



UNIVERSITI  
MALAYA

FACULTY OF BUILT ENVIRONMENT  
UNIVERSITI MALAYA

POSTGRADUATE

HANDBOOK

2021/2022

MacBook Pro

## DEAN'S MESSAGE

*UM is constantly climbing up the ladder in the global rankings of universities and is highly recognized worldwide as one of the top universities in the world*

*The latest Asian University Rankings showed that University of Malaya has improved its ranking from 13 in 2020 to 9 in 2021. With this improvement, UM is now within the top 1% percent of World's Universities.*

Assalamu'alaikum Warahmatullahi Wabarakatuh and Selamat Sejahtera.



Congratulations and welcome new students of the Faculty of Built Environment (FBE), a truly extraordinary group of students who are enrolled in the era of Covid19 pandemic. On behalf of the entire FBE community, I am thrilled that you will be coming to FBE and joining us to explore a new experience of your life.

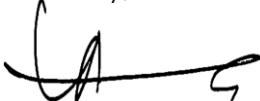
I know you are preparing for the start of your university experience under a particularly challenging set of conditions. Throughout the past few months, you have shown great resilience in creating new traditions and finding alternate ways to celebrate cherished milestones with the new normal. Even as the Covid-19 continues to transform our world, the FBE community spirit remains as strong and as vital as ever. The entire university community has responded to these recent challenges with ingenuity, compassion and a shared commitment to our mission. We are eager for you to join us and engage in FBE's transformative education, and we know that you are eager for information about what your FBE experience will look like under these unique circumstances. While your first semester at FBE will look different from our previous semesters, please know that we are committed to designing and delivering an outstanding experience for you this time.

The FBE offers a comprehensive range of degree programs that are distinctive within Malaysia and South East Asia Region. All programs are accredited by the Malaysian Qualifying Agency (MQA), local and international professional bodies. The programs bring theory to practice through rigorous curricula led by experts in their fields, providing opportunities for students to excel academically and professionally. Hence, the broad range of programs provide unique research, teaching and learning opportunities tailored to undergraduate in an environment which enables intellectual risk, choice and critical rigour to flourish.

The FBE welcomes you again into this vibrant environment where you will be part of a diverse student body in which students are holistically developed as confident, innovative, knowledgeable and future ready professionals. Finally, I want to reiterate that the safety of you is of the utmost importance. While keeping that foremost in our thoughts, we can continue to work together, remain determined, and move towards a better tomorrow.

Good luck and enjoy your studies! We cannot wait to meet you!

Sincerely,



**PROFESSOR DR SR ANUAR ALIAS**

Dean

## TABLE OF CONTENTS

|   |           |
|---|-----------|
| <b>Dean's Message</b>                           | ii        |
| <b>Table of Contents</b>                        | iii       |
| <b>About the Universiti Malaya</b>              | 1         |
| <b>About the Faculty of Built Environment</b>   | 2 - 3     |
| <b>Vision, Mission and Objectives</b>           | 4 - 5     |
| <b>Administrative Management Chart</b>          | 6         |
| <b>Academic Calendar 2021/2022 Session</b>      | 7         |
| <b>Calendar 2021 &amp; 2022</b>                 | 8         |
| <br>  |           |
| <b>Staff Directories</b>                        | 9 - 41    |
| <br>  |           |
| <b>General Information</b>                      | 42 - 50   |
| <br>  |           |
| <b>Support Services</b>                         | 51 - 55   |
| <br>  |           |
| <b>Academic Programmes</b>                      |           |
| Doctor of Philosophy                            | 56 - 61   |
| Master of Built Environment                     | 62 - 67   |
| Master of Real Estate                           | 68 - 75   |
| Master of Project Management                    | 76 - 85   |
| Master of Facilities and Maintenance Management | 86 - 93   |
| Master of Architecture                          | 94 - 105  |
| <br>  |           |
| <b>Miscellaneous Information</b>                | 106 - 108 |
| <br>  |           |
| <b>Campus Map</b>                               | 109       |

## ABOUT THE UNIVERSITI MALAYA



The **Universiti Malaya (UM)** is a public research university located in Kuala Lumpur, Malaysia. It is the oldest university in Malaysia and is the highest ranking Malaysian institution of higher education according to several international ranking agencies. The university has graduated two Prime Ministers of Malaysia and other political, business, and cultural figures of national prominence.

The predecessor of the university, King Edward VII College of Medicine, was established on 28 September 1905 in Singapore, then a territory of the British Raj. In October 1949, the merger of the King Edward VII College of Medicine and Raffles College created the university. Rapid growth during its first decade caused the university to organize as two autonomous divisions on 15 January 1959, one located in Singapore and the other in Kuala Lumpur.

In 1960, the government of Malaysia indicated that these two divisions should become autonomous and separate national universities. One branch was located in Singapore, later becoming the National University of Singapore after the independence of Singapore from Malaysia, and the other branch was located in Kuala Lumpur, retaining the name Universiti Malaya. Legislation was passed in 1961 and the University of Malaya was established on 1 January 1962. In 2012, UM was granted autonomy by the Ministry of Higher Education.

Today, UM has more than 2,500 academic staff and 3,500 non-academic staff and divided into 14 faculties, two academies and three academic centres. In 2021 QS World University Rankings, UM ranked at 59<sup>th</sup> in the world, 9<sup>th</sup> in Asia, 3<sup>rd</sup> in Southeast Asia and the highest ranked learning institution in Malaysia



## ABOUT THE FACULTY OF BUILT ENVIRONMENT



**The Faculty of Built Environment (FBE;** Malay: *Fakulti Alam Bina*) offers five undergraduate professional programmes tailored to meet the nation's construction and real estate sectors' manpower needs. These programmes are accredited at the national and international levels.

The Faculty of Built Environment (FBE) offers five undergraduate professional programmes tailored to meet the nation's construction and real estate sectors' manpower needs. These programmes are accredited at the national and international levels.

The Bachelor of Science in Architecture programme is accredited with Part I recognition by the Board of Architects Malaysia (LAM).

The same programme is also accredited by the Royal Institute of British Architecture (RIBA, UK) since 2005, which also leads to its Part I accreditation. This recognition is considered an achievement as it is the first programme in Malaysia recognised by RIBA and one of only five universities in East Asia.

The Bachelor of Building Surveying programme was developed based on the Programme Standards: Building Surveying by Malaysian Qualifications Agency (MQA). The programme is accredited by the Royal Institution of Surveyors Malaysia (RISM) and the Royal Institution of Surveyors (RICS, UK).

Meanwhile, the Bachelor of Real Estate programme is accredited by the Board of Valuers, Appraisers, Estate Agents and Property Managers, Malaysia (BOVEAP) as well as Royal Institution of Chartered Surveyors (RICS, UK).

FBE's Bachelor of Quantity Surveying programme earned its accreditation from the Board of Quantity Surveyors Malaysia (BQSM). Additionally, the programme is also accredited by the Royal Institution of Chartered Surveyors (RICS, UK) since 2004 as well as the Pacific Association of Quantity Surveyors (PAQS) since 2017. This programme was the first in Malaysia to receive the RICS accreditation and the second programme from public university accredited by PAQS.

Established in 2011 the Bachelor of Urban and Regional Planning is the fifth undergraduate programme in FBE and is accredited by the Board of Town Planners Malaysia (BTPM).

Since its establishment 24 years ago, FBE has always managed to attract the best achievers from high schools as well as from foundation and matriculation centres. Additionally, FBE also receives applications from other countries. This is well reflected by the high entry point requirements needed for candidates to be considered for intake. Some of our students have shown their achievements and competitiveness by winning numerous awards and medals both locally and internationally. In addition, our students also have an opportunity to be part of outbound exchange programmes abroad and to experience cross-cultural learning from international inbound students.

FBE's graduates are not only highly demanded in Malaysia but also regularly employed in different parts of the world such as the United Kingdom, Canada, Australia, New Zealand, the Middle East countries, African countries, Singapore, China, Hong Kong SAR, Pakistan, Bangladesh, Brunei and Indonesia, to name a few. Thus, FBE is at the forefront of training students with a high degree of international recognition consistent with national aspirations of creating 'Globalised Malaysians'.

The FBE offers two (2) postgraduate research programmes namely Doctor of Philosophy (PhD) in Built Environment and Master of Built Environment. Additionally, FBE also offers four (4) master by coursework programmes namely Master of Real Estate (MRE), Master of Project Management (MPM), Master of Facilities and Maintenance Management (MFMM) and also Master of Architecture (M.Arch). Both MRE and MFMM programmes are accredited by the RICS (UK) while its 2-year M.Arch programme leads to Part II recognition by LAM and RIBA.

The challenges faced by FBE in the oldest and most prestigious university in Malaysia have inspired it to be regarded as a centre of excellence in the development and dissemination of knowledge and professionalism in the field of the built environment, both nationally and regionally. The FBE has occupied the 10-storey Mercu Alam Bina since October 2012, which is a state-of-the-art building while transforming it as a living lab for research.

## **VISION, MISSION AND OBJECTIVES**

### **UNIVERSITI MALAYA**

#### **VISSION**

A global university impacting the world.

#### **MISSION**

*Pushing the boundaries of knowledge and nurturing aspiring leaders*

#### **CORE VALUES**

|   |   |           |
|---|---|-----------|
| P | : | Passion   |
| O | : | Oneness   |
| I | : | Integrity |
| S | : | Sincerity |
| E | : | Empathy   |

#### **QUALITY POLICY**

*Universiti Malaya is committed to conduct teaching and learning, carry out research and provide quality services on a global level, generate and enhance knowledge through continuous improvement efforts for the benefit of all stakeholders, especially Universiti Malaya's students.*

# **FACULTY OF BUILT ENVIRONMENT**

## **VISION**

*To be an internationally renowned Faculty of Built Environment in research, innovation, publication and teaching*

## **MISSION**

*To advance knowledge and learning through quality research and education for the nation and for humanity*

## **OBJECTIVES**

- *To be the centre of excellence in the built environment studies and to meet the demands of the construction industry in producing a responsible and competent professionals in the future.*
- *To create a healthy and conducive intellectual environment, equipping its graduates in the ever rapidly changing future.*
- *To strengthen research centres, in line with its position as the leading university in Malaysia, recognised on the territorial, national and international levels.*
- *To contribute knowledge and give consultation to society and the nation in the field of built environment for the development and the well-being of the world.*



# ADMINISTRATIVE MANAGEMENT CHART



# ACADEMIC CALENDAR 2021/2022 SESSION

## SEMESTER I

|                              |          |                         |
|------------------------------|----------|-------------------------|
| Course Registration (Module) | 2 weeks  | 24.09.2021 – 08.10.2021 |
| Lectures                     | 7 weeks* | 18.10.2021 – 05.12.2021 |
| Mid Semester Break I         | 1 week   | 06.12.2021 – 12.12.2021 |
| Lectures                     | 7 weeks* | 13.12.2021 – 30.01.2022 |
| Revision Week                | 1 week   | 31.01.2022 – 20.02.2022 |
| Examination Semester I       | 2 weeks  | 07.02.2022 – 13.03.2022 |
| Semester Break               | 3 weeks  | 21.02.2022 – 13.03.2022 |

23 weeks

## SEMESTER II

|                              |          |                         |
|------------------------------|----------|-------------------------|
| Course Registration (Module) | 2 weeks  | 18.02.2022 – 04.03.2022 |
| Lectures                     | 7 weeks* | 14.03.2022 – 01.05.2022 |
| Mid Semester Break II        | 1 week   | 02.05.2022 – 08.05.2022 |
| Lectures                     | 7 weeks* | 09.05.2022 – 26.06.2022 |
| Revision Week                | 1 week   | 27.06.2022 – 03.07.2022 |
| Examination Semester II      | 2 weeks* | 04.07.2022 – 17.07.2022 |

20 weeks

## SEMESTER BREAK

|                |         |                         |
|----------------|---------|-------------------------|
| Semester Break | 9 weeks | 18.07.2022 – 18.09.2022 |
|----------------|---------|-------------------------|

## SPECIAL SEMESTER

|                              |          |                         |
|------------------------------|----------|-------------------------|
| Course Registration (Module) | 1 week   | 01.07.2022 – 08.07.2022 |
| Lectures                     | 7 weeks* | 18.07.2022 – 04.09.2022 |
| Examination Special Semester | 1 week   | 05.09.2022 – 11.09.2022 |
| Special Semester Break       | 1 week   | 12.09.2022 – 18.09.2022 |

10 weeks

## Malaysia Public Holiday

*National Day (31 August 2021)*  
*Malaysia Day (16 September 2021)*  
*Maulidur Rasul (19 October 2021)*  
*Deepavali (4 November 2021)*  
*Christmas Day (25 December 2021)*  
*New Year (1 January 2022)*  
*Thaipusam (18 January 2022)*  
*Federal Territory Day (1 February 2022)*

*Chinese New Year (1 & 2 February 2022)*  
*Nuzul Al-Quran (19 April 2022)*  
*Labour Day (1 May 2022)*  
*Eidul Fitri (2 & 3 May 2022)*  
*Wesak Day (15 May 2022)*  
*His Majesty's King's Birthday (6 June 2022)*  
*Eidul Adha (9 July 2022)*  
*Awal Muharam (30 July 2022)*  
*National Day (31 August 2022)*





# **STAFF DIRECTORIES**

## DEAN'S OFFICE



### **PROFESSOR DR. Sr ANUAR ALIAS**

*PhD (Property Development and Environment), UM  
MSc (Project Management), USM  
B.Surv. (Hons) (Property Management), UTM  
Diploma (Valuation), UTM  
PGCert. (Professional Development), UCONN  
Registered Valuer & Estate Agent  
MRISM, MMIPPM*

Dean

Tel: 03-7967 5395/ 03-7967 6835

e-mail: anuar\_a@um.edu.my



### **NORHAYATI BINTI MAT**

Office Secretary

03 – 7967 5395

yatiey@um.edu.my



### **INTAN SHAFURA BINTI ABDULLAH**

*B. Corporate Admin, Universiti Teknologi MARA (UiTM)  
Dip. Public Admin, Universiti Teknologi MARA (UiTM)*

Assistant Administrative Officer

03 – 7967 5320

intansha@um.edu.my



### **NORAZMAH OSMAN**

Senior Administrative Assistant (Financial)

03 – 7967 5334

azmah@um.edu.my



### **NURFARAH MOHD AMIN**

Administrative Assistant (Financial)

03 – 7967 5334

farrah@um.edu.my



### **NORHISHAM MOHAMED HALIM**

Senior Assistant Administrative (Clerical & Operational)

03-7967 6889

shamz@um.edu.my



### **ZAINAL BIN MUSA**

Senior Operational Assistant

03 – 7967 7955

zaenal@um.edu.my





**MOHAMMAD BIN RENTAH**

Operational Assistant

03 – 7967 7955

zezul@um.edu.my

## DEPUTY DEAN (POSTGRADUATE) OFFICE



### **PROFESSOR DR. Sr Ts AZLAN SHAH ALI**

PhD Built Environment (Building Refurbishment), Universiti Teknologi MARA  
MSc (Real Estate & Property Mgmt), University of Salford, UK  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
B (Hons) (Building Surveying), Institut Teknologi MARA  
Prof. Dip. (Property Management Valuation Surveying), RISM  
Dip (Estate Management), Institut Teknologi MARA  
Chartered Surveyor, P.Tech. (Building & Construction, Registered Property Manager  
FRISM, FRICS, MSET

Deputy Dean (Higher Degrees)

