure A) *

ACADEMIC CALENDAR YEAR 2024/2025
FOR POSTGRADUATE (STRUCTURE A) *

Semester	Dates	Duration
Semester 1		
Semester Registration	16 September 2024 – 27 September 2024	2 weeks
Semester Duration	30 September 2024 – 10 January 2025	14 weeks
Progress report submission	13 January 2025 – 24 January 2025	2 weeks
Semester 2		
Semester Registration	27 January 2025– 7 February 2025	2 weeks
Semester Duration	10 February 2025 – 15 August 2025	26 weeks
Progress report submission	18 August 2025 – 30 August 2025	2 weeks

Notes:
(*) All dates are subject to change

Assessment for Structure A Programme

- A candidate will be given one of the following two grades at all times:

  S – Satisfactory
  U – Unsatisfactory

- The following reasons will be given a grade U

  - A candidate fails the proposal defense
  - A candidate who fails to achieve a satisfactory evaluation for his/ her progress report due to the followings:
  - A candidate has not been in regular contact with supervisor
  - A candidate fails to meet the agreed targets set with the supervisory committee

- A candidate given a grade U for the proposal defense and failed to obtain a grade S after two additional attempts will be terminated from the programme.

- A candidate given a grade U for two consecutive semesters for the progress report will be terminated from the programme.

Assessment for Structures B & C Programmes

- All taught courses are evaluated via the following assessment components, with the percentage contribution being fixed based on each programme or course:

  i.   Coursework
  ii. Examination

- The Coursework component for courses is given continuously throughout the semester via:

  i.   Tests, assignments, mini projects, term papers, case studies, presentations, etc.
  ii. Usually not more than 70% is allocated for such continuous assessment.

- Dissertations and projects may be graded via the followingsub-components:

  i.   Proposals, interim reports, oral presentation etc; and/or
  ii. *Viva-voce.*

- UNITEN adopts the CGPA (Cumulative Grade Point Average) System for assessment. Assessment for all taught courses are graded according to the scheme presented in Table 9.

Table 9: Assessment based on CGPA

Grade	Grade Point	Marks Range	Description
A+	4.00	90 – 100	Distinction
A	4.00	80 – 89.99	Distinction
A-	3.67	75 – 79.99	Very Good
B+	3.33	70 – 74.99	Good
B	3.00	65 – 69.99	Pass
B-	2.67	60 – 64.99	Marginal Pass
C+	2.33	55 – 59.99	Marginal Pass
C	2.00	50 – 54.99	Marginal Pass
C-	1.67	45 – 49.99	Fail
D+	1.33	43 – 44.99	Fail
D	1.00	40 – 42.99	Fail
E	0.00	Below 40	Fail

- The CGPA for a student at any particular time is calculated as follows:

$$\frac{\sum_i [Grade\ Point_i \times Credit_i]}{\sum_i Credit_i}$$

where *Grade Point$_i$* refers to the grade point obtained for a registered and examined *course$_i$*, and *Credit$_i$* refers to the credit hours for *course$_i$*, with *i* ranging from 1 to N = total number of courses taken so far; and $\sum_i$ refers to the sum from 1 to N.

Academic Status

The academic status for Structure A programme candidate is presented in Table 10:

Table 10: Academic Status Structure A Programme

Grade	Academic Status
S (Satisfactory)	*Good Standing*
U (Unsatisfactory) for the first semester	*Probation*
U (Unsatisfactory) for 2 consecutive semesters	*Terminated*

The academic status for Structures B and C programme candidate is presented in Table 11:

Table 11: Academic Status Structure B and C Programme

CGPA	Academic Status
3.00 and Above	*Good Standing*
Below 3.00	*Probation*
Below 2.33 in any semester or Below 3.00 for 2 consecutive semesters	*Terminated*

Course Status

On the whole and at any given time, all courses registered (including for projects/ dissertations) are given a status according to the scheme presented in Table 12:

Table 12: Course Status

Course Status	Description
LU (Pass)	Fulfilled all the requirements for a registered course.
GA (Failed)	Have not fulfilled all the course requirements successfully.
BS (Incomplete)	Incomplete assessment and requires candidate to re-sit the examination or to complete the course. If no other grade is given until the end of the following semester the status automatically changes to GA (Failed).
PK (Credit transfer)	Credit transfer course.
TD (Withdrawn)	Withdrawn <u>within the stipulated period.</u> No grade point given nor included in the calculation for the CGPA. The course is recorded in the transcript.

Examination Results

- The final grade for a course is released to the student after Senate's endorsement.

- An appeal can be made by a student to review the grade obtained in an examination for taught courses and project. This can be done by filling up the remarking form.

