

## Postgraduate Handbook



**Engineering the Nation with Precision  
for Sustainable Development**  
[www.mjiit.utm.my](http://www.mjiit.utm.my)

**2014/2015**

*(Updated on 5 August 2014)*



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

Malaysia-Japan  
International  
Institute of Technology

## MESSAGE FROM THE DEAN



Welcome to the Malaysia-Japan International Institute of Technology (MJIT), a new and vibrant entity at Universiti Teknologi Malaysia (UTM) Branch Campus, situated in Kuala Lumpur and about 1.5 km from the iconic Petronas Twin Towers. Established on August 1, 2010, MJIT draws its strength from the long established research university UTM, and a consortium of 25 well-established Japanese universities and is supported by various Japanese agencies.

MJIT combines the advantage of the Malaysian systematic outcome-based education with the research-intensive approach of Japanese education. The relatively autonomous nature of MJIT allows for greater innovation and creativity among its academic staff and students.

The dictum '*Engineering the Nation with Precision for Sustainable Development*' sums up our desire to produce knowledgeable human capital towards the advancement and development of state-of-the-art technology and processes while safeguarding the environment that sustains us. The global village that we live in knows no boundary and we welcome students from any nation that aspire to be educated within this unique and exclusive environment.

The blend of Malaysian, Japanese as well as international professors engaged in research and supervision at MJIT as well as the diversity of foreign students would surely bring about a global experience within the campus environment. I am confident that through the Master and Ph.D programmes at MJIT, our graduates will become valuable assets, leading cutting-edge technological and sustainable development in organisations and industries worldwide.

**Rubiyah binti Yusof**  
Dean and Professor

## ABOUT THIS HANDBOOK

This handbook provides information to postgraduate students undertaking programmes at MJIT. MJIT is committed to ensuring the quality of your research and study experience and, as such, this handbook will help you to understand the minimum requirements to safeguard high standards of postgraduate degree activity as well as informing you about all the support available to you as you progress through your degree. You should read this handbook in conjunction with the relevant information in the websites in Table 1.

*Table 1: LIST OF USEFUL WEBSITES*

INSTITUTION	WEBSITE / URL
<b>MJIT</b>	<a href="http://mjiit.utm.my">http://mjiit.utm.my</a>
<b>UTM Kuala Lumpur Campus</b>	<a href="http://www.ic.utm.my">www.ic.utm.my</a>
<b>School of Postgraduate Studies (SPS)</b>	<a href="http://www.sps.utm.my">www.sps.utm.my</a>
<b>Student Recruitment and Admission Division (SRAD)</b>	<a href="http://www.utm.my/admission/">http://www.utm.my/admission/</a>
<b>Academic Management Division (AMD)</b>	<a href="http://registrar.utm.my/bpa/">http://registrar.utm.my/bpa/</a>
<b>Universiti Teknologi Malaysia</b>	<a href="http://www.utm.my">www.utm.my</a>
<b>Library (PSZ)</b>	<a href="http://ent.library.utm.my">http://ent.library.utm.my</a>
<b>IT Service Centre (CICT)</b>	<a href="http://cict.utm.my">http://cict.utm.my</a>
<b>Academic Computing (ACID)</b>	<a href="http://acid.utm.my">http://acid.utm.my</a>
<b>Office of International Affairs</b>	<a href="http://www.utm.my/internationalaffairs/">http://www.utm.my/internationalaffairs/</a>
<b>UTM Kuala Lumpur Campus news</b>	<a href="http://news.kl.utm.my/">http://news.kl.utm.my/</a>
<b>Student Affairs and Alumni</b>	<a href="http://web.utm.my/hep/">http://web.utm.my/hep/</a>

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## 1.0 Introduction

### 1.1 Universiti Teknologi Malaysia

UTM is a leading innovation-led research intensive university in engineering, science and technology located both in Johor Bahru (where the main campus is located) and Kuala Lumpur, Malaysia. It was established on 1<sup>st</sup> April 1975 and the two campuses cover 1,177 and 18 hectares respectively. UTM is committed to the highest quality of teaching, learning and research and strives to adapt to the challenges of higher education.

The University has a wide range of more than 150 programmes in engineering, science & technology served by more than 2,000 faculty members with broad international exposure. UTM also has more than 30 years of experience in engineering education and has produced more than 140,000 graduates, including 13,000 postgraduates. A stimulating research culture exists in UTM through 11 Research Alliances (RA) and 28 Centres of Excellence (CoE) in addition to academic faculties to service technological education and research needs of the university.

UTM's branch campus, known as the Kuala Lumpur Campus is located in the capital city of Kuala Lumpur (KL). The Kuala Lumpur Campus houses five entities: Malaysia-Japan International Institute of Technology (MJIIT), UTM Razak school of Engineering and Advanced Technology (Razak School), UTM Perdana School of Science, Technology and Innovation Policy (UTM Perdana School), UTM Advanced Informatics School (AIS) and the International Business School (IBS). It also houses UTMSPACE and several centres of excellence such as CAIRO, COEI and IKG. Other available support systems include student accommodation, transportation system, university health centre, library, ATM services, canteen and some recreational facilities. For more details on the history of UTM, please refer to <http://www.utm.my/aboututm>.

#### **Philosophy of UTM**

The divine law of Allah is the foundation for science and technology. Universiti Teknologi Malaysia strives with total and unified effort to develop excellence in science and technology for universal peace and prosperity, in accordance with His will.

#### **Vision of UTM**

To be recognised as a world-class centre of academic and technological excellence

#### **Mission of UTM**

To be a leader in the development of human capital and innovative technologies that will contribute to the nation's wealth creation

#### **Motto of UTM**

In the Name of God for Mankind

## 1.2 Malaysia-Japan International Institute of Technology

The idea to initiate the Japanese-type education in Malaysia was borne in 2001 and agreed by both Malaysia and Japan during the course of ASEAN + 3 Summit at Bandar Seri Begawan, Brunei Darussalam by the then Prime Ministers Tun Dr. Mahathir Mohammad and Junichiro Koizumi respectively. Due to UTM's strength and collaboration with many Japanese universities, UTM has been chosen to set up the Malaysia-Japan International Institute of Technology (MJIT). It is officially established in 1<sup>st</sup> August 2010 and strategically located in UTM Kuala Lumpur.

MJIT was established as a government-to-government initiative with the objective of incorporating a novel Japanese-style of education in Malaysia. The approach is based on intensive R&D activities as well as close relations between academics and students capitalising on a highly productive work environment with a strong sense of professional ethics. MJIT works closely with Japanese universities and industries to create a distinctive working culture and employs a holistic approach in its programme offerings. MJIT offers undergraduate programmes, postgraduate and R&D activities. Presently, academic programmes at MJIT are strongly supported by a consortium of twenty-five Japanese universities and five associate members from Japanese government agencies and industry. For further details about the history of MJIT, please refer to <http://mjiit.utm.my/about-history.html/>.

MJIT strives to create partnerships through a hybrid approach of joint research, joint supervision, student-exchange, and staff mobility within the Japanese consortium universities. Presently, facilities at MJIT in Kuala Lumpur include a new multi-storey building with state-of-the-art laboratories for research and development. Moreover, MJIT is able to exploit all the facilities of UTM including the established research facilities and support of experienced academics. Figure 1 shows the new MJIT building while Figure 2 illustrates the current organization chart of MJIT. The blocks highlighted in blue represent the staff members which are part of postgraduate committee led by Deputy Dean (Research and Development). More details of the committee are in Section 1.5. Figure 3 summarizes the advantages of being a postgraduate student in MJIT.

### **Vision of MJIT**

To be a leader in providing Japanese cutting-edge technology education blended with Malaysia's distinctiveness for sustainable growth of industry and society

### **Mission of MJIT**

- To be a leading centre of academic and research excellence in the field of Electronics, Precision, Environmental and Green Process Engineering through innovation and creativity.
- To provide students with knowledge and skills with inclination towards positive Japanese working culture

### **Tagline of MJIT**

Engineering the Nation with Precision for Sustainable Development





Figure1: MJIT Building

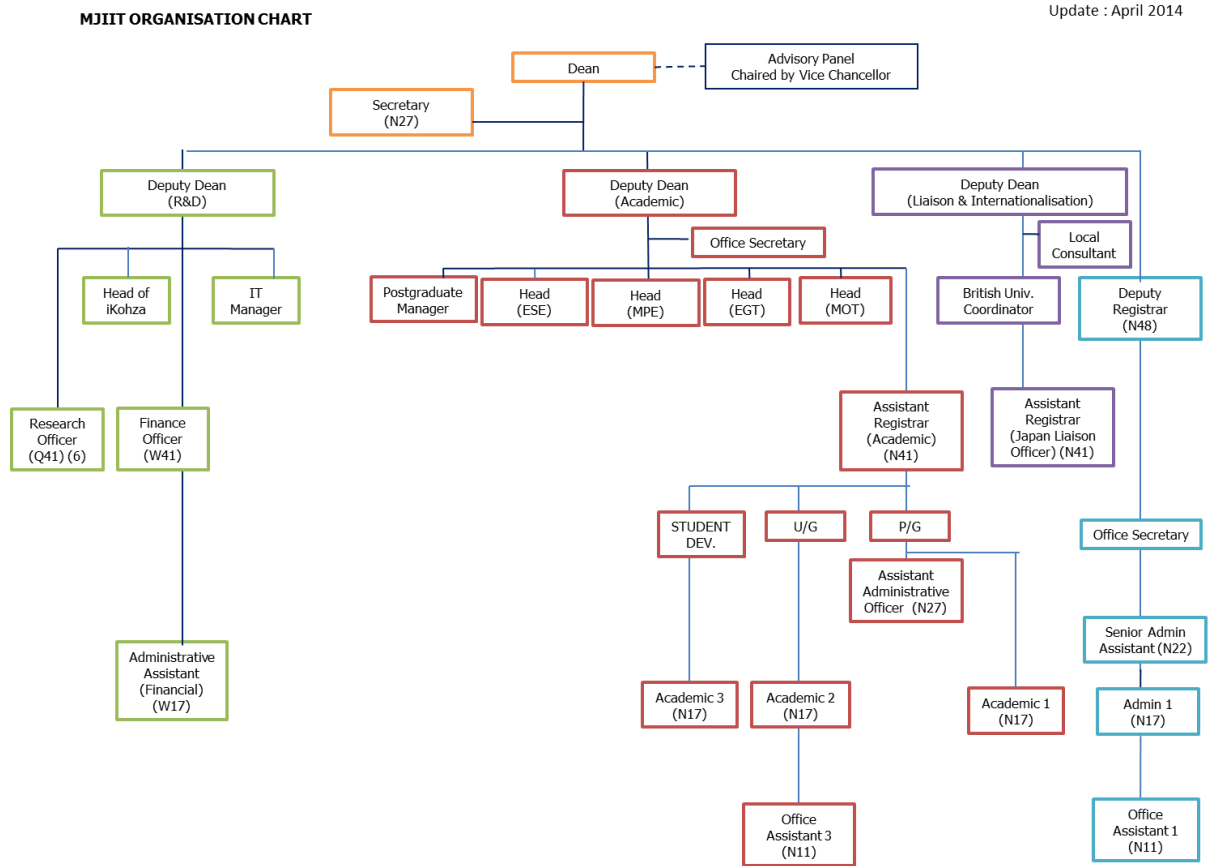


Figure 2: Organization chart of MJIT

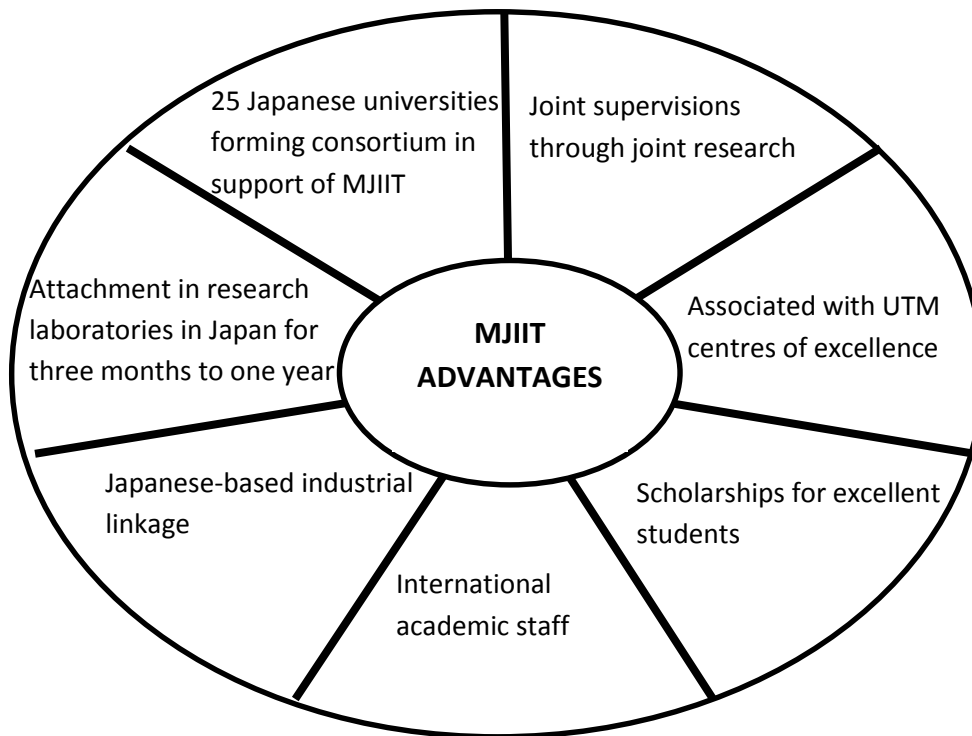


Figure 3: The MJIIT advantages

### 1.3 Programmes

MJIIT offers the following postgraduate research programmes:

- i. Doctor in Philosophy (Ph.D) (by research)
- ii. Master of Philosophy (M.Phil) (by research)
- iii. Master of Engineering (Electronic Systems) (by research and taught course)
- iv. Master of Engineering (Mechanical Precision) (by research and taught course)
- v. Master of Technology and Innovation Management (MTIM) (by taught course)

The programmes are offered in both full-time and part-time modes with specific research project supervised by supervisor/s. The Ph.D and Master degrees have been especially designed to incorporate the latest advancements in technology, offering students the exclusive experience of undertaking research under the supervision of Malaysian and Japanese experts while combining both theory and practice. Table 2 shows the duration of studies.