Tel: 03-7967 4494

e-mail: tdit\_fab@um.edu.my , asafab@um.edu.my



### **MOHD NORAZLIN BIN MANSOR**

MA (Communication), Universiti Putra Malaysia (UPM)  
B. Communication, Universiti Putra Malaysia (UPM)  
Dip. Technology Management, Universiti Teknologi Malaysia (UTM)

Senior Assistant Registrar (Higher Degrees)

03-7967 4449

muhammad@um.edu.my



### **NABILAH BINTI AHMAD**

Assistant Office Secretary

03 – 7967 6880

nabilahahmad@um.edu.my



### **NORIZAN BINTI ABD. RAJI**

Senior Administrative Assistant (Master by Coursework)

03 – 7967 5320

norizanabd@um.edu.my



### **NORIZAN MAT SAMAN**

Senior Administrative Assistant (Master by Research)

Tel: 03-7967 6807

e-mail: izan2080@um.edu.my



### **JUNITA BINTI HALIM**

Administrative Assistant (Doctor of Philosophy)

Tel: 03-7967 5320

e-mail: june1981@um.edu.my

## POSTGRADUATE PROGRAMMES COORDINATOR



### **Sr DR. KHO MEI YE**

#### *Coordinator for Doctor of Philosophy*

PhD (Project Management), Universiti Malaya  
MSc (Building), Universiti Malaya  
B. (Hons) Quantity Surveying, Universiti Malaya  
Reg. Professional QS (BQSM), MRISM

Tel : 03-7967 2457

e-mail: meiye@um.edu.my



### **ASSOCIATE PROFESSOR DR. NORHANIM ZAKARIA**

#### *Coordinator for Master programmes*

PhD (Real Estate/Project Management), Universiti Teknologi Malaysia  
MSc (Construction Management), Universiti Teknologi Malaysia  
B (Hons) Quantity Surveying, Universiti Teknologi Malaysia  
Diploma in Quantity Surveying, Universiti Teknologi Malaysia  
Reg. Provisional QS (BQSM), MIVMM, Graduate Member (RISM)

Tel : 03-7967 6875

e-mail : norhanimz@um.edu.my



### **ASSOCIATE PROFESSOR Sr DR. NORHAYATI MAHYUDDIN**

#### *Coordinator for Open & Distance Learning (ODL)*

PhD (Indoor Air Quality), University of Reading, UK  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
BSc (Hons) (HBP-Architecture), University Science Malaysia  
MISIAQ, MRISM, MBEng

Tel: 03-7967 6860

e-mail: hayati@um.edu.my



### **DR. ZAIRUL NISHAM MUSA**

#### *Coordinator for Master of Real Estate (by Coursework)*

PhD [Built Environment (Facilities Management)], Liverpool John Moores University, UK  
MSc. (Facilities Management), University of Greenwich, UK  
BSc. (Hons) (Estate Management), University of Luton, UK  
Diploma (Valuation), UTM

Tel: 03-7967 4490

e-mail: zairul@um.edu.my



### **Sr DR. LOO SIAW CHUING, PQS**

#### *Coordinator for Master of Project Management (by Coursework)*

PhD (Project & Construction Management), Universiti Malaya  
MSc (Building), Universiti Malaya  
B (Hons) Quantity Surveying, Universiti Malaya  
Reg. Professional QS (BQSM), MRISM

Tel : 03-7967 7959

e-mail : siawchuing@um.edu.my



### **DR. SHIRLEY CHUA JIN LIN**

#### *Coordinator for Master of Facilities & Maintenance Management (by Coursework)*

PhD (Asset & Facilities Management), University of Malaya  
B (Hons) (Building Surveying), University of Malaya  
Graduate Member RISM

Tel : 03-7967 7952

e-mail: shirleychua88@um.edu.my



**DR. NORAFIDA AB GHAFAR**

*Coordinator for Master of Architecture (by coursework)*

*PhD (Sustainable Architecture), University of Nottingham, UK*

*MA (Urban Design), Oxford Brookes University, UK*

*Pg.Dipl. (Architecture), Oxford Brookes University, UK*

*Pg.Dipl. (Urban Design), Oxford Brookes University, UK*

*Dipl. (Architecture), Institute Technology MARA*

**Tel: 03- 7967 5392**

**E-mail: [norafida@um.edu.my](mailto:norafida@um.edu.my)**

## DEPUTY DEAN (UNDERGRADUATE) OFFICE



### **ASSOCIATE PROFESSOR TPr. DR. GOH HONG CHING**

*Dr. rer. nat., Rheinische Friedrich-Wilhelms-Universitaet Bonn, GERMANY  
M. Sc. (Tourism Planning) UTM*

*B. URP, UTM*

*Corporate Member of the Malaysian Institute of Planners*

*Registered Town Planner of the Board of Town Planners Malaysia*

**Deputy Dean (Undergraduate)**

**Tel: 03-7967 5372**

**e-mail: gohhc@um.edu.my**



### **NOR AZLINA ABDULLAH**

*B.MC (Hons.)(PR), Universiti Teknologi MARA (UiTM)*

*Dip.Secretarial Science, Institut Teknologi MARA (ITM)*

**Senior Assistant Registrar**

**03 - 7967 5394**

**inazlina@um.edu.my**



### **SALMIZAH SAMSUDIN**

*Dip. Office Management & Technology, Universiti Teknologi MARA (UiTM)*

**Office Secretary**

**03 – 7967 5372**

**miza\_s@um.edu.my**

Supported by Administrative Staff from Departments



### **HASNITA MOHD ZHARI**

**Senior Administrative Assistant (Clerical and Operational)**

**Department of Architecture**

**03 – 7967 6899**

**hasrh@um.edu.my**



### **NORLEELA AHMAD**

**Senior Administrative Assistant (Clerical and Operational)**

**Department of Real Estate**

**Tel : 03 – 7967 6856**

**e-mail: norlela\_a@um.edu.my**



### **ROSAIDA ZEBEDI**

**Senior Administrative Assistant (Clerical and Operational)**

**Department of Urban and Regional Planning**

**03 – 7967 6856**

**rose\_aida@um.edu.my**





**SILA BALAKERSNAN**

*B. Public Management, Universiti Utara Malaysia (UUM)*

Administrative Assistant (Clerical and Operational)  
Department of Building Surveying  
03 – 7967 6856  
sila@um.edu.my



**MOHD NAZRI ABU SAMAH**

Administrative Assistant (Clerical and Operational)  
Department of Quantity Surveying  
03 – 7967 6841  
nazri7069@um.edu.my

## DEPUTY DEAN (RESEARCH & DEVELOPMENT) OFFICE



### DR. ASRUL MAHJUDDIN RESSANG AMINUDDIN

PhD (Architecture), University of Northham, UK (2018)  
M.Sc (Construction Management), Institute Technology Mara  
Pg.Dipl. (Architecture), Polytechnic of Central London, UK  
Canterbury College of Art (RIBA Part I)  
Dipl. (Architecture), University Technology Malaysia  
Deputy Dean (Research & Development)  
03 – 7967 7673  
asrulmahjuddin@um.edu.my



### AFIDAH ADIAT

Office Secretary  
03 – 7967 7673  
cdah@um.edu.my

## RESEARCH & PUBLICATIONS



### NOR AZLINA ABDULLAH

B.MC (Hons.)(PR), Universiti Teknologi MARA (UiTM)  
Dip.Secretarial Science, Institut Teknologi MARA (ITM)  
Senior Assistant Registrar  
03 - 7967 5394  
inazlina@um.edu.my



### NUR SHUHADA HILAL

BSc (Physics), Universiti Teknologi MARA (UiTM)  
Dip.Sc (Physics), Universiti Teknologi MARA (UiTM)  
Assistant Science Officer  
03- 7967 6889  
nurshuhadahilal@um.edu.my



### NURULFAZILA MOHD SAJUTI

BSc (Applied Chemistry), Universiti Teknologi MARA (UiTM)  
Dip.Science, Universiti Teknologi MARA (UiTM)  
Assistant Science Officer  
03- 7967 7610  
nurulms@um.edu.my

## DEVELOPMENT



### MOHD NORAZLIN MANSOR

MA(Communication), Universiti Putra Malaysia (UPM)  
B.Communication, Universiti Putra Malaysia (UPM)  
Dip.Technology Management, Universiti Teknologi Malaysia (UTM)  
Senior Assistant Registrar  
03-7967 4449  
muhammad@um.edu.my



**HAMISAH BINTI REDWAN**

Senior Assistant Information Technology Officer  
03 – 7967 6857  
hamisah@um.edu.my



**MOHD FARHAN IBRAHIM**

Assistant Information Technology Officer  
03- 7967 4498  
frhan@um.edu.my



**MOHD ANNUAR JA'AFAR**

Assistant Information Technology Officer  
03- 7967 4498  
annuar@um.edu.my



**MUHAMMAD DAIM ZUHAIR CHE MAT**

*BSc (Hons.)Architecture, Universiti Kebangsaan Malaysia (UKM)  
Dip.Architecture, PolIPD*

Assistant Architecture Officer  
03-7967 6857  
daim@um.edu.my



**SUHAIMI BIN MUSTAPHA**

Assistant Engineer  
03-7967 5374  
sumaimie@um.edu.my



**AHMAD FAUZI MOHAMMAD ASHRI**

Assistant Engineer  
03 – 7967 6887  
ahmadfauzi@um.edu.my

# DEPARTMENT OF ARCHITECTURE

## HEAD OF DEPARTMENT



### **Ar DR. HELENA AMAN HASHIM**

*PhD, University of Malaya  
B.Arch, University of Miami, USA  
APAM, LAM Professional Architect*

Tel: 03-7967 6373/ 6839

E-mail: helena@um.edu.my

### Area(s) of Expertise

- Cultural Heritage
- Building Conservation
- Heritage Policy & Guidelines
- Inventory
- Cultural Mapping and History
- Materials

## PROFESSOR



### **PROFESSOR DR. YAHAYA AHMAD, D.J.N (PP)**

*PhD (Conservation Management), University of Liverpool, UK  
MA (Architecture), Washington University, USA  
MConst Mgmt., Washington University, USA  
BA, Washington University, USA  
Registered Conservator, MRISM*

Tel: 03-7967 5395

E-mail: yahaya@um.edu.my

### Area(s) of Expertise

- Vernacular Architecture (vernacular Architecture)
- Conservation of Historic Buildings (conservation, Heritage, Historic)
- Conservation Management (conservation Policy, Management)

## ASSOCIATE PROFESSORS



### **ASSOCIATE PROFESSOR DR. NAZIATY MOHD YAACOB**

*PhD (Universal Design), University of Salford, UK  
MSc (Architecture), University of College London, UK  
PG Dipl (Architecture), North London Polytechnic, UK  
BA(Architecture), Leicester Polytechnic, UK  
Dipl. (Architecture), University Technology Malaysia  
LAM/RIBA Part I & II*

Tel: 03-7967 5396

E-mail: naziaty@um.edu.my

### Area(s) of Expertise

- Design Studio Practice (sustainable Design, Ecological Design, Sustainable Design in Education & Practice)

- History and Philosophy of Sciences & Technology (architecture Theory & Philosophy)
- Tertiary Education (architectural Education, Experiential Learning, Studio-based Learning)



### **ASSOCIATE PROFESSOR DR. HAZREENA HUSSEIN**

*PhD (Landscape Architecture), Edinburgh College of Art, UK  
MA (Landscape Research), Manchester Metropolitan University, UK  
PG Dipl. (Landscape Architecture), University of Sheffield, UK  
BA (Hons) Landscape Design, Manchester Metropolitan University, UK  
Dipl. Seni (Rupabumi), Institute Technology Mara*

Tel: 03-7967 7674

E-mail: reenalambina@um.edu.my

#### Area(s) of Expertise

- Person-environment Interactions
- Inclusive Access to Outdoor Environments
- Multi-sensory Stimulation Environments



### **ASSOCIATE PROFESSOR DR. Ts NAZLI CHE DIN**

*PhD (Engineering), Oita University, Japan  
M.Eng. (Architecture), Oita University, Japan  
B.Eng (Architecture), Oita University, Japan*

Tel: 03-7967 7602

E-mail: nazlichedin@um.edu.my

#### Area(s) of Expertise

- Acoustics (building Acoustics)
- Noise Pollution (noise)
- Architectural & Environmental (sustainability)



### **ASSOCIATE PROFESSOR DR. PAYAM SHAFIGH**

*PhD (Structural Engineering & Materials), University of Malaya  
MSc (Structural Engineering), University of Mazandaran, Iran  
BSc (Civil Engineering), University of Mazandaran, Iran*

Tel: 03-7967 2464

e-mail: pshafigh@um.edu.my

#### Area(s) of Expertise

- Structural Engineering (Concrete Technology)
- Structural Engineering (Concrete Structure)
- Structural Engineering (Concrete Composite)
- Structural Engineering (Concrete Pavement)



## ASSOCIATE PROFESSORS (INDUSTRY)



### **ASSOCIATE PROFESSOR (INDUSTRY) Ar SARLY ADRE SARKUM**

B.Arch Hons, Universiti Sains Malaysia  
B.A. Arch Hons, Liverpool University, UK  
LAM Professional Architect

Tel: 03-8688 3830

E-mail: sarly@um.edu.my

#### Area(s) of Expertise

- Green Architecture and Net Zero Carbon Building (green Buildings)
- Net Zero Carbon Building
- Net Zero Energy Buildings
- Sustainable Cities
- Biophilic Design



### **ASSOCIATE PROFESSOR (INDUSTRY) Ar ZURAINA LEILI AWALUDDIN**

B.Arch, University of Newcastle, UK  
Dip. (Architecture), Universiti Teknologi Malaysia (UTM)  
APAM, LAM Professional Architect

Tel: 03-7967 6825

E-mail: zurainaleily@um.edu.my

#### Area(s) of Expertise

- Preservation And Conservation (heritage, Conservation)
- Corporations And Associations Law (law For The Architect And Architectural Practices)
- International Negotiations On Architectural Practices (international Architectural Practices, WTO, APEC, ASEAN, UIA Accord)
- Interior Design Works (interior Design, Government Offices, Parliament House)



### **ASSOCIATE PROFESSOR (INDUSTRY) HIROYUKI SUBE**

MArch, University College London (Bartlett), UK  
BArch (Hons), Tokyo University of Science  
LAM I & II

Tel: 03-7967 5373 / 5216

E-mail: hiroyuki.sube@um.edu.my

#### Area(s) of Expertise

- Architectural Design



### **ASSOCIATE PROFESSOR (INDUSTRY) AR. GARY WONG WAI CHOONG**

Tel: 03-7967 XXX

E-mail: XXX@um.edu.my

## SENIOR LECTURERS



### **ATI ROSEMARY MOHD ARIFFIN**

MA (Urban Design), Oxford Brookes University, UK  
Pg.Dip (Architecture), Oxford Brookes University, UK  
Pg.Dipl. (Urban Design), Oxford Brookes University, UK  
Dipl. (Architecture), Institute Technology MARA

Tel: 03-7967 5393

E-mail: aa\_alambina@um.edu.my

#### Area(s) of Expertise

- Riverfront Development & Regeneration (River, Development, Urban Regeneration)
- Sustainable Designs (sustainable, Design, Passive Design, Active Design, Hybrid Buildings, Low Energy, Passive Architecture, Green Architecture)
- Energy Efficient Architecture (energy, Energy Efficient, Architecture)



### **DR. MUHAMMAD AZZAM ISMAIL**

PhD (Built Environment), University of New South Wales, AUS  
BArch (Hons), University of Malaya  
BArch, University of Glasgow, UK  
LAM/RIBA I & II

Tel: 03-7967 5373 / 7613

E-mail: ma.ismail@um.edu.my

#### Area(s) of Expertise

- Built Environment (environmental Sustainable Design)