- Candidates are required to fill up the remarking form with a remarking fee within two weeks of the release of the results.

GRADUATION

General Requirements for Conferment of Degree

- The Senate shall award the degree upon the recommendation of the Dean of COGS once all requirements for conferment of degree as stated below have been met:

    i. All the requirements under Post-Examination/ Pre-Graduation have been met.
    ii. Has completed the minimum period of study and not exceeded the maximum period allowed, as well as satisfied all academic residential requirements.

- Apart from the academic requirements, all the following administrative requirements also need to be fulfilled:

    i. Is currently registered (not withdrawn, defaulted, deferred or terminated).
    ii. Has made full settlement of fees and is free of any financial commitments and debts to the University.
    iii. Is free from any disciplinary action or any other pending disciplinary action.

Requirement for Structure A Programme

A candidate is deemed academically eligible to be conferred the degree if all the following are fulfilled:

    i.   Passed viva-voce
    ii.   Attended and passed Research Methodology course.
   iii. Passed proposal defense.
   iv. The candidate has completed the minimum period of study and not exceeded the maximum period allowed, as well as satisfied all academic residential requirements
    v.   Publication requirements are presented in Table 13.

Table 13: Requirement for Structure A Programme

Program	* Requirements
PhD (Registered before 10 October 2015)	Published two (2) journal papers **OR** one (1) journal paper plus one (1) SCOPUS-indexed conference paper.
PhD (Registered between 10 October 2015 till 21 August 2022)	Published two (2) SCOPUS / ISI-indexed journal papers.
PhD (Registered on or after 22 August 2022)	• Published one (1) Web of Science-indexed journal paper **AND** one (1) SCOPUS-indexed journal paper for the following programmes: – Doctor of Philosophy (Engineering), – Doctor of Philosophy in Information and Communication Technology. • Published two (2) Web of Science-indexed journal papers **OR** two (2) SCOPUS-indexed journal papers for the following programme: – Doctor of Philosophy (Business Management).
Master (Registered before 22 August 2022)	Published one (1) journal paper **OR** one (1) SCOPUS-indexed conference paper.
Master (Registered on or after 22 August 2022)	Published one (1) Web of Science-indexed journal paper **OR** one (1) SCOPUS-indexed journal paper.

* Candidates should provide proof that publications have been uploaded to UNITEN Publication System

• The content of papers must be related to the research topic of the candidate.
• The candidate must be the 1st or 2nd author of the papers. In the case the candidate is the 2nd author, the 1st author must be one of the supervisors. Name of the main supervisor must be included in the list of authors.

Requirement for Structure B Programme

A candidate is deemed academically eligible to be conferred the degree if all the following are fulfilled:

i. Achieved a CGPA of not less than 3.00 calculated based on all courses taken throughout the duration of study.
ii. Passed the necessary number of elective courses.
iii. Passed *viva-voce*.
iv. An academic paper is ready (in any format) during submission of thesis for examination. It can be submitted to conference/journal for review and possible publication before or after graduation.
v. Has completed the minimum period of study and not exceeded the maximum period allowed, as well as satisfied all academic residential requirements.

Requirement for Structure C Programme

A candidate is deemed academically eligible to be conferred the degree if all the following are fulfilled:

i. Achieved a CGPA of not less than 3.00 calculated based on all courses taken throughout the duration of study.
ii. Passed the necessary number of elective courses.
iii. Passed the project paper.
iv. Has completed the minimum period of study and not exceeded the maximum period allowed, as well as satisfied all academic residential requirements.

Deferment

- A candidate who has been certified unfit by a medical officer to proceed with his studies can apply for a deferment of candidature up to a maximum of two (2) semesters only. This deferment period will not be counted as part of the total period of study.

- A candidate may also apply for deferment of candidature based on reasons other than medical, for up to a maximum of two (2) semesters only. This application must be submitted and approved by COGS, and the deferment period will not be counted as part of the total period of study.

- Deferment of candidature may be granted at most twice only within a period of study. The two deferments must not be applied in consecutive semesters. All other situations will have to be taken on a case-by-case basis and subject to Senate approval.

- A deferred candidate covering a full semester will be exempted from fees for that semester if the deferment is approved within the add and drop period for the semester. No refund will be made for approved deferment after the add and drop period.

Examination Results

- The final grade for a course is released to the student after Senate's endorsement.

- An appeal can be made by a student to review the grade obtained in an examination for taught courses and project. This can be done by filling up the remarking form.

- Candidates are required to fill up the remarking form with a remarking fee within two weeks of the release of the results.

GRADUATE ACTIVITY CLUB UNITEN

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