Table 2: Duration of Studies

Level of Study	Full time		Part time	
	Minimum (semesters)	Maximum (semesters)	Minimum (semesters)	Maximum (semesters)
M.Phil	2	6	4	8
M.Eng & MTIM	3	6	4	8
Ph.D	6*	12	8	16

\*refer to Section 4.4 for exceptional cases

### 1.3.1 Programme Educational Objectives and Programme Outcomes for Ph.D and M.Phil

With the spirit of outcome based education, our programme educational objectives are to produce graduates with the following abilities five years after their graduation:

- PEO1 **generate** in-depth **relevant** knowledge in professional practices for the benefits of both national and international communities.
- PEO2 **maintain** conducive working environment qualities through effective leadership, problem solving and high order thinking skills.
- PEO3 **advocate relevant** knowledge and expertise through effective oral and written communications.
- PEO4 **develop relevant** niche knowledge and cutting-edge technologies.
- PEO5 **nurture and promote** professional and ethical responsibilities including contemporary issues and environmental awareness. )

In order to realize the programme educational objectives, we design the programme learning outcomes to be measured and assessed:

- PO1 Confidently generate in-depth knowledge acquisition and management.
- PO2 Originate, formulate, characterize, and solve **appropriate** operational problems and designs.
- PO3 Develop knowledge and technology of **relevant** project
- PO4 Generate comprehensive knowledge of **appropriate fields** in business thinking /entrepreneurship
- PO5 Adapt appropriate research methodologies, techniques and tools
- PO6 Communicate effectively through written and oral
- PO7 Exemplify high leadership qualities and team working
- PO8 Seek high ethical standards and integrity in **appropriate** practice

### 1.3.2 Programme Educational Objectives and Programme Outcomes for Master of Engineering (Electronic Systems)

We have also developed a set of programme education objectives whereby we expect our graduates to be able to do the following 3 or 5 years after their graduation:

- PEO1 Demonstrate advanced knowledge to lead research and development activities in **electronics and information engineering** industries, government and related organizations.
- PEO2 Innovate and create new ideas and techniques in the fields of **electronic, information, and communication and network systems**.
- PEO3 Work in multidisciplinary teams and contribute towards a sustainable society.
- PEO4 Adhere to the ethical, professional and community standard and engaged in lifelong learning

In order to realize the programme educational objectives, we design the programme learning outcomes to be measured and assessed:

- PO1 attain, integrate and generate advanced knowledge on electronics and information engineering.

- PO2 scientifically formulate hypothesis and carry out research and experiment on electronics, information, and communication and network system.
- PO3 communicate effectively not only to peers and experts but also to the community at large.
- PO4 demonstrate the understanding of professional and ethical responsibilities and commitment in relevant circles and global society.
- PO5 recognize the need for and to engage in lifelong learning.
- PO6 cooperatively evaluate, manage complex matters and identify business.

These programme learning outcomes are assessed by several measurement tools such as progress reports, and presentation. More details of review methods can be found in Chapter 5.

### **1.3.3 Programme Educational Objectives and Programme Outcomes for Master of Engineering (Mechanical Precision)**

We have also developed a set of programme education objectives whereby we expect our graduates to be able to do the following 3 or 5 years after their graduation:

- PEO1 Demonstrate advanced knowledge to lead research and development activities in **mechanical precision** industries, government and related organizations.
- PEO2 Innovate and create new ideas and techniques in the fields of **mechanical precision**.
- PEO3 Work in multidisciplinary teams and contribute towards a sustainable society.
- PEO4 Adhere to the ethical, professional and community standard and engaged in lifelong learning

In order to realize the programme educational objectives, we design the programme learning outcomes to be measured and assessed:

- PO1 attain, integrate and generate advanced knowledge on electronics and information engineering.
- PO2 scientifically formulate hypothesis and carry out research and experiment on electronics, information, and communication and network system.
- PO3 communicate effectively not only to peers and experts but also to the community at large.
- PO4 demonstrate the understanding of professional and ethical responsibilities and commitment in relevant circles and global society.
- PO5 recognize the need for and to engage in lifelong learning.
- PO6 cooperatively evaluate, manage complex matters and identify business.

These programme learning outcomes are assessed by several measurement tools such as progress reports, and presentation. More details of review methods can be found in Chapter 5.

### **1.3.4 Programme Educational Objectives and Programme Outcomes for Master of Technology and Innovation Management**

We have also developed a set of programme education objectives whereby we expect our graduates to be able to do the following 3 or 5 years after their graduation:

- PEO1 Forecast technological change and develop innovative ideas & techniques in managing & developing technology-based products.

PEO2 Leading organization for competitiveness by employing extensive knowledge in technology and innovation management.

PEO3 Work in multi-discipline team and contribute to the society.

PEO4 Comply with ethics, professional and community standards, and involve in life-long learning.

In order to realize the programme educational objectives, we design the programme learning outcomes to be measured and assessed:

- PO1 Manage knowledge & innovation throughout technology development cycle.
- PO2 Forecast, Anticipate and Plan the strategies and actions/activities in managing technological changes.
- PO3 Manage projects and resources creatively & effectively, meeting organization objectives.
- PO4 Undertake research to generate scientific solutions & enable critical thinking and decision making.
- PO5 Communicate & lead team effectively to generate value through technology and innovation.
- PO6 Demonstrate leadership qualities through communicating and working effectively with peers and stakeholders.
- PO7 Renew and integrate knowledge to support value creation to the society within professional and ethical boundaries.
- PO8 Manage life long learning in the field of Technology Management and Innovation.

These programme learning outcomes are assessed by several measurement tools such as progress reports, and presentation. More details of review methods can be found in Chapter 5.

## 1.4 Administration of Postgraduate Programmes

The postgraduate programmes in UTM are under the administration of the University's School of Graduate Studies (SPS) and Academic Registrar Office (ARO) set up under the office of the Academic Vice Chancellor. ARO is responsible in student recruitment, student admission and academic management such as course registration, course amendment, programme mode change and academic result management. SPS coordinates postgraduate research activities such as research progress report monitoring, Viva Voce and scholarships across the university and maintains the quality of education of postgraduate students in UTM. In addition, SPS is also responsible academic programme development and customer relation. ARO is divided into Student Recruitment and Admission Division (SRAD) led by a director and Academic Management Division (AMD) led by a director. The academic leadership of SPS comprises a Dean and two Deputy Deans and supported by a dedicated team of administrative and clerical staff based mainly in UTM main campus in Skudai, Johor. The ARO branch office and SPS branch office in UTM Kuala Lumpur are situated at 8<sup>th</sup> floor of Razak Tower. The organisation and members of staff of SPS and ARO is shown in Figure 4. ARO KL is also responsible to manage workspace for postgraduate students. For booking of workspace, you need to contact Ms Noraini Kassim at 03-2180 5197.

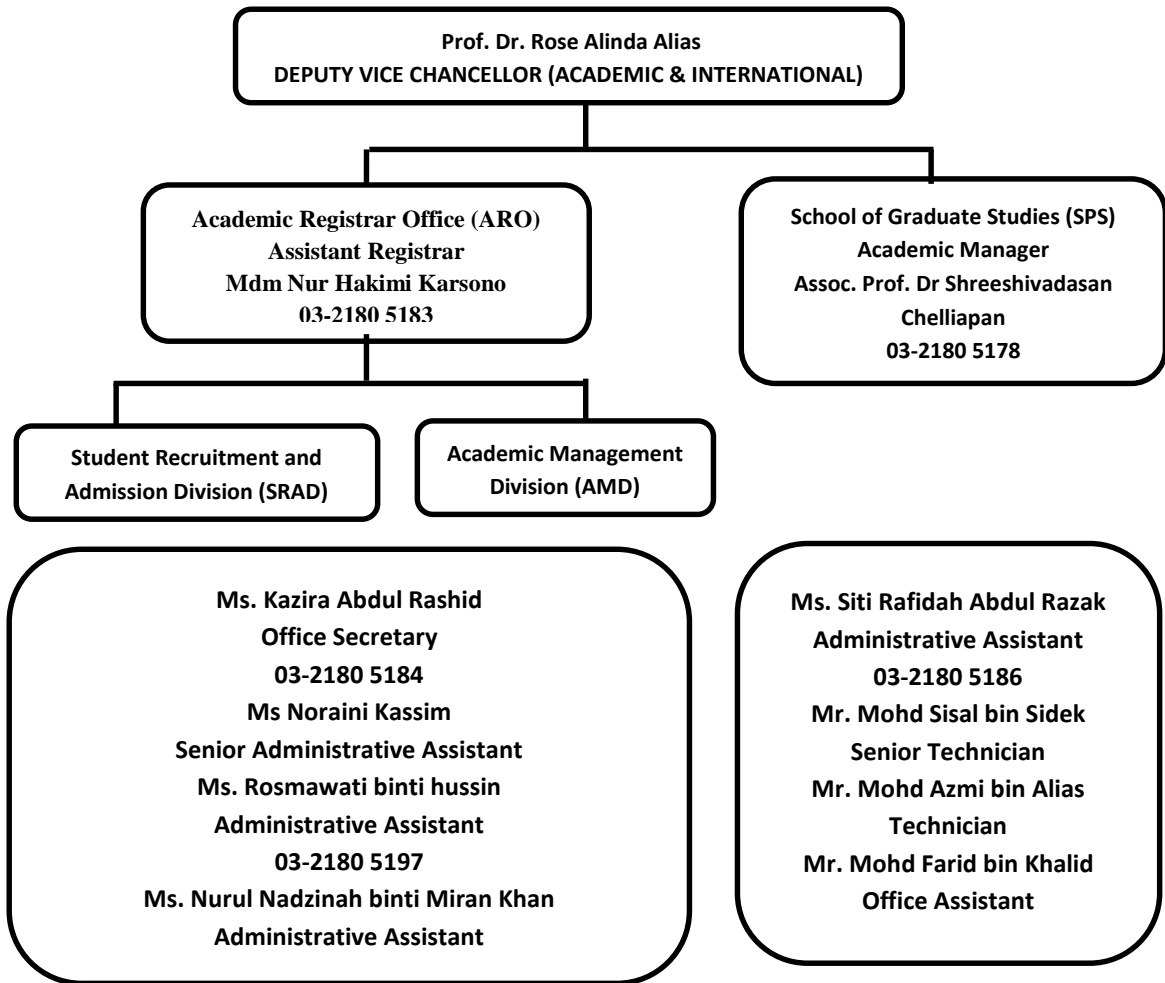


Figure 4 : Kuala Lumpur SPS and ARO Organisation

## 1.5 MJIT Postgraduate Committee

At MJIT, a Postgraduate Committee has been set up under the Deputy Dean of Academic. Other committee members include Postgraduate Academic Manager, one assistant registrar, one assistant administrative officer, one administrative assistant and several academics. The committee works closely with SPS, SRAD and AMD pertaining to the academic and social matters of your life and aims to foster a stimulating research environment. It facilitates the process of selecting postgraduate students and identifying the potential supervisors in line with their research areas.

One of the main responsibilities of Postgraduate Committee is supervision arrangement. A postgraduate candidate is supervised by one or more graduate staff that holds a minimum of PhD degree. If you are supervised by more than one supervisor, the group of supervisors is called *panel of supervisors*. In a panel of supervisors, there must be one main supervisor appointed among UTM graduate academic staff; the co-supervisors can be from any research institution related to your area of study, including those from Japanese consortium universities. Among the supervisors in the panel,

there must be at least one supervisor (either co- or main) from MJIT. You can identify and contact suitable supervisors and co-supervisors according to your research interest from the lists of academics given at the back of this handbook or from MJIT website and brochures. For more information on the minimum qualifications for supervisors and co-supervisors, please refer to the Postgraduate Academic Manager in MJIT and the SPS website at <http://www.sps.utm.my/sps/academic-resources.html#>. The Postgraduate Committee at MJIT will give the final decision on the allocation of supervisors and co-supervisors.

The general responsibility of a supervisor is to ensure that his/her student make full planning on the research work to be carried out as well as giving advice on academic and personal matters when necessary. The other detail of responsibilities of a supervisor during the research activity and Viva Voce are given in the same SPS website mentioned above. Any enquiries can be directed to the Postgraduate Academic Manager at [postgraduate\\_mjiit@ic.utm.my](mailto:postgraduate_mjiit@ic.utm.my).