### **DR. NORAFIDA AB. GHAFAR**

PhD (Sustainable Architecture), University of Nottingham, UK  
MA (Urban Design), Oxford Brookes University, UK  
Pg.Dipl. (Architecture), Oxford Brookes University, UK  
Pg.Dipl. (Urban Design), Oxford Brookes University, UK  
Dipl. (Architecture), Institute Technology MARA

Tel: 03- 7967 5392

E-mail: norafida@um.edu.my

#### Area(s) of Expertise

- Building Thermal Performance (passive Solar Atrium Design)
- Housing (low Cost, High Density Housing)
- Building Construction
- Urban Design (urban Housing)
- Islamic Architecture (mosque Architecture)



### **DR. MASTURA ADAM**

PhD (Urban Design), University of Salford, UK  
MA (Urban Design), Oxford Brookes University, UK  
PG Dipl. (Architecture), Oxford Brookes University, UK  
Dipl. (Architecture), Institute Technology Mara

Tel: 03-7967 5331

E-mail: mastura@um.edu.my

#### Area(s) of Expertise

- Heritage and Conservation (conservation of Heritage Buildings, Measured Drawings Recording and Documentation)
- Graphics Arts (architectural Graphic Communication)
- Design Studio Practice (Architectural Design Studio, Architectural Graphic and Communication, Architectural History, Building Construction, Interior Architecture)
- (Sustainable Urban Development, Place Making Design and Management)
- Universal Design for Vulnerable (Universal Design for NNT and People With Disability (PWD), Walkability in the Pedestrian Environment (PE) in the City; Travel Behavior For Non-motorised Transport User (NMT) )



**Ar ANIZA ABDUL AZIZ**

*B.Arch, Louisiana State University, USA  
APAM, LAM Professional Architect*

Tel: 03-7967 4586

E-mail: anizaziz@um.edu.my

Area(s) of Expertise

- Building and Construction (Building Construction)
- Built Environment (Water Rectification And Supply, Building Drainage and Sewerage)
- Professional Practice (architectural Practice)



**DR. ASRUL MAHJUDDIN RESSANG AMINUDDIN**

*PhD (Architecture), University of Northampton, UK (2018)  
M.Sc (Construction Management), Institute Technology MARA  
Pg.Dipl. (Architecture), Polytechnic of Central London, UK  
Canterbury College of Art (RIBA Part I)  
Dipl. (Architecture), University Technology Malaysia*

Tel: 03-7967 2454

E-mail: asrilmahjuddin@um.edu.my

Area(s) of Expertise

- Sustainable Building Design (Sustainability)
- Social Housing (High Rise Housing)
- Building Construction (Building Construction)



**DR. HAZRINA HAJA BAVA MOHIDIN**

*PhD (Architecture), Universiti Teknologi Malaysia (UTM)  
B.Arch, Universiti Teknologi Malaysia (UTM)*

Tel: 03-7967 5392

E-mail: hazrinahaja@um.edu.my

Area(s) of Expertise

- Theory and Philosophy of Architecture, (theory of Architecture, History and Theory of Architecture, Malaysian Architecture)

**Ar. DR. MOHD FIRRDHAUS BIN MOHD SAHABUDDIN**

*DHd (Sustainable Architecture), University of Strathclyde  
M.Sc. Advanced Sustainable Design, University of Edinburgh  
Bachelor of Architecture, UTM (2004)  
Diploma in Architecture, UTM (2001)*

Tel: 03-7967 2459

E-mail: firrdhaus@um.edu.my

Area(s) of Expertise

- Air Pollution Engineering (Indoor Air Quality)
- Building Design (Sustainable Architecture)
- Built Environment (Thermal Comfort)

**DR. LIYANA BINTI HASNAN**

Tel: 03-7967 xxx

E-mail: xxx@um.edu.my

Area(s) of Expertise**DR. NURDIYANA BINTI ZAINAL ABIDIN**

Tel: 03-7967 xxx

E-mail: xxx@um.edu.my

Area(s) of Expertise**DR. LINDA SHAFARINA BINTI HASSAN**

Tel: 03-7967 xxx

E-mail: xxx@um.edu.my

Area(s) of ExpertiseLECTURERS**ASRUL SANI ABDUL RAZAK**

*M.Sc (Design & Digital Media), University of Edinburgh, UK  
MA (Hons), University of Edinburgh, UK  
B.Arch, University of Edinburgh, UK  
LAM/RIBA Part I & II*

Tel: 03-7967 5217

E-mail: asrulsani@um.edu.my

Area(s) of Expertise

- Architecture Education (Theory; Design; Learning)
- Architecture Technology (Design Media; Digital Construction Practice)

## EMIRITUS PROFESSOR



### **EMIRITUS PROFESSOR EZRIN ERBI**

*Emeritus Professor, Universiti Malaya, 2014  
BSc.(Architecture), University of Melbourne, Australia*

Level 9, Mercu Alam Bina  
Faculty of Built Environment  
Universiti Malaya  
50603 Kuala Lumpur

## EXTERNAL ASSESSORS



### **Ar DAVID TEH**

*Bachelor of Architecture, University of Melbourne*

Director of Pakatan Reka Arkitek Sdn Bhd  
44 Persiaran 65C  
Pekeliling Business Centre  
Off Jalan Pahang Barat  
53000 Kuala Lumpur

*Appointed from 2018/2019 until 2021/2022*

## ADMINISTRATIVE STAFF



### **HASNITA BINTI MOHD ZHARI**

Senior Administrative Assistant (Clerical and Operational)  
Department of Architecture  
03 – 7967 6899  
hasrh@um.edu.my



## DEPARTMENT OF BUILDING SURVEYING

### HEAD OF DEPARTMENT



#### **Dr. Sr RAHA SULAIMAN**

*PhD (Building Services), University of Malaya  
MSc (Building Services Eng. Management), Heriot-Watt University, UK  
B (Hons with Distinction) (Bldg. Surveying), University of Malaya  
Dip (Architecture), Universiti Teknologi MARA  
MRISM*

Tel : 03-7967 6836 / 03-7967 6813

e-mail: rahasulaiman@um.edu.my

#### Area(s) of Expertise

- Indoor Environmental Quality (users' Satisfaction and Sick Building Syndrome - Structural Equation Modelling (AMOS and PLS-SEM)
- Environmental Psychology
- Post Occupancy Evaluation

### PROFESSOR



#### **PROFESSOR DR. Sr Ts AZLAN SHAH ALI**

*PhD Built Environment (Building Refurbishment), Universiti Teknologi MARA  
MSc (Real Estate & Property Mgmt), University of Salford, UK  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
B (Hons) (Building Surveying), Institut Teknologi MARA  
Prof. Dip. (Property Management Valuation Surveying), RISM  
Dip (Estate Management), Institut Teknologi MARA  
Chartered Surveyor, P.Tech. (Building & Construction, Registered Property Manager  
FRISM, FRICS, MSET*

Tel: 03-7967 4494

e-mail: asafab@um.edu.my

#### Area(s) of Expertise

- Facilities Management (Building Condition Assessment (BCA)
- Facilities Management (Building Maintenance Management )
- Building and Construction (Building Refurbishment)



#### **PROFESSOR DR. Sr Ts SYAHRUL NIZAM KAMARUZZAMAN**

*PhD (Building), University of Manchester, UK  
MSc (Building Technology), University Science Malaysia  
BSc (Hons) (HBP), University Science Malaysia  
Cert. Building Services Eng. (POLIMAS)  
Reg. Build. Surveyor, P. Tech. (Building & Construction)  
FRISM, MSET, MIACSIT*

Tel: 03-7967 6833

e-mail: syahrulnizam@um.edu.my

#### Area(s) of Expertise

- Building and Construction
- Building Science and Performance

- Facilities Management

### ASSOCIATE PROFESSOR



#### **ASSOCIATE PROFESSOR Sr DR. NORHAYATI MAHYUDDIN**

*PhD (Indoor Air Quality), University of Reading, UK  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
BSc (Hons) (HBP-Architecture), University Science Malaysia  
MISIAQ, MRISM, MBEng*

Tel: 03-7967 6860

e-mail: hayati@um.edu.my

#### Area(s) of Expertise

- Indoor Environmental Quality (Indoor Air Quality, Ventilation and Thermal Performance)
- Computational Fluid Dynamic (CFD) Indoor Air Flow (CFD, Air Movement & Distributions)
- Built Environment (Sustainable Built Environment)

### SENIOR LECTURERS



#### **DR. Sr ZURAINI MD. ALI**

*PhD (Architectural Conservation), University of Sheffield, UK  
MSc [Construction Management (Risk) with Distinction], Glasgow Caledonian University, UK  
BSc (Architectural Studies), University of Illinois at Urbana-Champaign, USA  
Registered Conservator, MRISM, MICOMOS*

Tel: 03-7967 4588

e-mail: zuraini\_mdali@um.edu.my

#### Area(s) of Expertise

- Heritage and Conservation (Building Condition Survey and Analysis)
- Architectural Conservation and History (Documentation and Practice)



#### **DR. Sr NOR HANIZA ISHAK**

*PhD (Architecture), Universiti Kebangsaan Malaysia  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
B (Hons) (Building Surveying), Universiti Teknologi MARA  
Dip (Architecture), Universiti Teknologi MARA  
MRISM, MSET*

Tel: 03-7967 6858

e-mail: niza\_alambina@um.edu.my

#### Area(s) of Expertise

- Building Performance and Surveying (Building Performance, Building Defects & Diagnosis, Building Condition & Dilapidation Survey, Timber Defects, Dampness)
- Project Management (Construction Project Management, Project Control & Monitoring, Problem Solving & Decision Making)
- Maintenance and Facilities Management (Building

Maintenance Management , Facilities Management,  
Planned Maintenance)



**DR. Sr RODIAH ZAWAWI**

*PhD (Construction), Heriot-Watt University, UK  
M. Civ.Eng (Env.Eng), University of Technology Malaysia  
B. Civ.Eng (Hons), University of Technology Malaysia  
MRISM*

Tel: 03-7967 4450

e-mail: rodiah31@um.edu.my

Area(s) of Expertise

- Heritage and Conservation ( Lime Mortar, Lime Concrete, Clay Tile, Brick)
- Waste Water (Biological Treatment)
- Heritage and Conservation (Measured Drawing, Condition Survey, Building Pathology)



**DR. Sr BRENNAN BRIT ANAK KAYAN**

*PhD (Construction Management), Heriot-Watt University, UK  
MSc (Building), University of Malaya  
BSc (Hons) (Building Surveying), University of Malaya  
Registered Conservator, MRISM*

Tel : 03-7967 6885

e-mail: brit284@um.edu.my

Area(s) of Expertise

- Green Maintenance and Materials
- Building Conservation
- Building Performance,
- Environmental Maintenance Impact
- Life-cycle Assessment and Sustainable Development (Green Maintenance, Green Materials, Low Carbon Materials, Embodied Energy, Carbon Emissions, Embodied Carbon Quantification, Life Cycle Assessment, Environmental Maintenance Impact)



**DR. MOHAMAD RIZAL BAHARUM**

*PhD (Facilities Management), Liverpool John Moores University, UK  
MSc (Facilities Management), Heriot-Watt University, UK  
B (Hons) (Building Surveying), University of Malaya  
Dip (QS), University of Technology Malaysia*

Tel : 03-7967 7608

e-mail: mrizal@um.edu.my

Area(s) of Expertise

- Facilities Management (Performance; Risk; Waste Management; Facilities Design; Operation Research)

**DR. Sr Ts FARID WAJDI AKASHAH**

PhD (Fire Risk Assessment), Ulster University, UK  
 B (Hons) (Building Surveying), University of Malaya  
 MRISM

Tel: 03-7967 6874

e-mail: faridakashah@um.edu.my

Area(s) of Expertise

- Hazard Analysis and Risk Assessment (business Continuity Management, Fire Safety Design, Quantitative Fire Risk Assessment)

**DR. AU YONG CHEONG PENG**

PhD (Facilities Management), University of Malaya  
 B (Hons) (Building Surveying), University of Malaya  
 Graduate Member RISM

Tel: 03-7967 6822

e-mail: auyongcp@um.edu.my

Area(s) of Expertise

- Building and Construction (building Performance)
- Facilities Management (building Maintenance)

**DR. ZAHIRUDDIN FITRI ABU HASSAN**

PhD (Civil Engineering), University of Dundee, UK  
 MSc (Building Surveying), University of the West of England, UK  
 B (Hons) (Building Surveying), University of Malaya  
 Dip (QS), University of Technology Malaysia  
 Graduate Member RISM

Tel: 03-7967 7601

e-mail: zahiruddin@um.edu.my

Area(s) of Expertise

- Building and Construction (Construction Technology; Building Material and Science; Construction Material Behaviour)
- Design of Construction SN: Including of Bridges, Commercial Building, Construction, High Rise Building, Industrial Building, Industrialised Building/construction System (IBS/ ICS), Port and Airport, Residential, Residential and Public Building, Road and Highway, Seismic and Dynamic Resistant, Structural Design and Assessment, Smart Building, Intelligent Building, Dam and Irrigation Systems (concrete Technology; Concrete Durability; Chloride Resistance Modelling; Chloride-induced Corrosion; Exposure Condition Concrete Mix Design)
- Building Surveying; Building Pathology; Building Defects Investigation; Construction Materials Failures; Non-destructive Survey of Defects; Building Defect Surveying Technology and Equipment



**DR. NIK ELYNA MYEDA NIK MAT**

*PhD (Facilities Management), University College London, UK  
MSc (Building), University of Malaya  
B (Hons) (Building, Surveying), University of Malaya  
Graduate Member RISM*

Tel: 03-7967 7022/2455

e-mail: elyna@um.edu.my

Area(s) of Expertise

- Building Surveying
- Facilities Management
- Building Defects & Measurements



**DR. NOOR SUZAINI BINTI MOHAMED ZAID**

*PhD (Planning and Development), University of New South Wales, AUS  
MSc (Building and Urban Design Development), University College London, UK  
B (Hons) (Building Surveying), University of Malaya  
Graduate Member RISM*

Tel: 03-7967 7603

e-mail: suzaini\_zaid@um.edu.my

Area(s) of Expertise

- Built Environment
- Zero Emissions
- Energy Management and Audit
- Urban Studies



**DR. SHIRLEY CHUA JIN LIN**

*PhD (Asset & Facilities Management), University of Malaya  
B (Hons) (Building Surveying), University of Malaya  
Graduate Member RISM*

Tel : 03-7967 7952

e-mail: shirleychua88@um.edu.my

Area(s) of Expertise

- Facilities Management (Building Maintenance Management)



**DR. NUR FARHANA AZMI**

*PhD (Building Control & Performance), University of Malaya  
B (Hons) (Building Surveying), University of Malaya  
Graduate Member RISM*

Tel : 03-7967 5391

e-mail: farhanazmi@um.edu.my

Area(s) of Expertise

- Building Control and Performance

## LECTURERS



### **IMADUDDIN ABDUL HALIM**

MSc (Building Technology), University Science Malaysia  
BSc (Hons) (Building Technology), University Science Malaysia

Tel: 03-7967 2458

e-mail: imaduddin@um.edu.my

#### Area(s) of Expertise

- Building Construction and Technology

## EXTERNAL ASSESSORS (POSTGRADUATE)



### **PROFESSOR DR. MICHAEL RILEY**

Doctor of Philosophy (Liverpool John Moores University, UK) 2013  
Master of Science (Building Services Engineering) (Heriot-Watt University, UK) 1993  
Bachelor of Science in Building Surveying (Salford University, UK) 1986  
FRICS CEnv FRISM SFHEA

Head of Department of Built Environment  
Department of the Built Environment  
Faculty of Engineering & Technology  
Liverpool John Moores University  
Byrom Street, Liverpool L3 3AF  
United Kingdom

Appointed from 2018/2019 until 2021/2022



### **MOHAMMAD SHAHRIZAL BIN MOHAMMAD IDRIS**

MSc. (Facilities Management) (Universiti Teknologi Malaysia)  
Bachelor Eng. (Hons.) (Mechanical) (Universiti Teknologi Malaysia)  
Certified British Institute of Facilities Management (CBIFM), UK  
CERTIFICATION Certified Energy Manager, Energy Commission Malaysia  
Certified Member British Institute of Facilities Management (BIFM)  
Ordinary Member Malaysian Association of Facility Management (MAFM)  
Ordinary Member Harvard Business School Alumni Club Malaysia  
Graduate Member Board of Engineers Malaysia (BEM)  
Professional Member, International Facility Management Association (IFMA)

Director,  
GFM Services Berhad,  
257A, 1<sup>st</sup> Floor, Jalan Bandar 12,  
Taman Melawati,  
53100 Kuala Lumpur

Appointed from 2018/2019 until 2021/2022

## EXTERNAL ASSESSORS (UNDERGRADUATE)



### **Sr LIM SWEE MENG**

M.Sc (Building), University of Malaya (UM)  
B.Sc (Hons) (Building Surveying), University of Malaya (UM)

Building Appraisal Pte. Ltd.  
Chartered Building Surveyors  
625 Aljunied Industrial Complex  
05-05, 389836, Singapore

Appointed from 2020/2021 until 2023/2024

## ADMINISTRATIVE STAFF



### **SILA A/P BALAKERSNAN**

*B.Public Management, Universiti Utara Malaysia (UUM)*

Administrative Assistant (Clerical and Operational)

Department of Building Surveying

03 – 7967 6856

[sila@um.edu.my](mailto:sila@um.edu.my)



# DEPARTMENT OF QUANTITY SURVEYING

## HEAD OF DEPARTMENT



### **Sr DR. OTHMAN MOHAMED, PQS**

*PhD (Knowledge Management), University of Salford, UK  
MSc Building Technology, Universiti Sains Malaysia  
MSc Information Management, Universiti Teknologi Malaysia  
B (Hons) Quantity Surveying, Universiti Teknologi Malaysia  
Diploma in Quantity Surveying, Universiti Teknologi MARA  
Reg. Professional QS (BQSM), MRISM Cert. in Edu (MPKB), Cert. in Value Mgmt (CIDB), MIVMM*

Tel : 03-7967 5379 / 03-7967 6834

e-mail : othmanmohamed@um.edu.my

### Area(s) of Expertise

- Knowledge Management and Information Management

## ASSOCIATE PROFESSORS



### **ASSOCIATE PROFESSOR Sr DR. FAIZUL AZLI MOHD RAHIM, PQS**

*PhD (Life Cycle Risk), University of Liverpool, UK  
MSc Information Technology in Property & Construction, University of Salford, UK  
BSc (Hons) Quantity Surveying, University of Salford, UK  
Reg. Professional QS (BQSM), MRISM, MIVMM, MCIOB*

Tel : 03-7967 5331

e-mail : azli@um.edu.my

### Area(s) of Expertise

- IT in Construction Industry
- Project Management (Project Management)
- Construction Economics (Construction Economics)
- Risk Management (Risk Management)



### **ASSOCIATE PROFESSOR Sr DR. HAFEZ SALLEH, CQS**

*PhD (Strategic IT Management), University of Salford, UK  
MSc (Information Technology in Property & Construction), University of Salford, UK  
BSc (Hons) Quantity Surveying, University of Salford, UK  
Diploma in Quantity Surveying, Universiti Teknologi MARA  
Reg. Consultant QS (BQSM), MRISM*

Tel : 03-7967 4476

e-mail : hafez@um.edu.my

### Area(s) of Expertise

- Facilities Management
- Strategic IT Management

**ASSOCIATE PROFESSOR Sr DR. MOHD SUHAIMI MOHD DANURI, CQS**

PhD (Business Law), Universiti Putra Malaysia  
 Master of Construction Law, University of Melbourne, Australia  
 B (Hons) Quantity Surveying, Universiti Teknologi Malaysia  
 Diploma in Quantity Surveying, Universiti Teknologi Malaysia  
 Reg. Consultant QS (BQSM), ACI Arb, MRISM, MIVMM

Tel : 03-7967 4473

e-mail : msuhaimi@um.edu.my

Area(s) of Expertise

- Procurement and Contract
- Construction Law

**ASSOCIATE PROFESSOR DR. NORHANIM ZAKARIA**

PhD (Real Estate/Project Management), Universiti Teknologi Malaysia  
 MSc (Construction Management), Universiti Teknologi Malaysia  
 B (Hons) Quantity Surveying, Universiti Teknologi Malaysia  
 Diploma in Quantity Surveying, Universiti Teknologi Malaysia  
 Reg. Provisional QS (BQSM), MIVMM, Graduate Member (RISM)

Tel : 03-7967 6875

e-mail : norhanimz@um.edu.my

Area(s) of Expertise

- Project Management
- Construction Management

ASSOCIATE PROFESSORS (INDUSTRY)**ASSOCIATE PROFESSOR (INDUSTRY) Sr AHMAD SUHAIMI ABDUL MAJID**

M.Sc, Universiti Teknologi MARA (UiTM)  
 B.Sc in Quantity Surveying, Nottingham Trent University, UK  
 Reg. Consultant QS (BQSM), FRICS, FRISM, MIVMM

Tel: 03-7967 5379

E-mail: asamqs@um.edu.my

Area(s) of Expertise

- Quantity Surveying and Professional Practice

SPECIALIST**Sr DR. KHAIRUDDIN SULAIMAN**

MSc (Construction), Loughborough University of Technology, UK  
 BSc (Hons) Quantity Surveying, Glasgow College of Technology, UK  
 Diploma in Quantity Surveying, Universiti Teknologi MARA (UiTM)  
 Reg. Consultant QS (BQSM), RISM

Tel : 03-7967 6875

e-mail : norhanimz@um.edu.my

Area(s) of Expertise

- Construction Health
- Safety/Procurement

## SENIOR LECTURERS



### **Sr DR. ZULKIFLEE ABDUL SAMAD, PMP**

PhD (Project Management), University of Cambridge, UK  
MSc (Project Management), Universiti Sains Malaysia  
MBA ESG Paris, France  
MAppMgt (Architecture), University of Newcastle, Australia  
B. (Hons) Quantity Surveying, Universiti Teknologi MARA  
Proj. Mgmt. Professional (PMP), FAPM (UK), MRICS, MRISM, MCI0B

Tel : 03-7967 4474

e-mail : zulkiflee1969@um.edu.my

### Area(s) of Expertise

- School Built Environment and Its Impact on Social and Educational Outcomes
- Construction Business and Entrepreneurship
- Project Management (Construction and Built Environment)
- Design Economics (Built Environment) - Good Design, Design Quality, Design Value, Whole-life Value



### **Sr DR. SAIPOL BARI ABD KARIM, PQS**

PhD (Project Risk Management), Manchester Business School, UK  
MSc Management of Project, University of Manchester, UK  
Bachelor of Quantity Surveying (Hons), University of Malaya  
Reg. Professional QS (BQSM), FIVMM, MRISM, MAPM (UK), M.SAVE Intl (USA), MACPM

Tel : 03-7967 5375

e-mail: saipolbari@um.edu.my

### Area(s) of Expertise

- Management of Projects; Strategic Management & Governance; People & Culture (Stakeholder Management); Supply Chain (Production Management); Planning & Control (construction Project Management, PMBOK, APMBOK, P2M, Prince2, ISO)
- Building Morphology; Design Economics; Cost Management; Financial Management; Commercial Management (Quantity Surveying & Construction Economics)
- Value Methodology; Value Planning; Value Engineering; Value Assessment; Value Analysis (Value Study, Function Analysis, Fast, Paired Comparison, WEM)
- Management of Risks, Uncertainty & Opportunity (Project Risk Management, Pram, Risk Governance, Integration of Risk & Value Management)



### **DR. MAHANIM HANID**

PhD (Construction Management), University of Salford, UK  
MSc Building Technology, Universiti Sains Malaysia  
B (Hons) Quantity Surveying, Universiti Malaya  
Diploma in Quantity Surveying, Universiti Teknologi Malaysia  
Reg. Provisional QS (BQSM), Graduate Member (RISM)

Tel : 03-7967 6872

e-mail : mahanim@um.edu.my

### Area(s) of Expertise

- Construction Management

- Lean Construction
- Building Economics



**Sr DR. UMI KALSUM ZOLKAFI @ ZULKIFLY, CQS**

*PhD (Building Conservation), Universiti Teknologi MARA  
MSc Construction Contract Management, Universiti Teknologi Malaysia  
B. (Hons) Quantity Surveying, Universiti Teknologi MARA  
Diploma in Quantity Surveying, Universiti Teknologi MARA  
Reg. Consultant QS (BQSM), FRISM*

Tel : 03-7967 7604

e-mail : umi@um.edu.my

Area(s) of Expertise

- Professional Practice
- Procurement
- Contract Management



**DR. NURSHUHADA ZAINON**

*PhD (IT Management), Universiti Malaya  
MSc Construction Economics & Management, University College London, UK  
B. (Hons) Quantity Surveying, Universiti Malaya  
Reg. Provisional QS (BQSM), Graduate Member (RISM)*

Tel : 03-7967 2461

e-mail: zshuhada@um.edu.my

Area(s) of Expertise

- Financial and Procurement (Public Private Partnership, Private Finance Initiative)
- Digital Construction (Building Information Modelling (BIM), Sustainable/Green Construction, Information Technology Management, Construction Innovation)



**Sr DR. KHO MEI YE, PQS**

*PhD (Project Management), Universiti Malaya  
MSc (Building), Universiti Malaya  
B. (Hons) Quantity Surveying, Universiti Malaya  
Reg. Professional QS (BQSM), MRISM*

Tel : 03-7967 2457

e-mail: meiye@um.edu.my

Area(s) of Expertise

- Quantity Surveying (project Management and Costing, Building Commissioning, Contract and Procurement, Construction Delay, Late Payment)



**DR. NUR MARDHIYAH AZIZ**

*PhD (IT in Construction), Universiti Malaya  
MSc Facilities Management, Universiti Teknologi MARA  
BSc (Hons) Housing, Planning & Building - Quantity Surveying, Universiti Sains Malaysia  
Reg. Provisional QS (BQSM)*

Tel : 03-7967 4587

e-mail: nurmardhiyah@um.edu.my

Area(s) of Expertise

- People And Culture (people Issue, Soft Issue)
- E-readiness, Building Information Modelling (BIM), IoT



**Sr DR. LOO SIAW CHUING**, PQS  
 PhD (Project & Construction Management), Universiti Malaya  
 MSc (Building), Universiti Malaya  
 B (Hons) Quantity Surveying, Universiti Malaya  
 Reg. Professional QS (BQSM), MRISM  
 Tel : 03-7967 7959  
 e-mail : siawchuing@um.edu.my

Area(s) of Expertise

- Project Management
- International Construction
- Risk Management
- Risk Assessment
- Risk Quantification

LECTURERS



**Sr IMRAN ARIFF YAHYA**, PQS  
 MSc (Building), Universiti Malaya  
 BSc (Hons) Quantity Surveying, University of Salford, UK  
 Reg. Professional QS (BQSM), MRISM, MIVMM  
 Tel : 03-7967 6846  
 e-mail : imranariff@um.edu.my

Area(s) of Expertise

- Communication in Construction
- Built Environment (value Management, Value Engineering, Value Analysis, Fast)
- Project Management



**MAZNAH OTHMAN**  
 MSc (Project Management), Universiti Sains Malaysia  
 BSc (Hons) Housing, Planning & Building, Universiti Sains Malaysia  
 MIVMM  
 Tel : 03-7967 6847  
 e-mail : maznah\_o@um.edu.my

Area(s) of Expertise

- Project Management and Costing (Project Management, Construction Management)

## EXTERNAL ASSESSORS (POSTGRADUATE)



### **PROFESSOR DR. LYNN HEATHER CRAWFORD**

*Bachelor of Architecture (Hons), Sydney University  
Master of Town & Country Planning, Sydney University  
Graduate Diploma in Human Resource Management, Mitchell CAE  
Advanced Post Graduate Diploma in Management Consultancy, Henley Management College  
Doctorate in Business Administration, Henley Management College/Brunel University*

Professor & Director of Project Management Program  
School of Civil Engineering  
Faculty of Engineering  
University of Sydney  
K06A – 21 Ross St Building  
Australia  
e-mail : [lynn.crawford@sydney.edu.au](mailto:lynn.crawford@sydney.edu.au)

*Appointed from 2020/2021 until 2023/2024*



### **KRISHNAN SRINIVASAN, PMP, MBA, ACMA, CA (M)**

*Master of Business Administration (MBA), University of Edinburgh, Scotland  
BSc. (Econs) Degree in Accounting & Financial Management (Hons), University of Buckingham, England*

President,  
Project Management Institute (PMI)  
Malaysia Chapter  
e-mail : [johanks2007@gmail.com](mailto:johanks2007@gmail.com)

*Appointed from 2020/2021 until 2023/2024*

## EXTERNAL ASSESSORS (UNDERGRADUATE)



### **PROFESSOR DR. LING YEAP YNG, FLORENCE**

*PhD, (1998) National University of Singapore  
MSc (Intl Constrn Mngt) (Guthrie Gold Medal)  
BSc (Building) (First Class Hons), (1987) National University of Singapore  
Member of the Royal Institution of Chartered Surveyors  
Fellow of Singapore Institute of Surveyors and Valuers*

Department of Building  
School of Design and Environment  
National University of Singapore (NUS)  
e-mail: [bdglyy@nus.edu.sg](mailto:bdglyy@nus.edu.sg)

*Appointed from 2018/2019 until 2021/2022*



**Sr JAILANI BIN JASMANI**, CQS  
*Bachelor of Applied Science (Quantity Surveying), WAIT  
Reg. Consultant QS (BQSM), MRISM, MICEC, MMWA*

Director, JUB Central Sdn Bhd (Consultant QS Practice)  
Director, Perunding Maju Arah Sdn Bhd (Multi-Disciplinary Practice)  
Lot 6.13, 6<sup>th</sup> Floor, Wisma Central  
Jalan Ampang  
50450 Kuala Lumpur  
e-mail: jcentralsb@gmail.com

*Appointed from 2019/2020 until 2022/2023*

#### ADMINISTRATIVE STAFF



**MOHD NAZRI ABU SAMAH**  
Administrative Assistant (Clerical and Operational)  
Department of Quantity Surveying  
03 – 7967 6841  
nazri7069@um.edu.my



## DEPARTMENT OF REAL ESTATE

### HEAD OF DEPARTMENT



#### **DR. Sr HASNIYATI HAMZAH**

*PhD (Property), University of Auckland, NZ  
Master (Property Law), University of Aberdeen, UK  
BSc. (Land Management), University of Reading, UK  
MRISM, MMIPFM*

Tel: 03-7967 5389/ 03-7967 5378

e-mail: hasniyati@um.edu.my

#### Area(s) of Expertise

- Housing And Property Law (housing Studies, Urban Studies, Property Law)

### PROFESSOR



#### **PROFESSOR DR. Sr ANUAR ALIAS**

*PhD (Property Development and Environment), UM  
MSc (Project Management), USM  
B.Surv. (Hons) (Property Management), UTM  
Diploma (Valuation), UTM  
PGCert. (Professional Development), UCONN  
Registered Valuer & Estate Agent  
MRISM, MMIPFM*