## 2.0 Getting Started

### 2.1 Admission and Registration

The University's approved Code of Practice on Admission of Postgraduate Students can be found on the School of Graduate Studies (SPS) website ([www.sps.utm.my](http://www.sps.utm.my)). For new students, ARO will conduct a formal registration process at the beginning of the semester. Any queries related to the admissions and registration process may also be directed to the Assistant Registrar of ARO at KL at the SPS office at 8<sup>th</sup> floor of Menara Razak or the Assistant Registrar in MJIT office. At other times, registration can be done at the office of SPS at 8<sup>th</sup> floor of Menara Razak. You will be required to pay the necessary fees such as registration fee and the semester tuition fee before your registration is completed.

### 2.2 Matric Card

Normally, new students can get their matric card or student card during the programme registration day. At other times, you have to go to the matric card studio room at Block J in person to obtain your student ID card or matric card. You are required to bring the proof of registration and identity such as IC, Passport or Driving Licence. The operation hours of the studio are as follows:

Wednesday:	10.00 am – 12.30 pm 2.30 pm – 4.00 pm
Friday:	10.00 am -12.00 pm 3.00 pm – 4.00 pm

Enquiries can be directed to +603-26154779.

### 2.3 Academic Computing ID (ACID)

Students need to have an Academic Computing ID (ACID) account to access various systems in the university including Virtual Private Network (VPN), UTMSHare, UTMotion, student email and the School of Graduate Studies (SPS) academic administration system. You can obtain your ACID account ID and password twenty four hours after your programme registration. You can use your matric card ID number to check your ACID number and password at ACID website at <http://acid.utm.my>. For more information, you can log on the ACID website.

### 2.4 Internet Facilities and Email Account

To apply for UTM internet facilities and an email account, you may go to the customer service counter at Centre for Information and Communication Technology (CICT). You may also register for wireless internet network facilities online by using your Matric card ID. MJIT uses your student email to communicate official alerts to students for important information. You are required to check your student email regularly. Internet and email workstations are located in the University Library and other places on campus. You may also access your email via wireless network in the campus.



## 2.5 University Student Support Services

The Office of Student Affairs and Alumni of UTM aims to provide students with a conducive environment for learning and acts as a one stop agency for services related to health, accommodation, financial aid, students' general welfare and more. Please refer to the website at [www.utm.my/hep](http://www.utm.my/hep) for more information on various services available. The student support services in UTM Kuala Lumpur include the library, UTM health Centre, transportation and student welfare services. The student affairs office in UTM KL is situated at the first floor of Block P.

### 2.5.1 Sultanah Zanariah Library (PSZ)

PSZ (Figure 5) is a modern library occupying a four-storey building with a seating capacity of 3,422 and a collection of nearly half a million volumes. As an integral component of the academic programme, PSZ supports the university's teaching, learning, research, consultancy and publication activities. Its services and collection development activities are geared towards fulfilling the need for library materials and information in the university's core area of Science and Technology. Nevertheless, PSZ also has an extensive Humanities and Social Science collection to support courses in these areas which are offered by several faculties. PSZ's operations and services are computerised. All processes including materials acquisition, indexing, circulation and information searching are conducted through the Computerised Library System known as SirsiDynix. Information on all materials available at PSZ can be accessed at <http://ent.library.utm.my/client/main>



Figure 5: PSZ Library

### 2.5.2 MJIT Library

MJIT Library is one of the branch libraries in UTM Kuala Lumpur. The MJIT Library was officially opened to public on 10th June 2013 and located at the Ground Floor of MJIT Building. The MJIT Library is unique because all the materials are related to Japanese technology, management, and culture. All the books are specifically related with courses taught in MJIT. Patrons will also find collections of materials in Japanese language as the students of MJIT are obliged to learn Japanese language to prepare them prior to their studies or industrial training in Japan. The collections is expected to grow gradually.

## COLLECTION OF MJIIT LIBRARY

TYPE	TOTAL (TITLE)
Monograph (Open access & references)	1170
Audio Visual Material	80
<b>TOTAL</b>	<b>1250</b>

## OPENING HOURS OF MJIIT LIBRARY

MONDAY-THURSDAY	FRIDAY
8.00AM - 1.00PM	8.00AM - 12.15PM
1.00PM - 2.00PM (CLOSED)	12.15PM - 2.45PM (CLOSED)
2.00PM – 5.00PM	2.45PM – 5.00PM
CLOSED ON SATURDAYS, SUNDAYS AND PUBLIC HOLIDAYS	

A full range of services is provided in the library including book loans, on-line renewal and reservation, inter library loan (ILL) and information consultancy. For any inquiries, you can contact Ms. Sharifah Radhiah Syed Azman, the Librarian at MJIIT Library at [shradhiah@ic.utm.my](mailto:shradhiah@ic.utm.my) or phone number +603-22031510.

### 2.5.3 UTM Health Centre

In UTM Kuala Lumpur, health facilities for the staff and student are provided by health centre in the campus and in the student residential area of *Kediaman Siswa Jaya (KSJ) Hostel*.

For emergency and appointment, contact the health centre:

**Office of Health Centre:**

03-26154457

**For enquiries:** 03-26154905

**FAX:**

03-26154306

### 2.5.4 Transportation

UTM IC provides shuttle bus services for students to move from hostel to campus and vice versa. The buses are available every day except during semester breaks. The service starts at 7.00 a.m. until 12.00 midnight depending on the needs of the students. The buses leave *Kediaman Siswa Jaya (KSJ) Hostel* for UTM IC every 15 minutes. Students who want to book the buses for their off-campus activities may do so through the Vehicle Reservation Management System at <http://ifammsweb.utm.my:8008/web/fleet-utm/>

### 2.5.5 Student's Welfare

UTM uses the Student Group Family Takaful Insurance Scheme which is managed by the Syarikat Takaful Malaysia Bhd. Through this scheme, every student invests RM10.00 per semester. It is renewed when the insured period expires every semester until the student graduates. This insurance is for students who have registered for the full-time undergraduate and postgraduate studies.

The purposes of the insurance scheme are:-

- i. to ensure that the welfare of the students are taken care of
- ii. to facilitate professional dealings between the university and organisations (with regard to students' practical/industrial training)
- iii. to facilitate students' programmes/activities.

## 2.5.6 Accommodation and Recreation

### 2.5.6.1 Student Accommodation

UTM Kuala Lumpur (UTM KL) provides a residential college that can accommodate up to 3000 students in one academic session. This college is located at *Kediaman Siswa Jaya (KSJ)*. Other accommodation provided by UTM IC KL are two rental apartments, Keramat Hujung Apartment and Jalan Gurney Apartment, located near the campus.



Figure 6: Kediaman Siswa Jaya

### Kediaman Siswa Jaya

*Kolej Kediaman Siswa Jaya (KSJ)*, the student residential accommodation is located at Jalan Rejang, Setapak, approximately 4km from UTM KL. Subject to availability, students may choose to occupy a single or shared room, with an attached inter-connected bathroom. Figure 6 shows the front gate of the hostel. Prospective students and current students may contact Ms. Naimah Mohamed at nai@ic.utm.my or +6 03-4021 6149 / +6 03-4021 3207. More details including hostel activities are available at [www.ic.utm.my/siswajaya](http://www.ic.utm.my/siswajaya) or <http://siswajaya.college.utm.my>. New students may apply for accommodation prior to registration by submitting your application along

with your expected time and date of arrival. An email will be sent to you upon confirmation. Hostel application can also be done through the website <http://hostel.utm.my>

### ***2.5.6.2 Accommodation for Students with Families***

Limited units of apartment located in Keramat, Kuala Lumpur are available for students with family members. The apartment is a 3-room fully-furnished apartment, equipped with air-conditioning and hot water facilities. Priority is given to **married students** with children only. The rental charge is RM1,100.00 monthly excluding utility charges. (The rate is subject to change). For reservation and transport availability, please contact Ms. Suhana Bahatin of the Office of Student Affairs at 03-2615 4282 or email: [suhatin@ic.utm.my](mailto:suhatin@ic.utm.my).

### ***2.5.6.3 Student Recreation***

Sports facilities such as sports field and gymnasium are available on campus and at the students' residential apartment *KSJ* to encourage students to participate in sports and recreation. Booking of sports facilities can be made at the Sports Unit (HEMA) booking counters based on a first-come, first-serve basis. It is our mission to cultivate a healthy lifestyle among students and staff. Annual sporting events are held to encourage students to be active and have fun while in UTM. For enquiries, you can call +603-26154851.

## **2.6 Scholarship and Financial Aids**

A limited number of funding is available for those wishing to pursue the M.Phil and Ph.D degrees at MJIT. The following represents a non-exhaustive list pertaining to applicable scholarships and financial assistantships.

### **2.6.1 MJIT Student Incentive Scheme**

Exceptionally qualified students may apply for the MJIT Student Incentives. These incentives are open to both Malaysian and International students. MJIT offers the following student incentives:

- ❖ Monthly allowance (MYR 1,800-2,800) and tuition fee waiver
- ❖ Monthly allowance (MYR 1,800-2,800)
- ❖ Tuition fee waiver

The application is subject to satisfactory academic performance. Candidates must be registered as full-time students of MJIT and have had previously obtained exceptional results, so as to be considered. For further information, prospective students may contact [postgraduate\\_mjiit@ic.utm.my](mailto:postgraduate_mjiit@ic.utm.my). The scholarship application form can also be downloaded from [www.mjiit.my](http://www.mjiit.my) and submitted to Postgraduate Academic Manager for further consideration.

### 2.6.2 Research Assistantships

Malaysian students involved in research work that are funded by grants may be offered positions as Research Officers or Research Assistants by their supervisors. Students may be required to undertake additional duties and will be remunerated with a monthly allowance. Further information on availability may be obtained from the respective faculty members at MJIT.

### 2.6.3 UTM Scholarships & Zamalah

The University offers limited scholarships for Malaysians for postgraduate studies. They include UTM Zamalah for Ph.D studies (Malaysians only) and UTM Scholarships for Masters (Malaysians only). Further information may be obtained from [www.sps.utm.my](http://www.sps.utm.my)

### 2.6.5 Other Scholarships

Details of other scholarships may be obtained from <http://www.sps.utm.my/sps/scholarship>.

## 2.7 Safety

Student safety is important to us. Ensuring the health and safety of students, staff and visitors is one of the University's highest priorities. The University is responsible for providing a safe environment and safe systems of work, but safety cannot be achieved without the full cooperation of everyone. University Ordinances require every student whilst on University premises; to take reasonable care for the health and safety of themselves and others; to act in accordance with University safety rules. Students are required: to read the fire procedure notices and familiarise themselves with the alternative fire exits; to report accidents, near misses or dangerous conditions to a responsible member of the department; to co-operate with health and safety instructions. In practical/laboratory departments, there is a safety code/handbook which sets out school/departmental safety arrangements in detail. If you have any problems or questions about safety, raise them with a member of teaching staff or with MJIT/Departmental Safety Coordinator. The KL Campus safety unit number and the emergency number for fire, police or ambulance etc, are given below.

#### EMERGENCY CALLS

##### General

UTM KL Safety unit      03-26154281/4989/5081

##### Emergencies

Police/Ambulance      999

Civil Defence            999

Fire & Rescue            999

To Call from any Handphones	999 / 112
Electrical Breakdown	15454
Water Woes (Selangor)	1-800-88-5252

## 2.8 Student Dress Code

1. Students are expected **TO BE CLEAN, WELL GROOMED and DRESSED** in a manner appropriate to the Malaysian custom or norms.
2. Students must **MAINTAIN A PROFESSIONAL APPEARANCE** by wearing **collared** shirts/t-shirts, shoes, slacks or long skirts while attending classes and/or on official visits to Faculties/Administration building.
3. Avoid **WEARING INAPPROPRIATE CLOTHING or FOOTWEAR** including:-
  - a) Shorts skirts or boxer shorts
  - b) Round-neck T-shirt.
  - c) Sleeveless shirts.
  - d) Tight slacks/pants.
  - e) Slippers/sandals.
4. During any formal/official university event, male students are **REQUIRED TO BE DRESSED** by wearing long sleeved shirts, necktie, slacks (not jeans) and leather shoes or **COMPLETE NATIONAL OUTFIT**. Female students are **REQUIRED TO WEAR 'BAJU KURUNG'** or any **APPROPRIATE SUIT** such as long skirts or loose slacks.
5. Female students are not allowed to **WEAR VEILS** in campus.
6. Headgears such as **BANDADA or CAPS** must be removed while on formal/official visits or business in campus, except during sport activities.
7. For male students, **HAIR MUST BE NEATLY TRIMMED and REASONABLE IN LENGTH, COLOURING and FREESTYLE HAIRDO** are strictly prohibited.
8. **MALE STUDENTS** are strictly prohibited **TO PUT ON ANY FEMALE COSTUMES and/or ACCESSORIES and VICEVERSA**.
9. Male students are strictly prohibited **TO WEAR BANGLES, BRACELETS, EARRINGS and NECKLACES**; and female students are prohibited to have their **EARS PIERCED MORE THAN ONCE PER EAR**, as it is against the norms of Malaysian society.
10. **TATTOOS** are prohibited on any parts of the body.
11. Students **MUST PUT ON** their **MATRIC CARD** at all times while in campus/premises. The **Matric Card MUST BE WORN and DISPLAYED** at chest level.

**Note:** STUDENTS' FAILURE TO COMPLY WITH ANY OF THESE REGULATIONS WILL BE GIVEN A WARNING OR FINED NOT MORE THAN RM50.00 (FOR FRIST OFFENCE). STUDENTS WILL BE REFERRED TO THE DISCIPLINARY AUTHORITY FOR REPEATED OFFENCE.



Figure 7: Student Dress Code

### 3.0 Introduction to *iKohza* System

The unique *Senpai-Kohai* relationship or mentor-mentee concept is emphasized from the moment a student is admitted into MJIT. The implementation of the innovative research laboratory (*iKohza*) system promotes strong collaborative between senior and junior researchers as well as continuous guidance from the professors in R&D project. The successful Japanese concept of 5S and Kaizen are part of the learning concept at MJIT aimed at developing skills of the Japanese such as team-working, responsibility, and resilience.

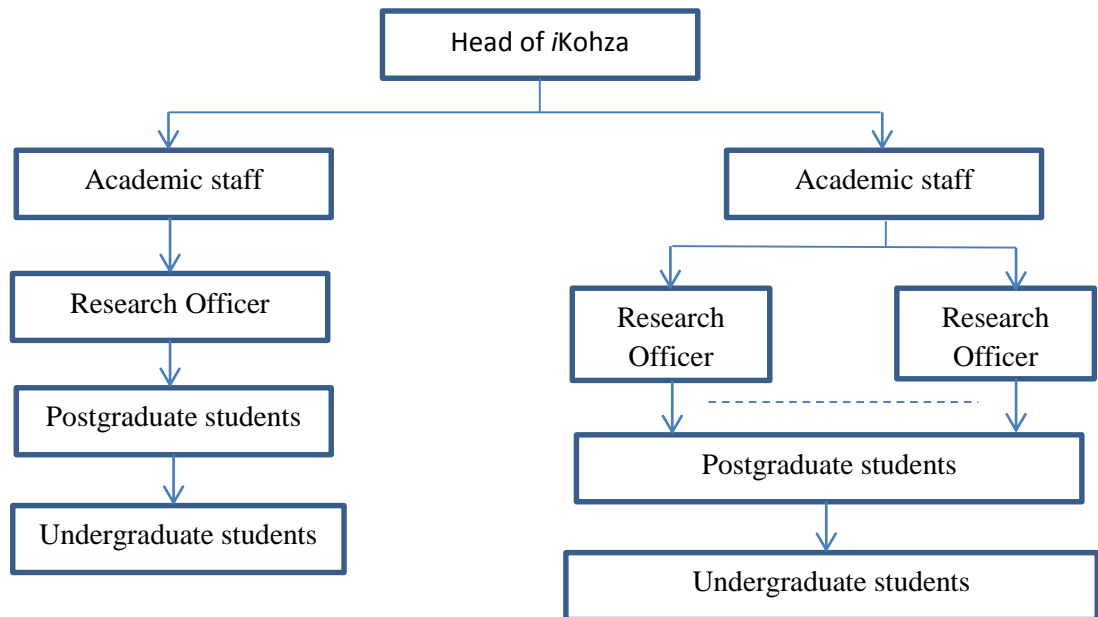


Figure 8: Structure of *iKohza*

Figure 8 shows the structure in an *iKohza*. Head of *iKohza* will be assisted by academic staff who can hire research officers in conducting research in the *iKohza*. More than one research officers can be under an academic staff member, depending on the size of the *iKohza*. Research officers will help in mentoring postgraduate students whereas postgraduate students will help to guide final year undergraduate students in projects. An outline of each of MJIT's research laboratories (*iKohzas*) are given below in Sections 3.1-3.12. Further information may be obtained from [www.mjiit.utm.my](http://www.mjiit.utm.my).

#### 3.1 Air Resources Research Laboratory

The Air Resources Research Laboratory pertains to the safe guard of our air resources or ambient air quality against man-made pollution. The research includes surveillance and quantification of pollutants that focuses on a detailed physical and chemical characterization of the pollutants in the ambient air or from stationary sources. The data is suitable for detailed investigation on the atmospheric aerosol dynamics, source-receptor relationship, control strategy development, monitoring and control equipment performance evaluation and health effects. The



focus of the research work is directed towards fine particulate size fraction that has a strong association with anthropogenic or man-made pollution sources, which is difficult to control and traditionally known to impose health problems. First and foremost, the quantification and characterization of the air pollutant at source is the most important development towards a better understanding of source-receptor relationship and even for air pollution control performance evaluation. Thus, research on the source emission performance along with the application of air dispersion and health risk based models are sought to explain such relationship. In addition, the impact of utilizing fossil or biomass or other alternative fuels towards the local and global climatic change is also area of interest within the group member.

### **3.2 Communication Systems and Networks Research Laboratory**

The Communication Systems and Networks *iKohza* is an inter-disciplinary group focusing on cutting-edge research in the development of reliable and efficient delivery of information for future Internet. It encompasses several areas of study including, but not limited to, telecommunication engineering, mobile communication, sensor networks, intelligent algorithms, network security and bio-inspired networks. The thrust of the research is on the development of new protocols and architectures that integrate 'intelligence' within the network for seamless support for a variety of applications and user requirements in next generation networks. Work includes algorithm design, protocol development, network programming, and prototype development. The main objective of the group is to establish a world-class research environment backed by strong research funding with expertise from Malaysia, Japan and abroad.

### **3.3 Intelligent Dynamics System Research Laboratory**

The Vibration and Noise Research Group is a major component of the Conditioning Monitoring Laboratory based in the UTM Kuala Lumpur and is part of the *iKohza* Group of Malaysia-Japan International Institute of Technology. The Group has first class facilities and excellent capabilities to work efficiently in Noise and Vibration related research activities. The research activities by the Group include finite element model updating, modelling of mechanical joints, sub-structuring, experimental analysis and validation, acoustic intensity analysis and validation and fatigue analysis. The Lab is established with a mission to instil aspiration for conducting innovative collaborative research between the Kyonggi and Hanyang University with active involvement of industry and a focus on solving real-world engineering problems.

### **3.4 Ecological Engineering Research Laboratory**

Sustainable environment is an important aspect in any development process for the preservation of the global environment. Coupled with depleting fossil fuels and increasing energy cost, and the dire need to reduce the carbon print, efforts to introduce effective and efficient technology that integrates with the ecological surroundings are highly essential. Blessed with abundance biomass from the food and agricultural sector, suitable climatic conditions, natural ecology with biodiversity make Malaysia a suitable environment for conducting research and development to contribute towards the sustainable future. The *iKozha* on Ecological Engineering focuses on a total or system solution that integrates management approach, appropriate technology and advanced technology in ecological surroundings towards sustainable environment. It involves developing policies and integrated technological solutions to prevent environmental degradation and minimise wastage. Research and development in Ecological Engineering includes works on appropriate water and wastewater technology, advanced water and wastewater treatment, water and waste management, ecosystem restoration and reclamation, bioremediation, renewable resources and biomass utilisation. Topics of current research interest includes but not limited to membrane separation, natural coagulants, storm water management, wetlands, rainwater harvesting, solid waste management and environmental policies.

### **3.5 Tribology and Precision Machining Research Lab**

The Tribology and Precision Machining Research Lab is designed to research fundamentals of tribological phenomena and support related industries through research activities and cultivating students and *iKohza* members. The lab will collaborate with other *iKohza* and any R&D organizations to generate synergistic effects: Fretting wear (small reciprocating sliding wear) issue with “Conditioning Monitoring”, atmospheric gas issues with I2CNER (International Institute of Carbon Neutral Energy Research) in Kyushu University, vegetable oil as environment friendly lubricant with some chemical research groups, energy saving and innovate power generation technology through tribological breakthroughs with coming *iKohza* in EGT, advanced semiconductor development by CMP (Chemical Mechanical Planarization) with some industries, etc.

### **3.6 Advanced Devices and Materials Research Lab**

The advanced devices and materials engineering (ADME) research laboratory is focusing on the research and development of emerging materials and devices down to nano-scale for high performance systems towards future green electronics and green energy applications. Research is highly interdisciplinary which involves Physics, Chemistry, Biology and Electronic/Electrical Engineering. For the material engineering area, the synthesis/growth of carbon nanomaterials, semiconductors, organic/molecular materials and bio-materials as well as their nanostructure formation technologies are within the focuses of this laboratory. In the device engineering area, various novel nanodevices and functional devices covering electronic/photonic devices, sensors, solar cells are focused by this laboratory.

### **3.7 Centre for Lipids Engineering Applied Research (CLEAR)**

The traditional strength of CLEAR's research has always been on palm oil which includes palm biomass, properties and process. CLEAR Kuala Lumpur has also diversified to extraction process for food based and medicinal products, extraction of bio waste for value added products and cosmaceutical development.

### **3.8 Centre for Artificial Intelligence and Robotics (CAIRO)**

Established in 1997, CAIRO is one of the Centres of Excellence in UTM. It has established itself as the leading R&D center in AI, Robotics and Automation in the country. Its main role is to acquire advanced technologies, to be involved in research, and to work with local industries to improve their product competitiveness.

### **3.9 Biologically Inspired System and Technology Laboratory**

Inspired by mechanisms operating in living organisms, "Biologically Inspired System and Technology (BIST) Laboratory" is interesting, developing and demonstrating innovative and advanced technology for the well-being of mankind. Although there are many approaches for studying the technology that mimics nature, this research laboratory advances it mostly from a standpoint of system engineering. The research is focusing on biological systems and technologies, and encompasses an array of inter-science and engineering discipline in Machine Learning, Computational Neuroscience, Systems Biology & Medicine, Biomimetics, and Optimal Control & Optimization. The research is not only directed towards modeling and simulation, but also visualization and measurement which are essential methodologies to understand sophisticated complex mechanisms and regulations in living bodies. Besides conducting research from principles to applications, the primary objective of the research group is to develop infrastructure for interdisciplinary research and education in this area. Another important objective is to lead this research field in Malaysia and to focus on the high impact research to compete globally.

### **3.10 Embedded System Research Laboratory**

"Embedded systems" are computer systems, not standing-alone for computing purposes, but built in various appliances, including handyp hones, TVs, printers, cars etc to provide sophisticated functions. They are faced with various challenges, such as mass-productivity, cost, and integration of heterogeneous components. Our goal is to undertake state-of-the-art and cutting-edge research in future design methodologies of giga-scale micro-electronics implementation technology for diverse applications. The group consists of members in MJIT and associate members in other locations such as UTM Johor as well as Japanese universities. We covers four fields: main processing unit, SoC (system-on-chip), analog mixed signal, as well as memory in the near future.

### 3.11 Chemical Energy Conversions and Applications Research Laboratory

The Chemical Energy Conversions and Applications (ChECA) research laboratory is focusing on the researches of highly efficient chemical energy conversions and applications for developing a sustainable society. In order to achieve this, we conduct investigations having the research discipline of the clarify the phenomena of Ions, Electrons and other associated species transfer in solid materials and Solid/Liquid or Solid/Gas interfaces, and develop the novel materials with fast transportation. Then apply these materials to high performance chemical energy conversions. As the materials, we treat Solid Electrolytes (inorganic, organic, hybrids), Mixed conductors, General Catalysis, Photo/Electro-catalysts, Functional membranes, Nano-structured materials, etc. Their applications are Batteries, Chemical conversion processes, Fuel Reforming, Separation and Reaction, Hydrogen Production/Generation, Bio-fuels, Fuel Cells, Bio-fuel Cells, Chemical Solar Cells, Chemical Sensors, Actuators, Artificial Photosynthesis, Super-Capacitors, etc.

### 3.12 Wind Engineering for Environment Research Laboratory

The *Wind Engineering for (Urban, Artificial, Man-made) Environment* is established as a center to conduct a pertinence research that is related to the wind engineering applications. Research activities currently undergoing in this lab are concerned particularly on improving the efficiency of urban ventilation, enhancing pedestrian thermal comfort within an urban area, harnessing wind energy for green urban development and others practical interests that are related to bluff body flow. Our research activities are multidisciplinary, where we stretch out our research activities to the other fields such as human behavior in term of energy consumption, social system, and green technology. Our strong collaboration with several institutions in Japan and Malaysia provides not only enhance the research activities but also provides a platform for information and technology sharing.

### 3.13 Nano-Characterization, Structural Control and Processing Research Laboratory

The Nano-Characterization, Structural Control and Processing (Nano<sup>3</sup>) Research Lab aims to undertake state-of-art research in materials science and engineering and solid-state-physics by developing analytical techniques of nano-characterization, to apply the advanced techniques to nano-structural control, and to contribute to the fabrication and quality-control of nano-functional materials and devices. The Research Lab now focuses on applying the advanced electron microscopes and focused-ion-beam machines to characterization and analysis. Currently researches on nitride semiconductor films, lead-free solders, silicon solar cells and graphene materials for sensors are being conducted in collaboration with Kyushu University, Meijo University and Imperial College, etc. The Research Lab will collaborate with other research groups and industries in nano-characterization for analysis of crystal growth process, quality-control and failure-analysis.

### 3.14 Metabolic Engineering and Molecular Biology Research Laboratory

The focus of this iKohza is to tackle the issues related to green technology from microbiological side. It is easily expected to solve that energy sources of all over the world will be insufficient in the future. The production of new energy source from biomass/biochar is now being watched with interest by the rest of the world. establishment of iKohza is particularly well suited for Malaysia's valuable and expanding not only palm oil industry but also any other biomass industries, its

developing biomass conversion undertakings, the production of bio ethanol/ bio hydrogen product and biomass conversions creating industrial and medical materials, such as antibiotics, vitamin.