Tel: 03-7967 6835

e-mail: anuar\_a@um.edu.my

#### Area(s) of Expertise

- Valuation - Rating, Taxation, Land Acquisition
- Property Management
- Project Management

### ASSOCIATE PROFESSORS



#### **ASSOCIATE PROFESSOR DR. Sr ROSLI SAID**

*PhD (Real Estate Finance), University of Ulster, UK  
MSc. (Urban Land Appraisal), University of Reading, UK  
BSc. (Hons) (Land Management), University of Reading, UK  
Diploma (Property Valuation), UTM  
Chartered Surveyor, Registered Valuer, Estate Agent & Property Manager  
MRISM, MMIPFM, MRICS*

Tel: 03-7967 6886

e-mail: rosli\_alambina@um.edu.my

#### Area(s) of Expertise

- Real Estate Economics
- Housing Studies
- Real Estate Modelling And Forecasting



### **ASSOCIATE PROFESSOR DR. Sr YASMIN MOHD ADNAN**

PhD (Urban Land Economy), UM  
MBA, UiTM  
BSc. (Hons) (Land Management), University of Reading, UK  
Registered Valuer, Estate Agent & Property Manager  
FRISM, MRICS, MMIPFM

Tel: 03-7967 6845

e-mail: yasmin\_alambina@um.edu.my

#### Area(s) of Expertise

- Property Management, Sustainable Real Estate Studies, Office Space Studies , Real Estate Space/market Preference And Decision Making , Operational & Corporate Real Estate, Real Estate Economics

### SENIOR LECTURERS



### **DR. Sr AINORIZA MOHD. AINI**

PhD (Property Investment), Kingston University, UK  
MSc. (Corporate Real Estate Finance & Strategy), City University of London, UK  
B. (Hons) (Estate Management), UM  
Reg. Probationary Valuer, MRISM

Tel: 03-7967 5396

e-mail: ainoriza@um.edu.my

#### Area(s) of Expertise

- Sustainable Property Investment
- Real Estate Finance And Investment
- Housing (housing, Elderly, Strata Properties)



### **DR. Sr ZAFIRAH AL SADAT BINTI ZYED**

PhD (Housing Studies), UM  
B.(Hons) (Estate Management), UM  
Reg. Probationary Valuer, MRISM, MMIPFM

Tel: 03-7967 2454

e-mail: zafirahzyed@um.edu.my

#### Area(s) of Expertise

- Housing Affordability
- Property Development
- Urban Studies (housing Studies)



### **DR. Sr ZAHIRIAH YAHYA**

PhD (Urban Land Economy), UM  
MSc. (Facilities Management), UiTM  
B.(Hons) (Estate Management), UiTM  
Diploma (Estate Management), UiTM  
Registered Valuer, Estate Agent & Property Manager, MRISM

Tel: 03-7967 4590

e-mail: zahiriah@um.edu.my

#### Area(s) of Expertise

- Real Estate Valuation & Taxation
- Facilities Management and Land Development (real Estate & Facilities Management)



### **DR. ZAIRUL NISHAM MUSA**

*PhD [Built Environment (Facilities Management)], Liverpool John Moores University, UK  
MSc. (Facilities Management), University of Greenwich, UK  
BSc. (Hons) (Estate Management), University of Luton, UK  
Diploma (Valuation), UTM*

Tel: 03-7967 4490

e-mail: zairul@um.edu.my

#### Area(s) of Expertise

- Property Management
- Facilities Management

### LECTURERS



### **Sr ABDUL GHANI SARIP**

*MSc. Geoinformatics (Geographical Information System), UTM  
B. (Hons) Estate Management, UTM  
Diploma (Valuation), UTM  
MRISM*

Tel: 03-7967 6861

e-mail: garnae@um.edu.my

#### Area(s) of Expertise

- GIS Application In Real Estate
- Automated Valuation Modeling, Mass Appraisal (property Valuation)



### **Sr ZULKIFLI ESHA**

*MSc. (Real Estate Development & Investment), University of Greenwich, UK  
BSc. (Hons) (Estate Management), University of Luton, UK  
Diploma (Valuation), UTM  
MRISM*

Tel: 03-7967 6862

e-mail: zules@um.edu.my

#### Area(s) of Expertise

- Property Investment/finance (real Estate Investment Trusts, Property Trust Funds)

### ADJUNCT PROFESSOR



### **TAN SRI DATO' (DR.) Sr ABDUL RAHIM BIN ABD RAHMAN**

*Executive Chairman, Rahim & Co International Sdn Bhd  
BSc (London)  
Registered Valuer, Estate Agent & Property Manager  
FRISM, FRICS*

Executive Chairman

Rahim & Co International Sdn Bhd

Level 17 Menara Liberty, 1008,

Jalan Sultan Ismail,

50250 Kuala Lumpur

## EXTERNAL ASSESSORS (POSTGRADUATE)



### **PROFESSOR DR. ALFRED CHRISTOPHER EVES**

*PhD, University Western Sydney  
Master of Commerce, University Western Sydney  
Bachelor of Business (Banking & Finance), Charles Sturt University  
Dip. Applied Science (Agriculture), Wagga Agricultural College*

RMIT University  
PO Box 12001, A'Beckett St  
Melbourne VIC8006  
Australia  
e-mail: chris.eves@rmit.edu.au

*Appointed from 2018/2019 until 2021/2022*



### **Sr NORDIN BIN DAHAROM**

*Master of Land Economy, Aberdeen University, Scotland  
Sarjana Muda Ukur (Pengurusan Harta benda), Universiti Teknologi Malaysia (UTM)  
Diploma Penilaian, Universiti Teknologi Malaysia (UTM)  
Malaysia Certificate Education (Commerce)*

Azami & Co. Sdn. Bhd.  
Lot 5G-4, Jalan Chenderawasih 6/7,  
Pusat Daerah Seksyen 6,  
40000 Shah Alam,  
Selangor

*Appointed from 2018/2019 until 2021/2022*

## EXTERNAL ASSESSORS (UNDERGRADUATE)



### **PROFESSOR DR. STEVEN ROWLEY**

*PhD, University of Northumbria  
BSc (Hons), de Montfort University*

School of Economics, Finance and Property  
Curtin University  
GPO Box U1987  
Perth, Western Australia 6102  
Australia  
e-mail: Steven.Rpowley@cbs.curtin.edu.au

*Appointed from 2019/2020 until 2022/2023*



### **Sr P. TANGGA PERAGASAM**

*PPRISM, FRICS, FRIM  
Chartered Surveyor, Registered Valuer, Property Manager & Estate Agent*

Jordan Lee & Jaafar Sdn. Bhd.  
No.3-3, Level 3, Jalan Medan Setia I  
Bukit Damansara,  
50490 Kuala Lumpur

e-mail: [hq@jjj.com.my](mailto:hq@jjj.com.my)  
*Appointed from 2018/2019 until 2021/2022*

ADMINISTRATIVE STAFF



**NORLEELA BINTI AHMAD**

Senior Administrative Assistant (Clerical and Operational)

Tel : 03 – 7967 6856

e-mail: [norlela\\_a@um.edu.my](mailto:norlela_a@um.edu.my)

## DEPARTMENT OF URBAN AND REGIONAL PLANNING

### HEAD OF DEPARTMENT



#### **DR. NIKMATUL ADHA NORDIN**

PhD (Urban Planning) USM  
MSc. (Planning) USM  
BSc. Housing, Building & Planning, USM  
Graduate Member of the Malaysian Institute of Planners  
Tel: 03-7967 6824 / 03-7967 5376  
e-mail: nikmatul@um.edu.my

#### Area(s) of Expertise

- Urban Planning And Management

### ASSOCIATE PROFESSORS



#### **ASSOCIATE PROFESSOR DR. TPr MELASUTRA MD DALI**

PhD (Urban Planning), University of Melbourne, AUS  
M. Sc. (Urban and Regional Planning), University of Wisconsin, Madison, USA  
BSc. (Urban Studies & Envi. Planning), University of Wisconsin, Green Bay, USA  
Registered Town Planner of the Board of Town Planners Malaysia  
Corporate Member of the Malaysian Institute of Planners,  
Member of Malaysian Social Impact Assessment Association  
Tel: 03-7967 7950  
e-mail: melasutr@um.edu.my

#### Area(s) of Expertise

- Urban Studies (urban Recreation, Open Space)
- Urban Planning And Management (governance and Management )
- Land Use And Social Planning (urban Land Use. Land Sustainability)



#### **ASSOCIATE PROFESSOR DR. Gs ROSILAWATI ZAINOL**

PhD (Science), Universiti Teknologi MARA (UITM)  
MIMT, Universiti Tun Abdul Razak (UNITAR)  
BA (cum laude) Arkansas State University, Arkansas, USA  
Professional Member of the Institution of Geospatial and Remote Sensing Malaysia (IGRSM)  
Associate Member of the Malaysian Institute of Planners  
Tel: 03-7967 5325  
e-mail: rosilawatizai@um.edu.my

#### Area(s) of Expertise

- Urban Planning And Management (urban Science, Health And City, Urban Analytics, Web-based Geographic Information System (web Gis), Urban Planning Tools, Geographic Information Systems(gis), Spatial Statistics, Spatial Analysis)
- Geographical Information System (gis) (urban Analytics, Spatial Statistics, Spatial Analysis, Active Living, Spatial Planning)



### **ASSOCIATE PROFESSOR DR. TPr GOH HONG CHING**

*Dr. rer. nat., Rheinische Friedrich-Wilhelms-Universität Bonn, GERMANY*

*M. Sc. (Tourism Planning) UTM*

*B. URP, UTM*

*Corporate Member of the Malaysian Institute of Planners*

*Registered Town Planner of the Board of Town Planners Malaysia*

**Tel: 03-7967 7606**

**e-mail: gohhc@um.edu.my**

#### Area(s) of Expertise

- Natural Resource (governance)
- Urban Planning and Management (natural Resource and Environmental Issues and Governance, Sustainable Development of Cities And Regions, Urbanization And Urban Risk, Urban Planning)
- Tourism (governance of Protected Areas, Natural Heritage Sites, Tourism Planning and Impacts Management)

### ASSOCIATE PROFESSORS (INDUSTRY)



### **ASSOCIATE PROFESSOR (INDUSTRY) TPr MOHAMED JAMIL AHMAD**

*MSc. Urban and Regional Planning, University of Strathclyde, SCOTLAND*

*BA. (Hons) Geography UM*

*Advisory Board of the Malaysian Institute of Planners*

*Member of the Board of Town Planners*

**Tel: 03-7967 5325**

**e-mail: jamil7798@um.edu.my**

#### Area(s) of Expertise

- Urban Planning And Management (regional Planning, Disaster Planning, planning Law, Local Governance, Structure and Local Planning, GIS)

### SENIOR LECTURERS



### **DR. YONG ADILAH BINTI SHAMSUL HARUMAIN**

*PhD (Land Use and Transport Planning), Utsunomiya University, JAPAN*

*MSc. (Land Administration and Development) UTM*

*BSc. Urban and Regional Planning UIA*

*Graduate Member of the Malaysian Institute of Planners*

**Tel: 03-7967 6811**

**e-mail: adilah\_shamsul@um.edu.my**

#### Area(s) of Expertise

- Urban Studies (transportation Planning, Urban Design, Urban Planning In Developing Countries, Machinoeki)
- Women Transport Related Studies (women, Mobility, Public Transportation, Urban Planning)



**DR. PETER ANING TEDONG**

*PhD (Housing studies) UM  
Master of Real Estate (MRE) UM  
BA. (Major: Urban Studies and Planning, Minor: Geography) UM  
Associate Member of the Malaysian Institute of Planners*

Tel: 03-7967 7953

e-mail: peteraning@um.edu.my

Area(s) of Expertise

- Migration (housing And Migration )
- Social Housing (gated Community ; Housing Policy And Governance)
- Urban Studies (neoliberal Urbanism ; Neighbourhood Planning And Governance)

**DR. Gs NUR AULIA ROSNI**

*PhD in Built Environment, IIUM  
Master science in Built Environment, IIUM  
Bachelor of Urban and Regional Planning, IIUM  
Graduate member of the Malaysian Institute of Planners  
Professional Member of Institute of Geospatial & Remote Sensing Malaysia*

Tel : 03-7967 7607

Email : nurauliarosni@um.edu.my

Area(s) of Expertise

- Land Use (land Use Planning, Site Planning)
- Traffic Planning And Management (traffic And Transportation Planning)
- Geographical Informations System(gis) (gis, Land Use Planning Application)
- Planning Administration And Practice (planning Law, Urban Governance, Planning Administration)

**DR. ZAKARIA ALCHEIKH MAHMOUD**

*PhD Urban Planning and Design, SPA, INDIA  
MUP, SPA, INDIA  
Bachelor of Architectural Eng. Al-Baath University Syria  
Urban Planning Consultant, Syria  
Member Architects Board, UAE*

Tel: 03-7967 4493

e-mail: zakaria2009@um.edu.my

Area(s) of Expertise

- Urban And Regional Planning (urban Design, Land Use Planning, Sustainable Planning And Development, Technology For Planning, Heritage And Building Conservation )

**DR. TEH BOR TSONG**

Tel: 03-7967 6844

e-mail: XXX@um.edu.my

Area(s) of Expertise



**DR. NOOR HASHIMAH HASHIM LIM**

Tel: 03-7967 7957

e-mail: XXX@um.edu.my

Area(s) of Expertise

EXTERNAL ASSESSORS



**PROFESSOR DATUK DR. MIZAN HITAM**

*PhD (Urban Development: Policy & Strategy), University of Newcastle Upon Tyne, UK  
Master of City & Regional Planning, Ohio State University, USA  
B.Urban Planning & Regional Planning, University of Southwestern Louisiana, USA*

Faculty of Architecture, Planning & Surveying  
Universiti Teknologi MARA (UiTM)

40450 Shah Alam,

Selangor

e-mail : drmizan@uitm.edu.my

*Appointed from 2019/2020 until 2022/2023*



**DATIN TPr NORAIĐA SALUDIN**

*Post-Graduate Diploma in Planning, University of Manchester, UK  
BA (Honours) in Town & Country Planning, University of Manchester, UK*

AJM Planning & Urban Design Group (APUDG)

8 Suria Block A, 33, Jalan PJU 1/42,

Dataran Prima,

47301 Petaling Jaya,

Selangor

e-mail: noraida@apudg.com

*Appointed from 2019/2020 until 2022/2023*

ADMINISTRATIVE STAFF



**ROSAIDA ZEBEDI**

Senior Administrative Assistant (Clerical and Operational)

03 – 7967 6856

rose\_aida@um.edu.my

# CENTRE FOR BUILDING CONSTRUCTION & TROPICAL ARCHITECTURE (BuCTA)

## HEAD OF RESEARCH CENTRE



### **PROFESSOR DR. Sr Ts AZLAN SHAH ALI**

PhD Built Environment (Building Refurbishment), Universiti Teknologi MARA  
MSc (Real Estate & Property Mgmt), University of Salford, UK  
MSc (Integrated Construction Project Management), Universiti Teknologi MARA  
B (Hons) (Building Surveying), Institut Teknologi MARA  
Prof. Dip. (Property Management Valuation Surveying), RISM  
Dip (Estate Management), Institut Teknologi MARA  
Chartered Surveyor, P.Tech. (Building & Construction, Registered Property Manager  
FRISM, FRICS, MSET