### **3.15 Vehicle System Engineering Research Laboratory**

The Vehicle System Engineering (VSE) Research Laboratory is a highly dedicated group with activities and facilities spanning across the field of Low Carbon and Active Driving Technologies in transportation. Researches toward Low Carbon application aim for higher vehicle efficiency through advanced engine sub-systems, thus leads to lower fuel consumption and emission. Some of the on-going current researches are investigation into alternative & emulsion fuels, engine downsizing, turbo compound, waste heat recovery devices, combustion control strategies and engine mechanism control strategies. On the other hand Active Driving researches focus for better ride and handling of a vehicle. Some of the on-going current researches are active & semi-active suspension system, vehicle-to-vehicle (V2V) communication and vehicle active safety. VSE has close collaboration with industries and some of the top universities in the world, thus enabling access to the state-of-the-art testing equipment and know-hows. The local expertise coupled with extensive links makes this research laboratory a significant entity for vehicle system research and development.

## 4.0 Presenting and Publishing your Research Work

### 4.1 *iKohza* level presentation (Rinkoh)

In order to develop dynamic and holistic post-graduates, you are required to make numerous presentations during the study at MJIT. One of the most important skills students at MJIT should develop is the ability to communicate ideas and concepts to a group of people through formal and informal presentations. Presentations at *iKohza* level is compulsory and may include proposal presentations, critical design reviews, progress reports, project results, papers in technical conferences as well as poster presentation. The schedule and type of this presentation will be decided by Head of each *iKohza*. You can compile all presentation information that will be useful for your revision and thesis writing.

### 4.2 National and International level presentation

Research presentations are excellent opportunities to demonstrate originality and inform others of valuable investigation findings. National and international conferences, seminars and journals contain audiences or referees who are experts in specific subject area who are capable of giving valuable advice and comments for further future improvements.

Today's technology and educational conferences or journals often provide websites with specific details about their expectations for papers. Information describing their preferences for paper topics, targeted audience, word length of papers, style format, how to create graphs and charts, multimedia directions and the amount of time allocated for each presentation are all provided. The publication process requires diligence, persistence and a willingness to shape presentation material to target specific groups of readers. Additionally, editors appreciate writers who provide creative research articles and meet their deadlines. It is very important to cultivate good working relationships with editors who can assist student in sharing ideas with the academic community.

### 4.3 SPS Policy Regarding Publication

As a Ph.D candidate, you need to publish two international journals with accumulated impact factor of 6 if you wish to submit thesis after two years of study. For Ph.D students, you need to publish one internationally refereed journal before you can submit thesis for examination. You can check with UTM library, PSZ or Research Management Centre (RMC) for the refereed journal. You are encouraged to use *Turnitin* software to check the similarity of your manuscript with other published works before submitting the manuscript for publication. More information on the software is available at SPS website.

### 4.4 MJIT Policy Regarding Publication

Prior to submitting any manuscripts on your research topic for publication, you should get your supervisor's approval. In addition, you should put MJIT's name as your affiliation in the publication and your supervisor must be one of the authors with his consent.

## 5.0 Progression

Two-year or three-year duration seems to be sufficient to complete a research. While you are doing research involving literature study, research approach formulation, setting up and conducting experiment, and thesis writing, time flies when you are occupied. Experience tells us that progression reviews are essential to monitor the quality of your work and the progress rates against the normal standard. There are several parts in our progression review; some are compulsory whereas the others are optional (subject to your *ikohza*):

- Curriculum
- Supervisory Review/Log book
- Progress Review
- Research Proposal Review
- Viva Voce

For postgraduate students of all programme modes need to take a university compulsory courses from the list in Table 3 below.

*Table 3: List of university compulsory courses*

UNIVERSITY COMPULSORY COURSE (3 Credit) (Choose 1)		
Code	Course name	Credit
UHAP 6013	Seminar on Global Development, Economic and Social Issues	3
UHAW 6023	Philosophy of Science and Social Development	3
UHAF 6033	Dynamics of Leadership	3
UHAZ 6123	Malaysian Society and Culture	3
UHAZ 6323	Malay Language for Postgraduates	3
UDPE 1123	Organizational Behavior and Development	3
UCSM 1263	IT Project Management	3
UMJT 1313	Qualitative Design and Data Analysis	3
UMJT 1323	Quantitative Data Analysis	3
UMJT 1333	Advances in Technology and Management Research	3

## 5.1 Curriculum

### 5.1.1 Research Programmes (M.Phil and Ph.D)

There are four types of compulsory courses/seminars you need to attend:

- Research course – this is the core course that you need to register every semester.
- Research methodology – you need to take this course once throughout your study. You could apply for credit transfer if you have taken an equivalent course before.
- University elective course – you need to take at least one university elective course.
- Research seminar – you need to attend at least one research seminar conducted by visiting professors or faculties of MJIT every semester.

Table 4 summarizes the curriculum for both M.Phil and Ph.D students.

Table 4: Curriculum for M.Phil students and Ph.D students by research

Course Category	Code		Subject	Credit
	M.Phil	Ph.D		
University Elective (1 subject)	UXXX XXX3		Select from Table 4	3
Prerequisite (Research student)	UMJP 0010		Research Methodology	0
Research project (Minimum 3 semesters for M.Phil while Minimum 6 semesters for Ph.D)	Full time			
	MMJG 1100	PMJG 1100	Research	0
	MMJG 1200	PMJG 1200	Research	0
	MMJG 2100	PMJG 2100	Research	0
	MMJG 2200	PMJG 2200	Research	0
	MMJG 3100	PMJG 3100	Research	0
	MMJG 3200	PMJG 3200	Research	0
		PMJG 4100	Research	0
		PMJG 4200	Research	0
		PMJG 5100	Research	0
		PMJG 5200	Research	0
		PMJG 6100	Research	0
		PMJG 6200	Research	0
	Part time			
	MMJG 1110	PMJG 1110	Research	0
	MMJG 1210	PMJG 1210	Research	0
	MMJG 2110	PMJG 2110	Research	0
	MMJG 2210	PMJG 2210	Research	0
	MMJG 3110	PMJG 3110	Research	0
	MMJG 3210	PMJG 3210	Research	0
	MMJG 4110	PMJG 4110	Research	0
	MMJG 4210	PMJG 4210	Research	0
		PMJG 5110	Research	0
		PMJG 5210	Research	0
		PMJG 6110	Research	0
		PMJG 6210	Research	0
		PMJG 7110	Research	0
	PMJG 7210	Research	0	
	PMJG 8110	Research	0	
	PMJG 8210	Research	0	
Requirement set by MJIIT			Research Seminar (Attend only)	0
<b>TOTAL CREDIT</b>				<b>3</b>

\*For part time student, course code for Research has 1 as the third digit (instead of 0).



### 5.1.2 Master of Engineering (Electronic Systems)

This program is offered on full-time basis and based on a 2-Semester Academic Year with several subjects being delivered and assessed in each semester. Assessment is based on final examination, presentation, case studies and project presentation conducted throughout the semester. Table 5 shows the curriculum of this program.

Table 5: Curriculum of Master of Engineering (Electronic Systems)

Semester	Code	Course	Credit
<b>YEAR 1</b>			
<b>I (Normal)</b>	Uxxx xxx3	University General Course <i>Select one from Table 3</i>	3
	MMJE 1213	Semiconductor Material Engineering	3
	MMJE 1113	Bio-Inspired System Engineering	3
	MMJE 1313	Network Engineering	3
	MMJP 1183	Research Methodology	3
<b>Total credits</b>			<b>15</b>
<b>II (Normal)</b>	MMJx xxxx	<i>Select three from Table 6</i>	3
	MMJx xxxx		3
	MMJx xxxx		3
<b>Total credits</b>			<b>9</b>
<b>YEAR 2</b>			
<b>I (Normal)</b>	MMJE1180/ MMJE1190	Dissertation	0
<b>II (Normal)</b>	MMJE1280/ MMJE1290	Dissertation	0
<b>YEAR 3</b>			
<b>I (Normal)</b>	MMJE2180/ MMJE2190	Dissertation	0
<b>II (Normal)</b>	MMJE2280/ MMJE2290	Dissertation	0
<b>YEAR 4</b>			
<b>I (Normal)</b>	MMJE3190	Dissertation	0
<b>II (Normal)</b>	MMJE3290	Dissertation	0
<b>Total credits</b>			<b>24</b>
<b>Overall total credits</b>			<b>48</b>

\*For dissertation, the course code whose 3<sup>rd</sup> digit is 8 is meant for full time student while the course code with 3<sup>rd</sup> digit 9 is meant for part time student.

Table 6: Elective Courses

<b>ELECTIVE COURSE (9 credits) (Choose 3 from Each Specialization)</b>					
<b>BIO-NANOELECTRONICS (Specialization 1)</b>					
<b>ELECTIVE</b>		<b>Credit</b>	<b>ELEKTIVE</b>		<b>Credit</b>
MMJE 1123	Computational Neuroscience	3	MMJE 1163	Advanced Measurement and Instrumentation	3
MMJE 1133	Simulation Engineering	3	MMJG 1173	Applied Mathematics	3
MMJE 1143	Optimal Control Sistem	3	MMJE 2113	Seminar in Bio-Nanoelectronics	3
MMJE 1153	Biomedical System Engineering	3			
<b>QUANTUM ELECTRONICS (Specialization 2)</b>					
<b>ELECTIVE</b>		<b>Credit</b>	<b>ELECTIVE</b>		<b>Credit</b>
MMJE 1223	Semiconductor Device Engineering	3	MMJE 1283	Advanced Electromagnetic Wave Engineering	3
MMJE 1233	Solid State Electronics	3	MMJE 1263	Advanced Digital Sistem Design	3
MMJE 1243	Fabrication and Characterization of Electronic Devices	3	MMJG 1173	Applied Mathematics	3
			MMJE 1153	Biomedical System Engineering	3
			MMJE 1293	Advanced Communication Engineering	3
			MMJE 1203	Applied Power Electronics	3
			MMJE 2213	Seminar in Quantum Electronics	3
<b>CYBERNETIC COMMUNICATION (Specialization 3)</b>					
<b>ELECTIVE</b>		<b>Credit</b>	<b>ELECTIVE</b>		<b>Credit</b>
MMJE 1293	Advanced Communication Engineering	3	MMJE 1353	Digital Sistem Verification and Testing	3
MMJE 1333	Network Security	3	MMJG 1173	Applied Mathematics	3
MMJE 1283	Advanced Electromagnetic Wave Engineering	3	MMJE 1163	Advanced Measurement and Instrumentation	3
			MMJE 1383	Advanced Digital Sistem Design	3
			MMJE 2313	Seminar in Cybernetic Communication	3
<b>TOTAL CREDIT (CHOOSE THREE ONLY)</b>					<b>9</b>

Students should pass all courses and examination of dissertation and achieve a total of 48 credit hours with a minimum of cumulative 'B' grade or CGPA of 3.0 to successfully graduate from this programme.

### 5.1.3 Master of Engineering (Mechanical Precision)

This program is offered on full-time basis and based on a 2-Semester Academic Year with several subjects being delivered and assessed in each semester. Assessment is based on final examination, presentation, case studies and project presentation conducted throughout the semester. Table 7 shows the curriculum of this program.

Table 7: Curriculum of Master of Engineering (Mechanical Precision)

Semester	Code	Course	Credit
<b>YEAR 1</b>			
<b>I (Normal)</b>	MMJM1183	Advanced Applied Mechanics	3
	Uxxx xxx3	University General Course <i>Select one from Table 3</i>	3
	MMJM1283	Advanced Precision Engineering	3
	MMJM 1383	Advanced Materials Engineering	3
	MMJP 1183	Research Methodology	3
<b>Total Credit</b>			<b>15</b>
<b>II (Normal)</b>	MMJx xxxx	<i>Select 3 from Table 8</i>	3
	MMJx xxxx		3
	MMJx xxxx		3
<b>Total Credit</b>			<b>9</b>
<b>YEAR 2</b>			
<b>I (Normal)</b>	MMJM1180/ MMJM1190	Dissertation	<b>0</b>
<b>II (Normal)</b>	MMJM1280/ MMJM1290	Dissertation	<b>0</b>
<b>YEAR 3</b>			
<b>I (Normal)</b>	MMJM2180/ MMJM2190	Dissertation	<b>0</b>
<b>II (Normal)</b>	MMJM2280/ MMJM2290	Dissertation	<b>0</b>
<b>YEAR 4</b>			
<b>I (Normal)</b>	MMJM3190	Dissertation	<b>0</b>
<b>II (Normal)</b>	MMJM3290	Dissertation	<b>0</b>
<b>Total Credit</b>			<b>24</b>
<b>Overall Total Credit</b>			<b>48</b>

\*For dissertation, the course code whose 3<sup>rd</sup> digit is 8 is meant for full time student while the course code with 3<sup>rd</sup> digit 9 is meant for part time student.

Students should pass all courses and examination of dissertation and achieve a total of 48 credit hours with a minimum of cumulative 'B' grade or CGPA of 3.0 to successfully graduate from this programme.