Tel: 03-7967 4494

e-mail: asafab@um.edu.my

## CONSERVATION & CULTURAL HERITAGE



### **PROFESSOR DR. YAHAYA AHMAD, D.J.N (PP)**

PhD (Conservation Management), University of Liverpool, UK  
MA (Architecture), Washington University, USA  
MConst Mgmt., Washington University, USA  
BA, Washington University, USA  
Registered Conservator, MRISM

Tel: 03-7967 5395

E-mail: yahaya@um.edu.my

## ASSET, FACILITIES & MAINTENANCE



### **PROFESSOR DR. Sr Ts SYAHRUL NIZAM KAMARUZZAMAN**

PhD (Building), University of Manchester, UK  
MSc (Bldg.Tech), University Science Malaysia  
BSc (Hons) (HBP), University Science Malaysia  
Cert. Building Services Eng. (POLIMAS)  
Reg. Build. Surveyor, P. Tech. (Build. & Cons.)  
FRISM, MSET, MIACSIT

Tel: 03-7967 6833

e-mail: syahrulnizam@um.edu.my

## DESIGN & SUSTAINABLE ARCHITECTURE



### **DR. MUHAMMAD AZZAM ISMAIL**

PhD (Built Environment), University of New South Wales, AUS  
BArch (Hons), University of Malaya  
BArch, University of Glasgow, UK  
LAM/RIBA I & II

Tel: 03-7967 5373 / 7613

E-mail: ma.ismail@um.edu.my

## PROJECT MANAGEMENT, PROCUREMENT & ECONOMICS



### **ASSOCIATE PROFESSOR Sr DR. FAIZUL AZLI MOHD RAHIM, PQS**

*PhD (Life Cycle Risk), University of Liverpool, UK  
MSc Information Technology in Property & Construction, University of Salford, UK  
BSc (Hons) Quantity Surveying, University of Salford, UK  
Reg. Professional QS (BQSM), MRISM, MIVMM, MCIOB*

Tel : 03-7967 7958

e-mail : azli@um.edu.my

## BUILDING SCIENCE, TECHNOLOGY & PERFORMANCE



### **ASSOCIATE PROFESSOR DR. PAYAM SHAFIGH**

*PhD (Structural Engineering & Materials), University of Malaya  
MSc (Structural Engineering), University of Mazandaran, Iran  
BSc (Civil Engineering), University of Mazandaran, Iran*

Tel: 03-7967 2464

e-mail: pshafigh@um.edu.my

## ADMINISTRATIVE STAFF



### **NUR SHUHADA HILAL**

*BSc (Physics), Universiti Teknologi MARA (UiTM)  
Dip.Sc (Physics), Universiti Teknologi MARA (UiTM)*

Assistant Science Officer

03- 7967 6889

nurshuhadahilal@um.edu.my

## CENTRE FOR SUSTAINABLE URBAN PLANNING & REAL ESTATE (SUPRE)

### HEAD OF RESEARCH CENTRE



#### **ASSOCIATE PROFESSOR DR. TPr MELASUTRA MD DALI**

*PhD (Urban Planning), University of Melbourne, AUS  
M. Sc. (Urban and Regional Planning), University of Wisconsin, Madison, USA  
BSc. (Urban Studies & Envi. Planning), University of Wisconsin, Green Bay, USA  
Registered Town Planner of the Board of Town Planners Malaysia  
Corporate Member of the Malaysian Institute of Planners,  
Member of Malaysian Social Impact Assessment Association*

Tel: 03-7967 7950

e-mail: melasutr@um.edu.my

### HOUSING & SETTLEMENTS



Position Empty  
(Will be appointed)

### ENVIRONMENTAL & URBAN DESIGN



#### **ASSOCIATE PROFESSOR DR. NAZIATY MOHD YAACOB**

*PhD (Universal Design), University of Salford, UK  
MSc (Architecture), University of College London, UK  
PG Dipl (Architecture), North London Polytechnic, UK  
BA(Architecture), Leicester Polytechnic, UK  
Dipl. (Architecture), University Technology Malaysia  
LAM/RIBA Part I & II*

Tel: 03-7967 5396

E-mail: naziaty@um.edu.my

### REAL ESTATE DEVELOPMENT & MANAGEMENT



#### **PROFESSOR DR. Sr ANUAR ALIAS**

*PhD (Property Development and Environment), UTM  
MSc (Project Management), USM  
B.Surv. (Hons) (Property Management), UTM  
Diploma (Valuation), UTM  
PGCert. (Professional Development), UCONN  
Registered Valuer & Estate Agent  
MRISM, MMIPPM*

Tel: 03-7967 6835

e-mail: anuar\_a@um.edu.my

## SUSTAINABLE PLANNING & DEVELOPMENT



### **ASSOCIATE PROFESSOR DR. Gs ROSILAWATI ZAINOL**

*PhD (Science), Universiti Teknologi MARA (UiTM)  
MIMT, Universiti Tun Abdul Razak (UNITAR)  
BA (cum laude) Arkansas State University, Arkansas, USA  
Professional Member of the Institution of Geospatial and Remote Sensing Malaysia (IGRSM)  
Associate Member of the Malaysian Institute of Planners*

Tel: 03-7967 5325

e-mail: rosilawatizai@um.edu.my

## REAL ESTATE ECONOMICS, FINANCE & INVESTMENT



### **ASSOCIATE PROFESSOR DR. Sr YASMIN MOHD ADNAN**

*PhD (Urban Land Economy), University of Malaya  
MBA, Universiti Teknologi MARA (UiTM)  
BSc. (Hons) (Land Management), University of Reading, UK  
Registered Valuer, Estate Agent & Property Manager  
FRISM, MRICS, MMIPFM*

Tel: 03-7967 6845 / 5378

e-mail: yasmin\_alambina@um.edu.my

## ADMINISTRATIVE STAFF



### **NURULFAZILA MOHD SAJUTI**

*BSc (Applied Chemistry), Universiti Teknologi MARA (UiTM)  
Dip.Science, Universiti Teknologi MARA (UiTM)*

Assistant Science Officer

03- 7967 7610

nurulms@um.edu.my

## ASEAN UNIVERSITY NETWORK (AUN) – DISABILITY AND PUBLIC POLICY (DPPnet)

### DIRECTOR



**PROFESSOR DR. YAHAYA AHMAD**, D.J.N (PP)

*PhD (Conservation Management), University of Liverpool, UK  
MA (Architecture), Washington University, USA  
MConst Mgmt., Washington University, USA  
BA, Washington University, USA  
Registered Conservator, MRISM*

Tel: 03-7967 5395

E-mail: yahaya@um.edu.my

### OFFICERS



**NASREEN ATHIRAH BINTI MOHD ALUDIN**

*B.Business Study, Universiti Teknologi MARA (UITM)  
Dip.Business Admin, Universiti Teknologi MARA (UITM)*

Assistant Registrar

Tel: 03-7967 7618

E-mail: athirah@um.edu.my



**AMIR MUQRI BIN WAHAB**

Project Officer

Tel: 03-7967 7618

E-mail: amirmuqri@um.edu.my



## HIGHER DEGREE COMMITTEE 2021/2022

### MEMBERSHIP

The Higher Degree Committee appointed for academic year 2021/2022 comprises of the following member;

#### *Chairman*



**PROFESSOR DR. Sr Ts AZLAN SHAH ALI**

Deputy Dean (Higher Degree)

Tel: 03-7967 4494

e-mail: tdit\_fab@um.edu.my, asafab@um.edu.my

#### *Head of Department*



**Sr DR. OTHMAN MOHAMED**

Head, Department of Quantity Surveying

Tel : 03-7967 5379 / 03-7967 6834

e-mail : othmanmohamed@um.edu.my



**DR. Sr HASNIYATI HAMZAH**

Head, Department of Real Estate

Tel: 03-7967 5389/ 03-7967 5378

e-mail: hasniyati@um.edu.my



**Ar DR. HELENA AMAN HASHIM**

Head, Department of Architecture

Tel: 03-7967 6373

e-mail: helena@um.edu.my



**Dr. Sr RAHA SULAIMAN**

Head, Department of Building Surveying

Tel : 03-7967 6836 / 03-7967 6813

e-mail: rahasulaiman@um.edu.my



**DR. NIKMATUL ADHA NORDIN**

Head, Department of Urban and Regional Planning

Tel: 03-7967 6824 / 03-7967 5376

e-mail: nikmatul@um.edu.my

#### *Coordinator for Postgraduate Programme (by Research)*



**Sr DR. KHO MEI YE**

Coordinator for Doctor of Philosophy

Tel : 03-7967 2457

e-mail: meiye@um.edu.my



**ASSOCIATE PROFESSOR DR. NORHANIM ZAKARIA**

*Coordinator for Master programmes*

Tel : 03-7967 6875

e-mail : norhanimz@um.edu.my

***Representative from Department***



**DR. Sr ZAFIRAH AL SADAT BINTI ZYED**

Department of Real Estate

Tel: 03-7967 2454

e-mail: zafirahzyed@um.edu.my



**ASSOCIATE PROFESSOR Sr DR. NORHAYATI MAHYUDDIN**

Department of Building Surveying

Tel: 03-7967 6860

e-mail: hayati@um.edu.my



**ASSOCIATE PROFESSOR DR. TPr MELASUTRA MD DALI**

Department of Urban and Regional Planning

Tel: 03-7967 7950

e-mail: melasutr@um.edu.my



**DR. NORAFIDA AB. GHAFAR**

Department of Architecture

Tel: 03- 7967 5392

E-mail: norafida@um.edu.my



**ASSOCIATE PROFESSOR Sr DR. MOHD SUHAIMI MOHD DANURI**

Department of Quantity Surveying

Tel : 03-7967 4473

e-mail : msuhaimi@um.edu.my

***Secretariat***



**MOHD NORAZLIN BIN MANSOR**

Senior Assistant Registrar (Higher Degrees)

Tel : 03-7967 4449

e-mail : muhammad@um.edu.my



**NABILAH BINTI AHMAD**

Assistant Office Secretary

03 – 7967 6880

nabilahahmad@um.edu.my



# **GENERAL INFORMATION**

## GENERAL INFORMATION

### PROGRAMMES

| Code | Programmes   | Mode                          | Intake                    |                         |
|------|--|-------------------------------|---------------------------|-------------------------|
|      |  |                               | Semester II<br>(February) | Semester I<br>(October) |
| BVA  | Doctor of Philosophy                               | Research                      | √                         | √                       |
| BMA  | Master of Built Environment                        | Research                      | √                         | √                       |
| BQA  | Master of Real Estate                              | Coursework<br>Remote Learning | -                         | √                       |
| BQB  | Master of Project Management                       | Coursework<br>Remote Learning | -                         | √                       |
| BQC  | Master of Facilities and<br>Maintenance Management | Coursework<br>Remote Learning | √                         | √                       |
| BVH  | Master of Architecture                             | Coursework                    | -                         | √                       |

### ENTRY REQUIREMENTS FOR THE DOCTOR OF PHILOSOPHY (BY RESEARCH)

#### Non-University of Malaya Graduates

1. Master's degrees by research; **OR**
2. Master's degree by coursework or mixed mode with a CGPA of at least 3.70; **OR**
3. Master's degree by coursework or mixed mode with a CGPA of at least 2.00 to 3.69 **AND** Bachelor's degree with CGPA 2.50 to 2.99.

Can be considered if it meets **one (1)** of the following criteria

- a. Have at least **three (3) years** of work experience in related field; **OR**
- b. Produce publications in related fields; **OR**
- c. scholarship recipient; **OR**
- d. A Malaysian Government agency personnel; **OR**
- e. Passed an interview; **OR**
- f. Pass Special Assessment.

4. Master's Degree by Course or mixed mode with a CGPA of 2.00 to 3.69 **AND** Bachelor with CGPA of 2.00 to 2.49.

Can be considered if it meets **two (2)** of the following criteria

- a. Have at least **five (5) year** of work experience in related field; **OR**
- b. Produce at least **one (1) publication** in related fields; **OR**
- c. Passed an interview; **OR**
- d. Pass Special Assessment.

### University of Malaya Graduates (UM Alumni)

1. Master's degrees by research; **OR**
2. Master's degree by coursework or mixed mode with a CGPA of at least 3.70; **OR**
3. Master's degree by coursework or mixed mode with a CGPA of at least 2.00 to 3.69 **AND** Bachelor's degree with CGPA 2.50 to 2.99; **OR**
4. Master's Degree by Course or mixed mode with a CGPA of 2.00 to 3.69 **AND** Bachelor with CGPA of 2.00 to 2.49.

Can be considered if it meets **one (1)** of the following criteria

- a. Have at least **five (5) year** of work experience in related field; **OR**
- b. Produce at least **one (1) publication** in related fields; **OR**
- c. Passed an interview; **OR**
- d. Pass Special Assessment.

### **ENTRY REQUIREMENTS FOR MASTER'S PROGRAMMES**

#### Non-University of Malaya Graduates

1. Bachelor of Science in Architecture, Urban & Regional Planning, Quantity Surveying, Building Surveying, Estate Management or equivalent in a related field from a recognized university with a CGPA of at least 3.00 and above or equivalent; **OR**
2. Bachelor's degree with a CGPA of 2.70 to 2.99.

Can be considered if it meets **one (1)** of the following criteria

- a. Have at least **one (1) year** of work experience in related field; **OR**
- b. Produce publications in related fields; **OR**
- c. scholarship recipient; **OR**
- d. A Malaysian Government agency personnel; **OR**
- e. Passed an interview; **OR**
- f. Pass Special Assessment.

3. Bachelor's Degree with a CGPA of 2.50 to 2.69.

Can be considered if it meets **two (2)** of the following criteria

- a. Have at least **one (1) year** of work experience in related field; **OR**
- b. Produce publications in related fields; **OR**
- c. scholarship recipient; **OR**
- d. A Malaysian Government agency personnel; **OR**
- e. Passed an interview; **OR**
- f. Pass Special Assessment.

Bachelor's Degree with a CGPA of 2.00 to 2.49.

Can be considered if it candidates **passed an interview by the Faculty** and meets **one (1)** of the following criteria

- a. Have at least one **(5) five years** of work experience in related field; **OR**
- b. Produce at least **one (1) publication** in related fields; **OR**
- c. Pass Special Assessment.

### University of Malaya Graduates (UM Alumni)

1. Bachelor of Science in Architecture, Urban & Regional Planning, Quantity Surveying, Building Surveying, Estate Management or equivalent in a related field from a recognized university with a CGPA of at least 3.00 and above or equivalent; **OR**
2. Bachelor's degree with a CGPA of 2.70 to 2.99; **OR**
2. Bachelor's degree with a CGPA of 2.50 to 2.69

Can be considered if it meets **one (1)** of the following criteria

- a. Have at least **one (1) year** of work experience in related field; **OR**
  - b. Produce publications in related fields; **OR**
  - c. scholarship recipient; **OR**
  - d. A Malaysian Government agency personnel; **OR**
  - e. Passed an interview; **OR**
  - f. Pass Special Assessment.
3. Bachelor's Degree with a CGPA of 2.00 to 2.49.

Can be considered if it meets **one (1)** of the following criteria

- a. Have at least **five (5) years** of work experience in related field; **OR**
- b. Produce at least **one (1) publication** in related fields; **OR**
- c. scholarship recipient; **OR**
- d. A Malaysian Government agency personnel; **OR**
- e. Passed an interview; **OR**
- f. Pass Special Assessment.