*Table 8: Elective courses*

<b>Code</b>	<b>Course Name</b>	<b>Credit</b>
MMJM1483	Advanced Vehicle System	3
MMJM1583	Finite Element Method	3
MMJM1683	Advanced Fluid Dynamics	3
MMJM1783	Tribology	3
MMJM1883	Structural Vibration for Analysis and Practice	3
MMJM1983	Condition Monitoring	3
MMJM1083	Engine Turbocharging	3
MMJG1173	Applied Mathematics	3
MMJE1683	Advanced Measurement and Instrumentation	3
<b>TOTAL CREDITS (Chosse THREE)</b>		<b>9</b>

#### **5.1.4 Master of Technology and Innovation Management**

The minimum duration of this program is 1.5 year (3 normal semesters) for a full time student and 2 years (4 normal semesters) for a part time student. The curriculum involves four components below:

- a. Core courses
- b. Elective courses
- c. Management workshop
- d. Master project

Table 9: Curriculum of Master of Technology and Innovation Management

Semester	Code	Course	Credit
<b>YEAR 1</b>			
<b>I (Normal)</b>	MMJT 1013	Managing Technology and Innovation	3
	MMJT 1023	Business Planning and Organizing.	3
	MMJT 1033	Costing and Financial Analysis	3
	MMJT 1043	Marketing of Technology & Innovative Products	3
	MMJT 1053	Human Resource and Talent Management for Innovation	3
			<b>Total credit</b>
<b>II (Normal)</b>	MMJT 1xx3	<i>Select from Table 10</i>	3
	MMJT 1xx3	<i>Select from Table 10</i>	3
	MMJT1183	Research Methodology (Modular)	3
	MMJT 1153	Project 1 (Decision Making and Creative Problem Solving)	3
	MMJT 1xx3	<i>Select from Table 10</i>	3
			<b>Total credit</b>
<b>YEAR 2</b>			
<b>I (Normal)</b>	MMJT 2016	Project 2 (Operations and Project Management for Technology Initiatives)	6
	MMJT 1xx3	<i>Select from Table 10</i>	3
	MMJT 2023	Advanced Managerial Techniques	3
	Uxxx xxx3	<i>University General Course Select from Table 3</i>	3
			<b>Total credit</b>
<b>Overall total credit</b>			<b>45</b>

Table 10: Elective Course

Course code	Course name	Credit
MMJT 1063	Finance and Funding of Technology Enterprise (TM)	3
MMJT 1073	Business and Intellectual Property Law (B&TM)	3
MMJT 1083	Leading Knowledge Workers for Innovation (IM)	3
MMJT 1093	Value Configurations and Competitive Strategy (IM)	3
MMJT 1103	Business Networking and Managing Alliances (B&IM)	3
MMJT 1113	Managing Technology Change and Transformation (TM)	3
MMJT 1123	Valuation and Intellectual Property Management (IM)	3
MMJT1133	Strategic Management of Technology	3
MMJT1143	Policy and Economics of Technological Innovation	3

## 5.2 Supervisory Review Report/Log book

This section is for research students (MPhil and PhD) as well as mixed mode students who are doing dissertation. This report records the summary of discussion in each meeting between you and your supervisor. The review form could be filled in online at GSMS website. You are required to summarize the discussion in this form and submit it to your supervisors before the next meeting. Things to be included:

- Objectives of the research currently worked on.
- Framework – guidelines, scope and ideas you are using to achieve the above objectives.
- Progress – improvement made compared to previous discussion.

Besides, you need to perform self-checking of your own progress by answering the following Yes/No questions in the review form as shown in Table 11. All the supervisory review reports must be attached together with the progress report that must be submitted at the end of each semester.

Table 11: Yes/No questions of supervisory form

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### QUESTIONS

Has the student made sufficient progress in meeting the objectives?

Are the supervisor and student clear about current objectives?

Have any specific problems associated with the work or supervision been identified? If appropriate, please comment below.

Are the supervisor and student clear about the work to be done before the next meeting?

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### 5.3 Progress Report

This section is for research students (MPhil and PhD) as well as mixed mode students who are doing dissertation. As a research student, you are required to submit progress reports to your supervisor by the end of every semester. As a mixed mode programme (consisting of research and taught courses) student, you are required to submit progress reports to your supervisor during the semesters when you register research course of dissertation. You need to complete:

- Programme information
- Research progress
- Publication progress
- Thesis progress

After completing the above information, your supervisor needs to fill in evaluation part and submit it to the office. It may be done online at GSMS website. Progress report form could also be obtained from the website of SPS. Table 12 shows the results given to the student's progress report.

Table 12: Summary of grades, marks and their interpretation

Overall Assessment	Statement by category	Mark Description
(a) Satisfactory	Excellent	$9.0 \leq M \leq 10.0$
	Very Good	$8.0 \leq M \leq 9.0$
		$7.0 \leq M \leq 8.0$
	Good	$6.0 \leq M \leq 7.0$
$5.0 \leq M \leq 6.0$		
(b) Unsatisfactory	Fair	$4.0 \leq M \leq 5.0$
		$3.0 \leq M \leq 4.0$
(c) Fail	Poor	$2.0 \leq M \leq 3.0$
		$1.0 \leq M \leq 2.0$
		$0.0 \leq M \leq 1.0$

### 5.4 Research Proposal Review

Research proposal review is scheduled to be in the second semester for M.Phil students and Fast Track Ph.D students, and in the third semester for Ph.D students. For research students, the proposal review is also called *First Stage Evaluation*. Research proposal review is called *Proposal Defence Seminar* for mixed mode students. The proposal defence normally takes place in the third semester for mixed mode students. In that semester, you must first attend Research Methodology course before you could defend your research proposal. After you completed successfully Research Methodology course, you can then submit your research title and synopsis to the MJIT office. This is followed by submitting your research proposal with 10-15 pages in length for M.Phil student as well as mixed mode students and 15–20 pages in length for Ph.D student. The research proposal should address at least the following points:

- An introduction to the research problem. What is the research about? Why is this topic important? What do you hope to achieve by working on this problem?
- A brief history of research into this topic by others including a detailed literature survey.
- A discussion of the approach to the topic. What are the methods used?

- A description of the work you have carried out to date, with results if appropriate.
- A carefully prepared detailed timetable for the research. You should display these timetables as properly formatted GANTT charts or similar.

The research proposal will be read by two members of the panel which will consist of a member of staff knowledgeable in the research field and a chairman appointed by the Postgraduate Committee.

During research proposal seminar, the examining panel will pay attention to:

- your understanding of the problem you are investigating and why your research is necessary.
- Your understanding of the background to the problem, the underlying principles, and what has been achieved by other researchers on this topic.
- your knowledge of how to go about your own research in this topic whether satisfactory progress has been made in the course of your work to date.
- the clarity of your vision for the work you will be carrying out in future, and your ability to timetable that work.

In addition to the above criteria, the following points are looked into for Ph.D candidates:

- critical comments of previous works.
- a preliminary Results chapter, giving an account and a critical discussion of results obtained to date.
- copies of any publications should be appended to the research proposal.

Panel will especially pay attention to the following especially for Ph.D candidates:

- do your research demonstrate the standards of originality and quality required for the award of a Ph.D degree?
- are you completely familiar with the process of producing, and hence be able to defend your research results
- do you possess a sufficient breadth of knowledge in the background material and previously published work?
- is the timetable realistic and appropriate to complete the research and write a thesis in the time available?
- are all the the necessary hardware/software/devices/wafers in place and if not, what are the contingency plans?

Please refer to academic office for the schedule of the semester when student defends his research proposal.

## **5.5 Attachment in Japan Consortium Universities (Student Fellowship Programme)**

Selected Malaysian research students will be awarded financial support to have their attachment in research laboratories in Japan to conduct research. This is part of their research programme whereby they need to complete three months to one year attachment. For the students whose co-supervisors are from a Japanese consortium university, they may need to travel to Japan for field trip or data collection. Allowances from MJIT student incentive will be put on hold if the recipients go for attachment in Japan are under sponsorship.



## 6.0 Writing and Examining Your Thesis/Dissertation

For a Ph.D degree programme, the minimum study duration is six (6) registered semesters or three (3) registered years before you are allowed to submit your thesis for examination. The Ph.D candidate needs to have one refereed journal before he could submit his thesis.

### 6.1 Thesis/Dissertation Guideline

Writing a thesis is a challenging and time consuming task. Therefore, you must schedule the thesis writing carefully. We recommend that the thesis writing should be started by the mid of your second last semester. A good thesis needs a solid content as well as a skilful presentation. Besides, you must follow thesis format and other guidelines set by SPS. Thesis manual can be downloaded from the school's website.

### 6.2 Thesis Submission and Examination Arrangements

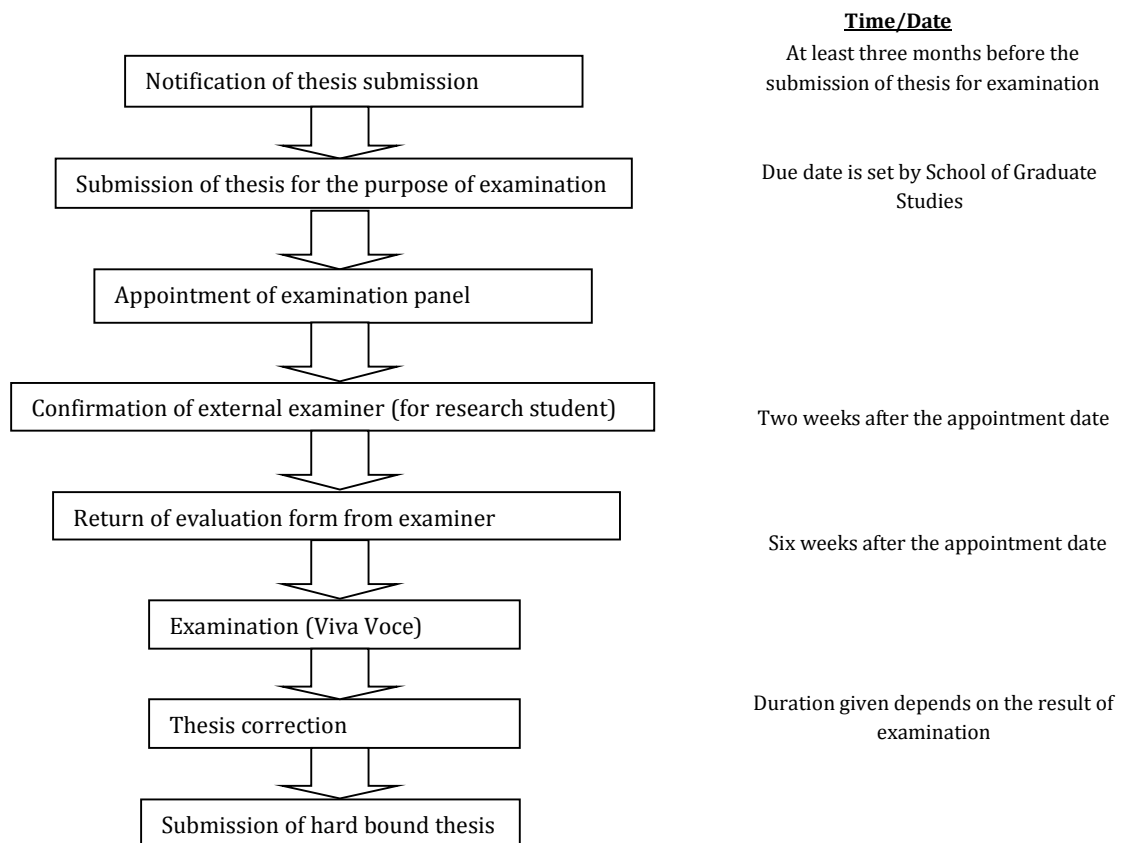


Figure 10: Flow chart of thesis/dissertation submission

For the purpose of examination or viva, thesis submission due date is set by SPS every semester. You need to submit the thesis submission form for examination before the due date to avoid the need to register for the coming semester. At least three months before that, you need to submit 'Notification for Submission of Thesis'. All the forms are available at SPS website.

Submission of thesis for examination/Viva is suggested to be done three months before viva. When you submit the thesis for examination, make sure the followings are completed:

- Pass one general university elective course
- Attended research methodology course
- Final draft of thesis
- *Turnitin* report

Four copies of a thesis should be submitted to the MJIT Office. It is sufficient to submit temporarily bound copies (for example using a ring binding) with soft covers for examination purposes only, providing that the binding is secure.

The thesis shall be examined by one or more examiners appointed by the *University Graduate Studies Committee* (JAPSU) from among the experienced academic staff of the University, and by one or more External Examiners appointed by JAPSU. No person who has been involved in the direct supervision of the research student may be appointed as an examiner. For dissertation, two examiners will be appointed by JAPSU from among the experienced academic staff of the University. More details are available at *Panduan Pelantikan dan Tanggungjawab Pemeriksa* at SPS website.

### 6.3 The Oral Examination/ Viva Voce

The copies of your thesis will be scrutinised by the examiners and the additional copy supplied to the Chair Person. It is mandatory for a Ph.D degree that a subsequent oral examination takes place. For the M.Phil degree, an oral examination may be optionally requested by the examiners. The supervisor must be present at the oral examination to understand the corrections and result determined during the examination.

The Examiners can discuss with Chair Person to conduct the oral examination as they wish. The general practice is that 40 minutes are given to a presentation for Ph.D. However, it is customary for most of the time to be spent on the work of the thesis; but the Examiners are at liberty also to ask general questions relevant to the field of study. Nevertheless, you can reasonably be expected to have a majority of questions on:

- the rationale of the research.
- the suitability, advantages, limitations etc. of the experimental/theoretical methods used; any alternatives which might have been tried.
- adequacy of interpretation of the results; loopholes, flaws, etc. "Given more time, what would you do next?"
- the contemporary literature on the subject.

Most External Examiners are very particular with up grammatical and typographical errors, and it is the rare thesis where a list of these is not produced. Examiners are also carefully in checking the References and you should avoid errors in the preparation of the Bibliography. The important thing is not just to avoid the correction of these errors afterwards, but to avoid implanting in the examiner's mind the idea that the thesis has been thrown together carelessly. It should therefore be a challenge to the student to produce a thesis which from cover-to-cover is absolutely free of these avoidable errors in English.

### 6.4 Concluding the Examining Process for Research Students

Following the examination for research students, the examiners need to sign the Examiner Report Form. The outcome of the examination will be one of the following recommendations:

- (a) the degree be awarded unconditionally

(b1) the degree be awarded subject to certain minor corrections of detail specified by the examiners. The corrections shall be carried out within one month of receipt of the specifications to the satisfaction of the supervisor.

(b2) the degree be awarded subject to certain changes specified by the examiners in the examiner report form. The revisions shall be carried out within a month and shall be confirmed by the Internal Examiner.

(c) the thesis as a whole is unacceptable. The candidate is invited to resubmit the thesis taking account of the comments of the examiners. It will be resubmitted within a timescale to be determined by the examiners.

(d) the thesis as a whole is unacceptable for the award of a doctoral degree. The candidate is invited to revise and resubmit the thesis for a M.Phil degree.

(e) no degree be awarded.

Finally after addressing all required corrections and/or revisions to the satisfaction of the supervisor or examiner(s), you should submit four hard bound copies of your thesis, which become the property of the University. The graduate school will subsequently issue an award letter and you are eligible to graduate. One copy of the thesis will be placed in the library, one in the department/faculty and one with your supervisor. Theses of the University are normally made freely available in the Malaysian University Libraries and National Library Network. Please remember enrolment is required for graduation. Forms can be obtained from SPS office.

## 6.5 Concluding the Examining Process for Students of Mixed Mode Programme

Mixed mode programmes consists of two components, i.e. taught courses and dissertation. Students are required to pass all taught courses before he could embark on research for dissertation. Table 13 shows the student's academic standing in the programmes based on his result in both dissertation and taught courses. Note that student will only be awarded the degree at the end of the study provided that he achieves CGPA  $\geq 3.0$  in the taught courses and Grade Satisfactory in his dissertation.

Table 13: Student's Academic Standing in Mixed Mode Programmes

CGPA	DISSERTATION/ RESEARCH GRADE	ACADEMIC STANDING	CONDITION TO PROCEED WITH THE STUDY	AWARD OF THE DEGREE
<b>GOOD PASS (KB)</b> CGPA $\geq 3.00$	MM	KB	QUALIFIED	QUALIFIED
	TM	KS	QUALIFIED	NOT QUALIFIED
	GG	KS	TERMINATED	NOT QUALIFIED
<b>CONDITIONAL PASS (KS)</b> $2.67 \leq \text{CGPA} < 3.00$	MM	KS	QUALIFIED	NOT QUALIFIED
	TM	KS	QUALIFIED	NOT QUALIFIED
	GG	KG	TERMINATED	NOT QUALIFIED
<b>FAIL (GG)</b> CGPA $< 2.67$	MM	KG	TERMINATED	NOT QUALIFIED
	TM	KG	TERMINATED	NOT QUALIFIED
	GG	KG	TERMINATED	NOT QUALIFIED

Notes: MM-Satisfactory; TM-Not satisfactory; GG-Fail

## 6.6 Concluding the Examining Process for Students of Taught Course Programme

Academic standing for a taught course programme student is based on cumulative grade point average (CGPA). Table 13 shows the academic standing for a taught course student. Students must maintain KB (Kedudukan Baik or Good Pass) with  $CGPA \geq 3.0$  or KS(Kedudukan Syarat or Conditional Pass) with  $2.67 \leq CGPA < 3.00$  to continue study. Getting KG (Kedudukan Gagal or Fail) with  $CGPA < 2.67$  means the study will be terminated. To be qualified for degree conferment, the academic standing must be KB.

Table 13: Academic standing for Taught Course Programme

MARKS	GRADE	POINTS	LEVEL OF ACHIEVEMENT
90 - 100	A+	4.00	EXCELLENT PASS
80 - 89	A	4.00	
75 - 79	A-	3.67	
70 - 74	B+	3.33	GOOD PASS
65 - 69	B	3.00	
60 - 64	B-	2.67	PASS
55 - 59	C+	2.33	FAIL
50 - 54	C	2.00	
45 - 49	C-	1.67	
40 - 44	D+	1.33	
35 - 39	D	1.00	
30 - 34	D-	0.67	
00 - 29	E	0.0	

## 7.0 Faculty by Research Areas

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
1.	Prof. Ir. Megat Johari bin Megat Mohd Noor	Master in Environmental Engineering (UK)	<ul style="list-style-type: none"> <li>• Membrane separation</li> </ul>
2.	Prof. Dr. Mohd Rashid bin Mohd Yusof	PhD in Chemical Engineering (Manchester University, UK)	<ul style="list-style-type: none"> <li>• Air Resources Science and Engineering</li> </ul>
3.	Prof. Dr. Tatsuo Kitajima	PhD in Electrical Engineering (Waseda University, Japan)	<ul style="list-style-type: none"> <li>• Computational Neuroscience</li> <li>• Artificial Neural Networks</li> <li>• Numerical computation algorithm</li> </ul>
4.	Prof. Dr. Toshio Wakabayashi	PhD of Engineering in Electromagnetic Wave Engineering (Tokai University, Japan)	<ul style="list-style-type: none"> <li>• Electromagnetic Analysis</li> <li>• Antenna and Propagation Engineering Microwave</li> <li>• Millimeter Wave Engineering</li> </ul>
5.	Prof. Dr. Kanao Fukuda	PhD of Engineering (Kyushu University, Japan)	<ul style="list-style-type: none"> <li>• Tribology and Precision Machining</li> </ul>
6.	Prof. Dr. Shoichiro Ikeda	PhD in Applied Chemistry (Nagoya University, Japan)	<ul style="list-style-type: none"> <li>• Applied electrochemistry</li> <li>• Functional ceramics</li> <li>• Environmental chemistry</li> <li>• Nano materials</li> <li>• Bio-electrochemistry</li> <li>• Industrial inorganic chemistry</li> </ul>
7.	Prof. Dr. Satoru Matsumoto	Bachelor Engineering (Keio University, Japan)	<ul style="list-style-type: none"> <li>• Microelectronics</li> <li>• Semiconductor Engineering</li> <li>• Fabrication Technology and Device Physics</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
		Master of Engineering (Keio University, Japan)  Doctor of Engineering (Keio University, Japan)	
8.	Prof. Datin Dr. Rubiyah bt Yusof	BSc (Hons) in Electrical and Electronics Engineering (University of Loughborough, UK)  Master Degree in Control Systems (Cranfield Inst. Of Technology, UK)  PhD in Control System (University of Tokushima, Japan)	<ul style="list-style-type: none"> <li>• Biometrics Systems</li> </ul>
9.	Prof. Dr. Rozhan bin Othman	PhD (University College Dublin, UK)	<ul style="list-style-type: none"> <li>• Competitive strategy</li> <li>• Leadership and creative behavior</li> <li>• Talent management</li> <li>• HRM</li> </ul>
10.	Prof. Dr. Datin Zuriati binti Zakaria	PhD (University of East Anglia, UK)	<ul style="list-style-type: none"> <li>• Natural products of Plants and Lichens</li> <li>• Palm oil</li> <li>• Pesticide chemistry</li> <li>• Environmental chemistry</li> </ul>
11.	Prof. Dr. Shozo Komaki	Doctor of Engineering (Osaka University, Japan)	<ul style="list-style-type: none"> <li>• Electronic and computer</li> <li>• Engineering and wireless</li> <li>• Network</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
12.	Prof. Dr Akira Kobayashi	BSc of Eng. In Mechanical Eng. , Osaka University MEng (Plasma Physics), Osaka University PhD Eng. (Plasma Physics), Osaka University	<ul style="list-style-type: none"> <li>• Functional materials processing using plasma technology – manufacturing tech., heat transfer.</li> </ul>
13.	Prof. Dr. Takashi Yamamoto	Bachelor of Engineering (The University of Tokyo, Japan)  Master of Engineering (The University of Tokyo, Japan)  Doctor of Engineering (The University of Tokyo, Japan)	<ul style="list-style-type: none"> <li>• Tribology of vehicle transmission and mechanical components.</li> <li>• Tribology of wet-clutch materials.</li> <li>• Mechanism of rolling contact fatigue.</li> <li>• Tribology of new materials.</li> <li>• International Standardization.</li> <li>• Industrial Standard.</li> <li>• Mechanical design and drawing.</li> </ul>
14.	Prof. Dr. Nooh Abu Bakar	BSc MechEnggr/Production Eng. (Brighton University)  MSc Production Technology and Production Management (University of Aston, Birmingham),  PhD Manufacturing Engineering (Loughborough University)	<ul style="list-style-type: none"> <li>• Manufacturing Engineering</li> <li>• Operations, Quality and Project Management</li> <li>• Technology and Innovation Management</li> <li>• Business Strategy and Strategic Management</li> </ul>
15.	Prof. Dr. Fuminori Kobayashi	BE, MS, PhD, all Control Engineering (Tokyo Inst. of Tech.)	<ul style="list-style-type: none"> <li>• PLLs (phase-locked loops)</li> <li>• Dynamically reconfigurable systems</li> <li>• Realtime systems</li> <li>• Circuits and systems in control and instrumentation</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
16.	Prof. Dr. Noriyuki Kuwano	BEng (Kyushu Univ), MEng Iron & Steel Engineering (Kyushu Univ), PhD Engineering (Kyushu Univ)	<ul style="list-style-type: none"> <li>• Phase transformation and microstructure control</li> <li>• Crystal growth process and defect control in compound semiconductors</li> <li>• Micro-characterization by electron microscopy</li> <li>• Kinetics of evolution in microstructure</li> </ul>
17.	Prof. Dr. Masataka Shirakashi	BEng (Tokyo Institute of Technology), MEng Mechanical Engineering (Tokyo Institute of Technology), PhD Mechanical Engineering (Tokyo Institute of Technology)	<ul style="list-style-type: none"> <li>• Flow induced vibrations</li> <li>• Non-Newtonian fluid flow</li> <li>• Energy saving and new energy</li> <li>• Snow Engineering</li> </ul>
18.	Prof. Dr. Mohamed Mahmoud El-Sayed Nasef	BSc Chem . (Minoufia Univ. Egypt), M Chem. Eng. (UTM, Malaysia), PhD Chem. Eng. (UTM, Malaysia)	<ul style="list-style-type: none"> <li>• Polymer electrolytes and fuel cell &amp; battery applications</li> <li>• Ion exchange materials and environmental applications</li> <li>• Radiation modification of polymers</li> <li>• Nanofibers and applications</li> <li>• Solid polymer catalysts and applications</li> <li>• Membranes for gas and liquid separations</li> </ul>
19.	Prof. Dr. Ezzat Chan bin Abdullah	Bachelor Degree Engineering UTM  Master of Engineering Science UM	<ul style="list-style-type: none"> <li>• Powder Technology</li> <li>• Thermal Pollution</li> </ul>



NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
		PhD in Engineering University of Bradford	
20.	Prof. Dr. Masafumi Goto	BSc. Of Sanitary Eng., Kyoto University M.Eng in Sanitary Eng., Kyoto University PhD in Environment Science and Eng., Rice University, Texas, USA	<ul style="list-style-type: none"> <li>• Mass and energy balance</li> <li>• Environment systems and engineering</li> <li>• Ecological engineering</li> </ul>
21.	Prof. Dr. Nozomu Hamada	BSc. In Electrical Eng., Keio University Master in Electrical Eng., Keio University Doctor of Eng. In Electrical Eng., Keio University	<ul style="list-style-type: none"> <li>• Digital signal processing</li> <li>• Image processing</li> <li>• Audio signal processing</li> <li>• Linear system theory and control theory</li> <li>• Analog circuit theory</li> </ul>
22.	Prof. Dr Norio Arai	BSc of Eng. , Yokohama National University Master of Eng., University of Tokyo Doct of Eng., University of Tokyo	<ul style="list-style-type: none"> <li>• Fluid dynamics</li> </ul>
23.	Prof. Dr. Norio Sugiura	BSc. Agriculture, Shinshu University, Japan PhD, Nihon University, Japan	<ul style="list-style-type: none"> <li>• Separation process</li> <li>• Bio-system engineering</li> <li>• Ecological engineering</li> </ul>
24.	Assoc. Prof. Dr. Anthony Centeno	BEng (Wales), PhD Millimeter Wave Engineering (Wales)	<ul style="list-style-type: none"> <li>• Computational Electromagnetics</li> <li>• Plasmonics</li> <li>• Electromagnetic Materials</li> <li>• Passive Microwave Devices</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
25.	Prof. Dr. Ahmad Rahman Bin Songip	BSc (Chemical Engineering, High Honors, Illinois Institute of Technology, Chicago, USA), MChE (Chemical Engineering, Illinois Institute of Technology, Chicago, USA), Dr. Eng (Chemical Engineering, Kyoto University, Japan)	<ul style="list-style-type: none"> <li>• Innovation &amp; Technology Management</li> <li>• Change Management</li> <li>• Enterprise Risk Management</li> <li>• Chemical Reaction Engineering</li> </ul>
26.	Prof. Madya Dr. Noor Azian binti Morad	PhD in Chemical Engineering (UK)	<ul style="list-style-type: none"> <li>• Palm oil: Palm biomass, properties and process.</li> <li>• Extraction process for food based and medicinal products, extraction of biowaste for value added products and</li> <li>• Cosmeceutical development</li> </ul>
27.	Prof. Madya Dr. Sabariah binti Baharun	PhD in Applied Mathematics (UTM)	<ul style="list-style-type: none"> <li>• Graph and Fuzzy Graph Modeling</li> <li>• Mathematical Thinking</li> </ul>
28.	Prof. Madya Nur'azah binti Abd. Manaf	Master in Applied Math. (Western Carolina University, USA)	<ul style="list-style-type: none"> <li>• Survival Analysis</li> <li>• Reproducing Kernel Method on Survival Data</li> <li>• Hazard/Risk Functions</li> </ul>
29.	Prof. Madya Dr. Abdul Manaf bin Hashim	Doctor of Engineering -Electronic (Hokkaido University, Japan)	<ul style="list-style-type: none"> <li>• Semiconductor based plasma wave electronic devices, sensing devices and solar energy devices</li> <li>• Germanium and compound</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
			semiconductor heteroepitaxial growth using CVD, MBE and MOVPE technology <ul style="list-style-type: none"> <li>• Nanostructures, nanodevices and their processing technologies</li> <li>• Graphene growth and their device application</li> </ul>
30.	Prof. Madya Dr. Wan Haslina binti Hassan	PhD in Electrical Engineering (UTM)	<ul style="list-style-type: none"> <li>• Computer Networks</li> <li>• Mobile Computing</li> <li>• Intelligent Architectures</li> <li>• Network Security</li> </ul>
31.	Prof. Madya Dr. Mahyudin bin Abdul Rachman	Doctor of Engineering – Biochemical Engineering (Hiroshima University, Japan)	<ul style="list-style-type: none"> <li>• Fermentation Technology</li> <li>• Biochemical engineering</li> <li>• Molecular biology</li> <li>• Fuel cell application</li> </ul>
32.	Assoc. Prof. Dr. Naoki Ohshima	B. Eng in Applied Physics (Nagoya University, Japan) MS in Crystalline Materials Science (Nagoya University, Japan) Dr. Eng in Crystalline Materials Science (Nagoya University, Japan)	<ul style="list-style-type: none"> <li>• Project Management Human Resource Development</li> <li>• Instructional System Design for Education</li> <li>• Network Analysis of Structures</li> <li>• Internet of Things</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
33.	Assoc. Prof. Hirofumi Hara	B.Eng (Nagaoka University of Technology, Japan)  M.Sc Bioengineering (Nagaoka University of Technology, Japan)  PhD Information and Control Engineering (Nagaoka University of Technology, Japan)	<ul style="list-style-type: none"> <li>• Bioengineering</li> <li>• Biochemistry</li> <li>• Applied Microbiology</li> <li>• Environmental Microbiology</li> <li>• Bioinformatics</li> </ul>
34.	Assoc. Prof. Dr Tohru Suwa	BSc. In Mechanical Eng., Saitama University MEng (Mechanical), Saitama University PhD in Mechanical Eng., Stevens Institute of Technology, USA	<ul style="list-style-type: none"> <li>• Heat Transfer</li> </ul>
35.	Dr. Aminudin bin Hj. Abu	PhD in Automotive Engineering. (Hanyang University. Seoul, Korea)	<ul style="list-style-type: none"> <li>• Noise and Vibration</li> <li>• Damage detection and Fatigue</li> <li>• Model updating</li> <li>• Sensitivity Analysis</li> <li>• Design of Experiment</li> </ul>
36.	Dr. Shahrum Shah bin Abdullah	PhD in Artificial Neural Network (London)	<ul style="list-style-type: none"> <li>• Intelligent control</li> <li>• Underwater Robotics</li> <li>• Artificial Neural Networks</li> </ul>
37.	Dr. Wira Jazair bin Yahya	PhD in Ecosystem Eng (Tokushima University, Japan)	<ul style="list-style-type: none"> <li>• Diesel engine technology</li> <li>• Diesel emission</li> <li>• Alternative fuel</li> <li>• Heat recovery systems</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
38.	Dr. Ooi Chia Yee	PhD in Information Science (NAIST. Japan)	<ul style="list-style-type: none"> <li>• Semiconductor Fault Modeling</li> <li>• Test Pattern Generation</li> <li>• Design for Testability</li> <li>• System-on-Chip</li> <li>• Test and Verification</li> </ul>
39.	Dr. Pauziah binti Muhamad	PhD in Mechanical Engineering (Sheffield,UK)	<ul style="list-style-type: none"> <li>• Nonlinear System identification in Structural Vibration</li> <li>• Structural Health Monitoring for damage detection</li> <li>• Smart material- Magnetoreological (MR) and Electrorheological (ER) fluids applications</li> <li>• Vibration damper and active Suspension system</li> </ul>
40.	Ir. Dr. Saiful Amri bin Mazlan	PhD (Dublin, UK)	<ul style="list-style-type: none"> <li>• Active Suspensions</li> <li>• Automotive Active Safety</li> <li>• Smart Materials</li> <li>• Magnetorheological Fluids</li> </ul>
41.	Dr. Toh Hoong Thiam	PhD Engineering Mechanics (USA)	<ul style="list-style-type: none"> <li>• Computational Fluid Dynamics</li> <li>• Finite Element Analysis</li> <li>• Wave Propagation in Fluid and Solid Media</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
42.	Dr. Nurulbahiyah binti Ahmad Khairudin	PhD in Pharmaceutical Technology (USM)	<ul style="list-style-type: none"> <li>• Molecular Simulations</li> <li>• Structural Bioinformatics</li> </ul>
43.	Dr. A.K.M Muzahidul Islam	PhD in Computer Science and Engineering (Japan)	<ul style="list-style-type: none"> <li>• Algorithm</li> <li>• Wireless Sensor Network</li> <li>• Communication Protocol</li> <li>• Network Security</li> <li>• Cloud Computing</li> <li>• Cognitive Radio Networks</li> </ul>
44.	Dr. Muhamad Kamal bin Mohammed Amin	PhD in (Aberdeen University, Scotland)	<ul style="list-style-type: none"> <li>• Spiking Neuron models</li> <li>• Bio-inspired Machine Learning</li> <li>• Modular Neural Networks</li> <li>• Engineering Education</li> </ul>
45.	Dr. Rory Padfield	PhD in Geography (UK)	<ul style="list-style-type: none"> <li>• Environmental Management and Policy</li> <li>• Water Resource Management</li> </ul>
46.	Dr. Hafizal bin Yahaya	PhD in Materials Science Engineering (Kyushu University, Japan)	<ul style="list-style-type: none"> <li>• Thin film growth</li> <li>• Epitaxial growth</li> <li>• Semiconductor nano-structure</li> <li>• Bio-sensor</li> </ul>
47.	Dr. Sheikh Ahmad Zaki bin Shaikh Salim	PhD in Energy & Environmental Engineering (Kyushu Univ. Japan)	<ul style="list-style-type: none"> <li>• Urban Climatology</li> <li>• Heat Island</li> <li>• Building Physics</li> <li>• Wind Engineering</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
48.	Dr. Rasli bin Abd. Ghani	PhD in Power Distribution System (UKM)	<ul style="list-style-type: none"> <li>• Power System Analysis</li> <li>• Fault Location Analysis</li> <li>• Neural Network and Fuzzy Logic Prediction</li> <li>• High Voltage Study</li> <li>• Lightning Study</li> </ul>
49.	Dr. Mohamed Sukri bin Mohd. Ali	PhD in Mechanical Engineering (Aeroacoustics), (University. of Adelaide, Australia)	<ul style="list-style-type: none"> <li>• Aerodynamics: Bluff bodies, helicopter main rotor blade, rocket.</li> <li>• Aeroacoustics: Bluff bodies.</li> <li>• Computational Fluids Dynamics (CFD).</li> </ul>
50.	<u>Dr. Azran Azhim Noor Azmi</u>	Dip Eng (Japan), BEng (Japan), MEng (Japan), Dr. Eng. in Biomedical Eng. (Japan)	<ul style="list-style-type: none"> <li>• Bio-signal Processing</li> <li>• Bioelectronics and Bioinstrumentation</li> <li>• Systems Biology for Tissue Engineering</li> <li>• Biomaterials based on Regenerative Medicine</li> </ul>
51.	<u>Dr. Mohd Fawazi Noor Rudin</u>	Diploma Associate of Eng., Dongyang Mirae University BSc in Mechanical Eng., Hanyang University, Korea PhD in Mechanical Eng., Hanyang University, Korea	<ul style="list-style-type: none"> <li>• Applied Mechanics</li> </ul>
52.	<u>Dr. Fawzi Mohamed Amin Elfagaih</u>	BSc. Chemical Engineering (BSUT), MSc. (Liverpool Uni-LCIC) Chemistry, MSc Chemical Eng.(UTM) Malaysia, PhD. Chemical Eng. (UTM) Malaysia.	<ul style="list-style-type: none"> <li>• Applied Heterogeneous &amp; nanocatalysis and their supports</li> <li>• Process Modeling and Optimization (RSM&amp;ANN).</li> <li>• Oil and Gas (Crude Assay,</li> </ul>

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			Hydrotreatment, Hydorcracking, FCC, Naphtha Reforming, GTL). <ul style="list-style-type: none"> <li>• Design of Experiment (DOE-CCRD/CCOD/FCCD).</li> <li>• Renewable Energy.</li> </ul>
53.	Dr. Sumiaty binti Ambran	Sarjana Sains Kejuruteraan Telekomunikasi dan Maklumat (UiTM)	<ul style="list-style-type: none"> <li>• Telecommunication</li> <li>• Opto Electronics</li> </ul>
54.	Dr. Siti Rahmah bt Aid	Bachelor of Engineering (Keio University, Japan) Master of Science in Engineering (Keio University, Japan) PhD in Engineering (Keio University, Japan)	<ul style="list-style-type: none"> <li>• Microelectronics (Semiconductor Device and Process Engineering)</li> </ul>
55.	Dr. Nor'Azizi bin Othman	BSc. Mechanical Engineering (Seoul National University, Korea) MEng (UTM ) PhD (Kyushu University, Japan)	<ul style="list-style-type: none"> <li>• Biomas and biochar gasification</li> <li>• Biomass and biochar combustion</li> <li>• Activated carbon</li> <li>• Transport engineering</li> <li>• Renewal energy</li> </ul>
56.	Dr. Aung Lwin Moe	B. Eng in Mechanical (Yangon Technological University) M.Eng in Mechanical	<ul style="list-style-type: none"> <li>• Super Precision Machining</li> <li>• Lapping for Mirror-like surface Finishing</li> <li>• Tribology</li> </ul>



NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
		(Yangon Technological University) D. Eng in Information Science & Control Engineering (Nagaoka University of Technology)	<ul style="list-style-type: none"> <li>• Vehicle Dynamics (suspension)</li> </ul>
57.	Dr. Akbariah binti Mohd Mahdzir	Bachelor Ed. (TESL) UKM M.A. ELT PHD Education (Testing and Measurement)	<ul style="list-style-type: none"> <li>• Measurement &amp; Evaluation Education</li> </ul>
58.	Dr. Muhammad Ali Tareq	Bachelor in Business Administration (BBA) University of Dhaka Master of Business Administration (MBA) University of Dhaka Mphil in Real Estate Finance Cambridge University, UK PhD in Business Administration (Finance) Shiga University, Japan	<ul style="list-style-type: none"> <li>• Finance &amp; Banking</li> <li>• Accounting</li> <li>• Real Estate Finance</li> </ul>
59.	Dr. Mohd Azizi bin Abdul Rahman	BEng. (Hons) in Electrical Eng., Liverpool University, UK MSc. In Control and Automation , Universiti Putra Malaysia PhD in Functional Control System, Shibaura Institute of Technology, Japan	<ul style="list-style-type: none"> <li>• Electrical and Electronics</li> </ul>
60.	Dr. Azura Hamzah	BEng (Communication), IIUM MEng (Telecommunication), UM PhD in Fiber Optic Communication, UM	<ul style="list-style-type: none"> <li>• Fibre Optic communication</li> </ul>

NO.	NAME	ACADEMIC QUALIFICATION	RESEARCH AREA
61.	Ms. Nor Ruwaidah Jamian (On study leave)	B.Eng. Chemical Eng., UTM M.Eng. Chemical Eng., UTM	<ul style="list-style-type: none"> <li>• Air pollution control</li> <li>• Environmental engineering</li> </ul>
62.	Marina binti Lias	Master in Met (University of Sheffield, UK)	<ul style="list-style-type: none"> <li>• Lead-free solder</li> <li>• Powder metallurgy</li> <li>• Metal-matrix composites</li> </ul>
63.	Nordinah binti Ismail	Master in Electrical Engineering (UTM)	<ul style="list-style-type: none"> <li>• RTL Design of Digital System,</li> <li>• Hardware synthesis,</li> <li>• Parallel processing,</li> <li>• Computer Architecture design &amp; methodology</li> </ul>
64.	Ms. Effie Papargyropoulou	Master in Environmental Engineering (UK)	<ul style="list-style-type: none"> <li>• Sustainable consumption and production</li> <li>• Sustainable solid waste management</li> <li>• Food waste prevention</li> <li>• Biomass utilization</li> </ul>
65.	Mr. Mohd Fitri Mohd Yakub (on Study leave)	Beng. Electronic, UTM MSc Mechatronic, IIUM	<ul style="list-style-type: none"> <li>• Control Systems</li> <li>• Artificial Intelligent</li> </ul>
66.	Ms. Uswah Khairuddin (on study leave)	Beng. IIUM Master of Electrical Eng., UTM	<ul style="list-style-type: none"> <li>• Artificial Intelligence</li> <li>• Data Mining</li> <li>• Engineering Design</li> </ul>