### **ADDITIONAL REQUIREMENTS**

Beside the general entry requirement that is stated by the University, below are the additional requirements for candidates specific to the programme requirements:

#### **Master of Architecture**

- A. **UM graduates with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:
  1. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation.
    - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of six (6) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test).
  2. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)

3. Candidates with CGPA of 2.70 – 2.99
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)
  4. Candidates with CGPA of 2.70 – 2.99
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)
- B. **Non UM graduates and International students with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:
1. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation.
    - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of twelve (12) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test).
  2. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)

Non UM graduate and International students with CGPA of 2.99 and below are not eligible to apply for the Master of Architecture program

### **Master of Project Management**

- a. Bachelor's Degree in Built Environment, Engineering, Management, IT, Sciences, Social Sciences, Economy, Finance or equivalent qualification in a relevant discipline with CGPA of 3.00 and above; OR
- b. Professional qualification from a recognized professional body; OR
- c. Other qualifications as written by the Senate from time to time; AND
- d. Have at least one (1) year of working experience in related field; OR
- e. Bachelor's Degree with CGPA of less than 3.00 (2.70 to 2.99) with a minimum of three (3) years of working experience in related field; OR
- f. Bachelor's Degree with CGPA of less than 2.70 (2.50 to 2.69) with a minimum of three (3) years of working experience in related field; AND University of Malaya graduate; OR Produce at least one (1) publication in related fields; OR Scholarship recipient; OR
- g. Bachelor's Degree with CGPA of less than 2.50 (2.10 to 2.49) with a minimum of five (5) years of working experience in related field; AND University of Malaya graduate; AND Produce at least one (1) publication in related fields; OR Scholarship recipient.



## ENGLISH LANGUAGE REQUIREMENTS FOR NON-CITIZEN APPLICANT

- A band 5.5 in the International English Language Testing System (IELTS) (Academic); or
- A score of 550 paper based total, a score of 213 for computer-based total or a score of 80 for internet-based total for Test of English as a Foreign Language (TOEFL); or
- Band 4 and above in the Malaysian University English Test (MUET); or
- A score of 42 and above in the Pearson Test of Academic English (PTE Academic); or
- A Grade C and above in English for General Certificate of Education (A Level), University of Cambridge; or
- A Grade C and above in the Cambridge Assessment English: First (FCE); or
- A Grade C and above in the Cambridge Assessment English: Advanced (CAE); or
- A Grade C and above in the Cambridge Assessment English: Proficiency (CPE).

## BAHASA MALAYSIA REQUIREMENT

- a. For **Malaysian citizen**, candidate shall be required to possess at least a Pass in Bahasa Melayu or Bahasa Malaysia at the level of Sijil Pelajaran Malaysia (SPM) or a Level III in Sijil Kecekapan Bahasa Malaysia or a Level III in the Sijil Intensif Bahasa Malaysia of the University or an equivalent level before being conferred the Degree.
- b. **International candidate** shall be required to attend at a satisfactory level a Bahasa Malaysia course that is conducted by the University before being conferred the Degree. However candidate can be exempted from taking the Bahasa Malaysia course if they possesses at least a Pass in Bahasa Melayu or Bahasa Malaysia at the level of Sijil Pelajaran Malaysia or Level III in Sijil Kecekapan Bahasa Malaysia or Level II in the Sijil Intensif Bahasa Malaysia of the University or a Bahasa Malaysia course recognised by the University.

## RESEARCH AREAS OR EXPERTISE

Below are listing of research field under the Faculty of Built Environment, UM for candidates who are taking the **[BVA] Doctor of Philosophy (by Research)** and **[BMA] Master of Built Environment (by Research)** based on the National Education Code (NEC)

| <b>Architecture &amp; Building</b> (NEC code: 58)   | <b>Arts</b> (NEC code: 21)  |
|---|---|
| Architecture & Town Planning (581)<br>Building (582)  | Arts (210)<br>Fine Arts (211)<br>Music and Performing Arts (212)<br>Audio-Visual Techniques and Media Production (213)<br>Design (214)<br>Craft Skills (215)  |
| <b>Business &amp; Administration</b> (NEC code: 34)   | <b>Engineering &amp; Engineering Trades</b> (NEC code: 52)  |
| Business and Administration (340)<br>Wholesale and Retail Sales (241)<br>Marketing and Advertising (342)<br>Finance, Banking and Taxation (343)<br>Management and Administration (345)<br>Secretarial and Office Work (346)<br>Working Life (347) | Engineering and Engineering Trades (520)<br>Mechanics and Metal Work (521)<br>Electricity and Energy (522)<br>Electronics and Automation (523)<br>Chemical and Process (524)<br>Motor Vehicles, Ships and Aircraft (525)<br>Civil Engineering (526)<br>Material Engineering (527) |

| <b>Environment Protection</b> (NEC code: 85)  | <b>Security Service</b> (NEC code: 86)  |
|---|---|
| Environmental Protection (850)<br>Environmental Protection Technology (851)<br>Natural Environments and Wildlife (852)<br>Community Sanitation Services (853) | Security Services (860)<br>Protection of Persons and Property (861)<br>Occupational Health and Safety (862)<br>Military and Defence (863) |

Source : <http://maya.um.edu.my>

## LEGISLATIONS AND PRESCRIBED RULES

A Doctoral candidate is governed by the University of Malaya (Doctoral Degrees) Rules and Regulations, 2019 and for Master's candidate is governed by the University of Malaya (Master's Degrees) Rules and Regulations, 2019

# REGISTRATION SCHEDULE FOR NEW STUDENTS SEMESTER I, 2021/2022 ACADEMIC SESSION

## NEW POSTGRADUATE STUDENTS

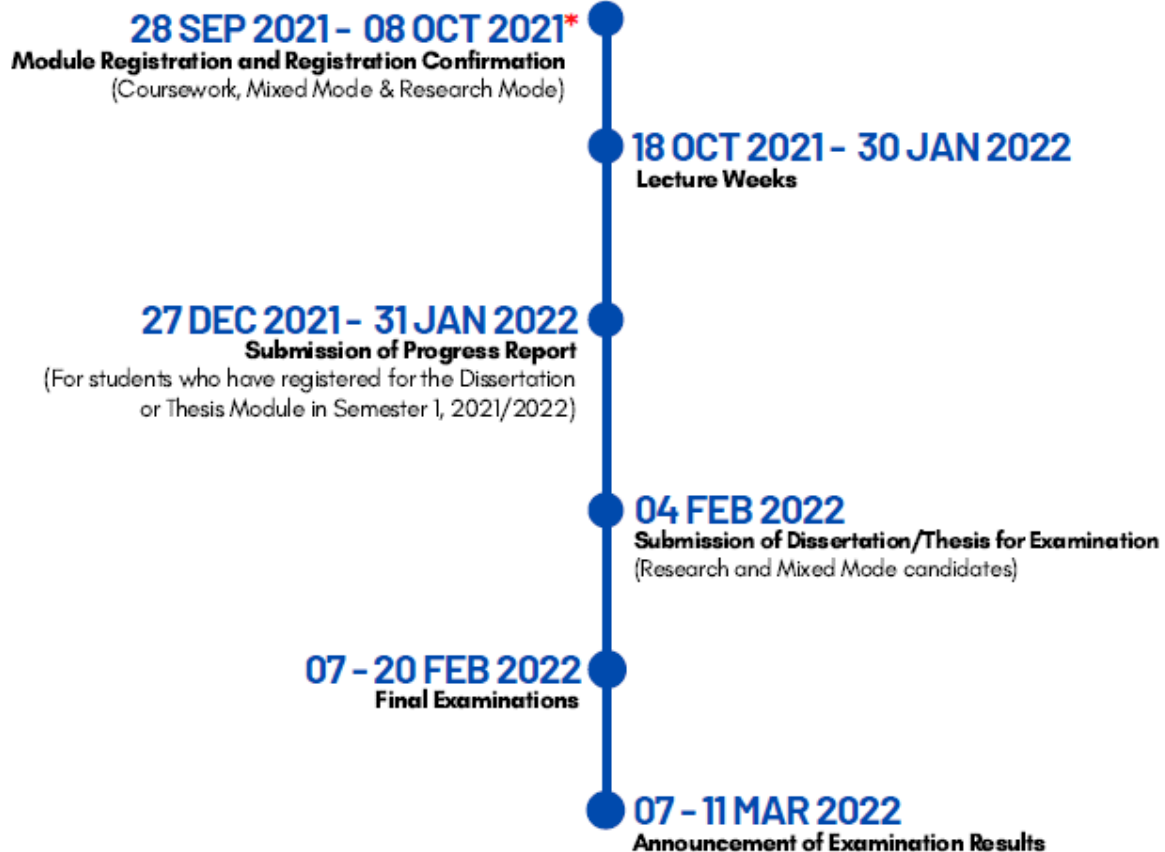


- \*Final date for registration confirmation (Status will remain as **NOT REGISTERED** if registration is not confirmed)
- Students are **not allowed to ADD and/or DROP** any course once registration is confirmed within the stipulated dates.
- Please note that the registration schedule is subject to change.  
(Updated 13th August 2021)

Admission and Registration Section  
Academic Administration and Services Centre (AASC)

# REGISTRATION SCHEDULE FOR CURRENT STUDENTS SEMESTER I, 2021/2022 ACADEMIC SESSION

## CURRENT POSTGRADUATE STUDENTS



 **\*Final date for registration confirmation** (Status will remain as **NOT REGISTERED** if registration is not confirmed)

 Students are **not allowed to ADD and/or DROP** any course once registration is confirmed within the stipulated dates.

 Please note that the registration schedule is subject to change.  
(Updated 13th August 2021)

Admission and Registration Section  
Academic Administration and Services Centre (AASC)



# **SUPPORT SERVICES**

## SUPPORT SERVICES

### LIBRARY

The University of Malaya Library established since 1962 in Kuala Lumpur is a network of 17 Libraries, fully computerized and integrated in its operation and services. The Built Environment Library is one of the special subject libraries in the University of Malaya Library network. Prior to 2003, the collections were kept in the Engineering Library, at the Faculty of Engineering. At the present location, the Built Environment Library is conveniently located for access and is open to all students during office hours. The library is manned by two full-time staff members and one senior librarian which covers a floor space of about 835 sq. meters with seating capacity for 133 students.

The Library's core function is to support the learning, teaching and research needs of undergraduate, postgraduate students, and the academic staff and researchers of the Faculty of Built Environment. However, it is also opened to other registered users of the University of Malaya Library network, subject to some limitation in borrowings.

The collection gives priority on the learning and teaching programme of the Built Environment Faculty especially in the areas of architecture, real estate, quantity surveying, building surveying and urban planning. The library materials include both primary and secondary sources, such as books, journals, reference books, dissertation and theses, conference proceedings and electronic resources. The library online catalogue, known as Pendeta WebPAC is a union catalogue of the University of Malaya Library network which provides access to holdings of collection of materials and can be accessed by others via the Internet.

| Library Collections                          |   |
|--|---|
| General                                      | The Library has a general collection of about 11,141 item consists of textbooks, reference books, and handbooks, journal, CD-ROM and etc.   |
| Dissertations, Theses and Academic Exercises | This ever expanding collection consists of works produced by undergraduate and postgraduate students of the Faculty.  |
| Conference Papers                            | Papers presented by the academic staff at the seminars or conferences especially held in Malaysia are continually collected and indexed in an index database known as iMalaysiana Collection.                             |
| Journal, Online databases and e-Books        | The Library subscribes to printed journal, online databases - mostly full text journals and e-books, which can be accessed via the campus network and remote access from individual home of registered users.             |
| Others                                       | Some available online databases related to the built environment are ICONDA (International Construction Database), RIBA e-books, IEEE Xplore, Art & Architecture Complete @EBSCOHOST, Science Direct, Springer Link, etc. |

| Library Services                                |   |
|---|---|
| Loans, Online Renewal and Reservation           | Most books are allowed borrowings, except the Reference and special collection such as dissertation/theses and conference proceedings. The library-computerized system allows online renewal by the individual by each patron; and also reservation of books when materials on loan to other user.  |
| Discussion Area ("Ruang Bicara")                | This Discussion Area is located beside the library office and accommodate with 16 seats. This area is spacious and very interesting for any discussion and meeting. It is open to anyone who interested and users only need to make a reservation at counter services. Projectors are also provided for teaching and learning facilities.   |
| Books Donation Corner (by Faculty Members)      | This corner was initiated by faculty members to keep books donation as a library collection. All of these materials can be referred and borrowed.   |
| Inter-library loan and Document Supply Services | Inter-library loan facilities and document delivery services are available for postgraduate students, researchers and academic staff of the Faculty of Built Environment. Requests to these services are facilitated via the Library interactive portal, which can be submitted to the Library management electronically. A special budget is allocated for this purpose with deposit accounts established at the British Library (U.K) and National University of Singapore (Singapore). |
| Access to Other Resource Centres in Malaysia    | Registered students and academic staff of the University Malaya are allowed to visit and use (for reference only) other academic / public university libraries in Malaysia, as a part of the resource sharing programme.  |
| Information Literacy (GIG1004)                  | Besides that, the library conducts a formal compulsory course for first year undergraduate called Information Literacy (GIG1004) to equip them with the skills on information retrieval and access to resources.  |
| User Education Session                          | The postgraduate students, academic staff and researchers of the Faculty are given special user education session; to cater for information needs at a regular basis to familiarize them with the use of library resources and library catalogue (Pendeta WebPAC), Endnote Management Software and online databases subscribed.   |

### Reference and Information Enquiries

A librarian will assist and guide users with searching information for the collection, online database subscribed, internet or from other institutions. For further information do contact Mr. Muhammad Faizal Abd Aziz, Senior Librarian at 03-79676802 or email at [mfaizal@um.edu.my](mailto:mfaizal@um.edu.my)



## Operating Hours

|   |                   |
|---|-------------------|
| Monday - Friday                                 | 8.30 am – 5.30 pm |
| Closed on Saturday, Sunday and Public Holidays. |                   |

## STUDENT FACILITIES

| FACILITIES                                    | DISCRIPTION  |
|---|--|
| Self-Photocopying Machines                    | Photocopying services operated by commercial contractors are provided in the Library and cards can be purchased at the Service Counter.  |
| Computers (PC)                                | Computers with Internet connections are provided for use in the Library for searching information from Library resources and other online databases subscribed by the Library.   |
| Student Centre                                | Located at Level 3, Mercu Alam Bina was designed to give students space for study and relaxation between classes.  |
| Surau/Musolla (Praying Room)                  | Located at the second floor of Mercu Alam Bina for both male and female  |
| WIFI  | Access is available within the building with a number of access points.  |
| Vending Machines                              | Available on selected floors.  |
| Centralised and Special Computer Laboratories | The general computer laboratory is a centralised facility for all students of the Faculty. The facilities include desktop publishing and image editing. The special computer laboratory is for teaching purposes that include facilities for 2D draughting, 3D modelling and simulation. All the computers are networked within the Faculty's area network and are linked to the Internet.   |
| Centralised Workshop                          | A Model-Making Workshop that has 100m <sup>2</sup> floor area is available for students to make architecture models and construct small-scale objects. The workshop, equipped with hand and power tools for model-making with wood, plastics and metal, is open during normal working hours for use by all students of the faculty. Some equipment are available for loan outside operating hours. One full-time technician supervises the workshop activities and provides hand-on training and assistance to students. |
| Centralised Laboratories                      | There are three centralized laboratories within the Faculty buildings that support the lecturers and students in teaching and research activities. These are Physics, Building   |

|      |  |
|------|--|
|      | Laboratories and Digital Crafting Lab. The labs offer advanced practical, research and model-making facilities with state-of-the-art machines and equipment, under the supervision of experienced academic and technical staff. In addition, students have access to more specialized laboratories in Engineering and Science Faculties. |
| Cafe | The faculty's café is located at level 3 and is open during office hours on weekdays.  |



# **DOCTOR OF PHILOSOPHY**

(Research)

## [BVA] DOCTOR OF PHILOSOPHY (BY RESEARCH)

### Program Overview

PhD students will carry out focused research in their area of specialisation, which is of immediate relevance to their research interest.

Additionally, they will be exposed to new developments and challenges in their research topic in the international arena through media, seminars, conferences and keynote addresses and also through research attachments and collaborative exchange arrangements with international recognised research centres.

### Program Structure

This Ph.D programme is purely based on individual supervised research. Candidates will be exposed to [Code: BVX8001] Research Methodology Course (3 Credits) to strengthen their research knowledge. At the end of the candidate's study, a thesis must be submitted and upon successful defence, the candidate will be granted Ph.D status. All research proposals must be approved and supervised by the Faculty. Ph.D candidates' theses must not exceed 100,000 words. They are required to complete their studies within 12 semesters.

### Programme Fees

| Candidate         | Fees (RM) |
|-------------------|-----------|
| Local (Malaysian) | RM 19,500 |
| International     | RM 42,230 |

Source: <https://study.um.edu.my>

### Candidacy

|                |   |              |
|----------------|---|--------------|
| Minimum period | : | 4 Semesters  |
| Maximum period | : | 12 Semesters |

### Registered Candidate

A candidate will be classified as a registered candidate of the University of Malaya from his/her initial registration until the award of his/her degree, subject to the candidate to renew his/her registration every semester.

### Candidature Requirements

- attend at least 3 credits of **[Code: BVX8001] Research Methodology Course not later than the second (2nd) semester** of candidature;

- b. candidates need to present his/her **initial research proposal in the Pre-Research Proposal at the end of Research Metodology Course**;
- c. fulfil attendance requirements for the **University Bahasa Malaysia course not later than the second (2nd) semester** of candidature (International Students only);
- d. present research proposal at **Proposal Defence not later than the second (2nd) semester** of candidature;
- e. present research progress at **Candidature Defence not later than the fifth (5th) semester** of candidature;
- f. present research progress at **Thesis Seminar before the submission of thesis for examination**;
- g. must show proof of acceptance for publication as per the following (according to the criteria set in the publication guidelines), prior to graduation:
  - (i) at least **one (1) article** in journals indexed by Thomson Reuters Web of Science (WoS)  
**or**;
  - (ii) at least **one (1) book published** by publishers listed in the Thomson Reuters Web of Science (WoS) Master Book List or by University of Malaya Press or Dewan Bahasa dan Pustaka or any publishers listed and recognized by the Faculty  
**or**;
  - (iii) at least **two (2) publications** in Category A or B refereed journals, or book chapters as follows:
    - **Articles in Category A journals:**  
Journals indexed in the Scopus citation database
    - **Articles in Category B journals:**  
Journals published by University or scholarly publishers or listed in MyJurnal (Malaysian Journal Management System). (List of Category B journals must be listed and recognized by the Faculty)
    - **Book chapters of different books:**  
Book chapters published by publishers listed in the Thomson Reuters Web of Science (WoS) Master Book List, or by University of Malaya Press or Dewan Bahasa dan Pustaka or any publishers listed and recognized by the Faculty. Two (2) book chapters in different books are equivalent to one (1) publication; and
- h. fulfil the residential requirement of **12 months**.

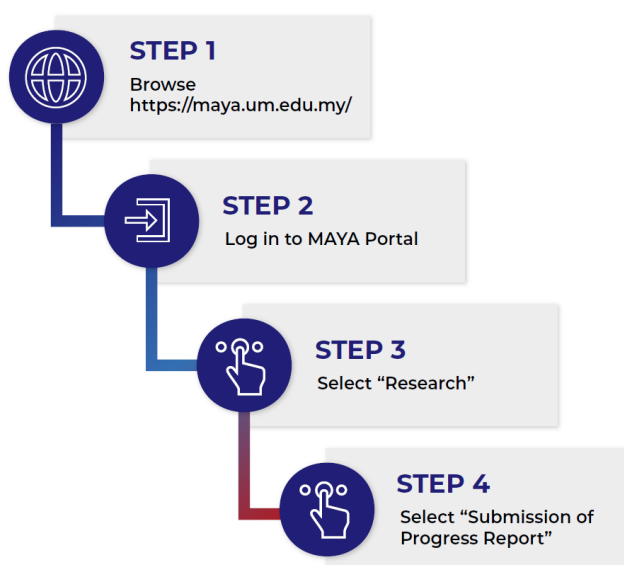
### **Additional Requirements**

Compulsory to attend the seminars/conference/workshop or special seminars organized by the faculty or others at least five (5) times during the study period.

## Progress Report

A candidate is required to submit a research progress report latest between **week sixteen and week eighteen of each semester before the registration of the subsequent semester** begins in accordance with the prescribed procedure. The Supervisor, Co-Supervisor and Consultant shall evaluate the candidate's research progress report in accordance with the prescribed procedures and complete the said evaluation within one (1) week from the date of receipt of progress report for the semester concerned.

A candidate whose **progress is satisfactory shall be recommended to continue** with his candidature. A candidate whose **progress is not satisfactory for two (2) consecutive semesters shall have his candidature terminated** by the University. Please make sure the following steps are followed to ensure successful submission of your progress report:



## Submission for the Proposal Defence (PD)

Candidates are required to submit **four (4) copies of complete research proposal report of 3,000 – 7,000 words** to the Postgraduate Office **not later than two (2) weeks before the date of the presentation**, which includes the following:

- introduction, statement of problem and scope of research;
- research objective;
- summary of literature review;
- description of conceptual framework or summary of experimental methods or summary of research design and required equipment;
- importance and relevance of study;
- preliminary findings / pilot test (initial findings, if any)
- proposed work schedule based on the designated date of submission of thesis/dissertation; and

- h. brief bibliography.

#### **Submission for the Confirmation Defence** *(for direct admission candidates)*

Candidates are required to submit **four (4) copies of complete research proposal report of 4,000 - 7000 words** to the Postgraduate Office **not later than two (2) weeks before the date of the presentation**, which includes the following:

- a. introduction, statement of problem and scope of research;
- b. research objective;
- c. complete literature review;
- d. credible research methodology;
- e. importance and relevance of study;
- f. initial findings (preliminary findings) / pilot test (if any)
- g. proposed work schedule based on the designated date of submission of thesis/dissertation; and
- h. brief bibliography.

#### **Submission for the Candidature Defence (CD)**

Candidates are required to submit **four (4) copies of a complete research progress report of 5,000 - 10,000 words** to the Postgraduate Office **not later than two (2) weeks before the date of the presentation**, which includes the following:

- a. abstract (500 words in Malay and English);
- b. objective and Statement of Problem
- c. importance and relevance of the study;
- d. brief and concise literature review;
- e. credible research methodology;
- f. research findings that have been obtained to this point;
- g. brief and concise bibliography;
- h. research plan that will lead to the submission of the dissertation/thesis on the designated date; and
- i. list of publications or conference papers presented during the candidature period.

#### **Submission for the Thesis Seminar**

Candidates shall submit presentation notes with abstract to the Postgraduate Office **not later than three (3) working days** before the date of presentation

#### **Submission of Thesis for Examination**

Candidates shall submit their thesis for examination after the minimum period and within the maximum period of the candidature. Candidates must ensure that they have submitted a Three Months' Notice and that thesis title has been approved by the Faculty prior to submission of the thesis for examination. Any corrections of re-examination required for the thesis must be submitted before the lapse of the prescribed period. Failure to do so shall be deemed a failure in the examination of the thesis unless an extension to the prescribed

period is approved by the Senate. Candidates are not allowed to withdraw from an examination for a thesis where the thesis has already been submitted for examination. Candidates are advised to refer to the latest Guidelines for the Preparation of Research Reports.

### **Programme Coordinator**



**Sr DR. KHO MEI YE**

*Coordinator for Doctor of Philosophy*

*PhD (Project Management), Universiti Malaya*

*MSc (Building), Universiti Malaya*

*B. (Hons) Quantity Surveying, Universiti Malaya*

*Reg. Professional QS (BQSM), MRISM*

Tel : 03-7967 2457

e-mail: meiye@um.edu.my

### **Administrative Staff**



**JUNITA BINTI HALIM**

Administrative Assistant (Doctor of Philosophy)

Higher Degrees Office

Level 8, Mercu Alam Bina, Faculty of Built Environment

University of Malaya

Tel : 03 – 7967 5320

e-mail: june1981@um.edu.my





# **MASTER OF BUILT ENVIRONMENT**

(Research)

# **[BMA] MASTER OF BUILT ENVIRONMENT (BY RESEARCH)**

## **Program Overview**

Students will have the benefits of exposure in conducting research in their particular areas of interest or specialisation and acquisition of an understanding of a body of knowledge in the respective area of specialisation.

## **Programme Structure**

This Master's programme is purely based on individual supervised research. Candidates will be exposed to [Code: BMX7001] Research Methodology Course (3 Credits) to strengthen their research knowledge. At the end of the candidate's study, a dissertation must be submitted and upon successful defence of the dissertation, the candidate will be awarded a Masters' degree. All research proposals must be approved and supervised by the Faculty. Candidates are required to complete their studies within 8 semesters.

## **Programme Fees**

| <b>Candidate</b>  | <b>Fees (RM)</b> |
|-------------------|------------------|
| Local (Malaysian) | RM 18,400        |
| International     | RM 34,200        |

Source: <https://study.um.edu.my>

## **Candidacy**

Minimum period : 2 Semesters  
Maximum period : 8 Semesters

## **Registered Candidate**

A candidate will be classified as a registered candidate of the University of Malaya from his/her initial registration until the award of his/her degree, subject to the candidate to renew his/her registration every semester.

## **Upgrade to PhD**

A program leading to a doctoral degree (PhD) within the same research area is possible and conversion from Master to PhD is based on merits. The PhD Candidacy is for a period of four (4) semesters (minimum) and up to twelve (12) semesters (maximum). Application for this option should be made before the expiry of the third semester of study (no later than 15 months from registration).

## Candidature Requirements

- a. attend at least 3 credits of **[Code: BMX7001] Research Methodology Course not later than the second (2nd) semester** of candidature;
- b. candidates need to present his/her **initial research proposal in the Pre-Research Proposal at the end of Research Metodology Course**;
- c. fulfil attendance requirements for the **University Bahasa Malaysia course not later than the second (2nd) semester** of candidature (International students only);
- d. present research proposal at **Proposal Defence not later than the second (2nd) semester** of candidature;
- e. present research progress at **Candidature Defence not later than the third (3rd) semester** of candidature;
- f. present research progress at **Dissertation Seminar before the submission of dissertation for examination**;
- g. must show proof of acceptance for publication as per the following (according to the criteria set in the publication guidelines), prior to graduation:
  - (ii) at least **one (1) article** in journals indexed by Thomson Reuters Web of Science (WoS)  
**or**;
  - (ii) at least **one (1) book published** by publishers listed in the Thomson Reuters Web of Science (WoS) Master Book List or by University of Malaya Press or Dewan Bahasa dan Pustaka or any publishers listed and recognized by the Faculty  
**or**;
  - (iii) at least **one (1) publication** in Category A or B refereed journals, or book chapters as follows:
    - **Articles in Category A journals:**  
Journals indexed in the Scopus citation database
    - **Articles in Category B journals:**  
Journals published by University or scholarly publishers or listed in MyJurnal (Malaysian Journal Management System). (List of Category B journals must be listed and recognized by the Faculty)
    - **Book chapters of different books:**  
Book chapters published by publishers listed in the Thomson Reuters Web of Science (WoS) Master Book List, or by University of Malaya Press or Dewan Bahasa dan Pustaka or any publishers listed and recognized by the Faculty. Two (2) book chapters in different books are equivalent to one (1) publication; and
- h. fulfil the residential requirement of **6 months**.

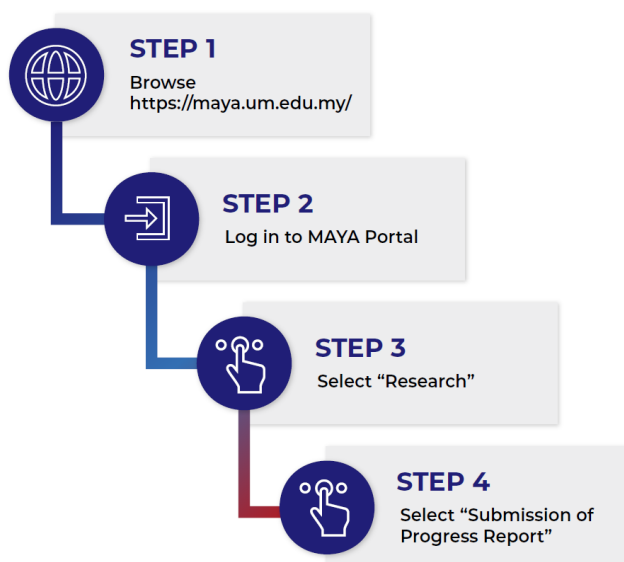
## Additional Requirements

Compulsory to attend the seminars/conference/workshop or special seminars organized by the faculty or others at least one (1) times during the study period.

## Progress Report

A candidate is required to submit a research progress report latest between **week sixteen and week eighteen of each semester before the registration of the subsequent semester** begins in accordance with the prescribed procedure. The Supervisor, Co-Supervisor and Consultant shall evaluate the candidate's research progress report in accordance with the prescribed procedures and complete the said evaluation within one (1) week from the date of receipt of progress report for the semester concerned.

A candidate whose **progress is satisfactory shall be recommended to continue** with his candidature. A candidate whose **progress is not satisfactory for two (2) consecutive semesters shall have his candidature terminated** by the University. Please make sure the following steps are followed to ensure successful submission of your progress report:



## Submission for the Proposal Defence (PD)

Candidates are required to submit **four (4) copies of complete research proposal report of 3,000 – 7,000 words** to the Postgraduate Office **not later than two (2) weeks before the date of the presentation**, which includes the following:

- i. introduction, statement of problem and scope of research;
- j. research objective;
- k. summary of literature review;
- l. description of conceptual framework or summary of experimental methods or summary of research design and required equipment;
- m. importance and relevance of study;

- n. preliminary findings / pilot test (initial findings, if any)
- o. proposed work schedule based on the designated date of submission of thesis/dissertation; and
- p. brief bibliography.

### **Submission for the Candidature Defence (CD)**

Candidates are required to submit **four (4) copies of a complete research progress report of 5,000 - 10,000 words** to the Postgraduate Office **not later than two (2) weeks before the date of the presentation**, which includes the following:

- j. abstract (500 words in Malay and English);
- k. objective and Statement of Problem
- l. importance and relevance of the study;
- m. brief and concise literature review;
- n. credible research methodology;
- o. research findings that have been obtained to this point;
- p. brief and concise bibliography;
- q. research plan that will lead to the submission of the dissertation/thesis on the designated date; and
- r. list of publications or conference papers presented during the candidature period.

### **Submission for the Dissertation Seminar**

Candidates shall submit presentation notes with abstract to the Postgraduate Office **not later than three (3) working days** before the date of presentation

### **Submission of Dissertation for Examination**

Candidates shall submit their dissertation for examination after the minimum period and within the maximum period of the candidature. Candidates must ensure that they have submitted a Three Months' Notice and that dissertation title has been approved by the Faculty prior to submission of the dissertation for examination. Any corrections of re-examination required for the dissertation must be submitted before the lapse of the prescribed period. Failure to do so shall be deemed a failure in the examination of the dissertation unless an extension to the prescribed period is approved by the Senate. Candidates are not allowed to withdraw from an examination for a dissertation where the dissertation has already been submitted for examination. Candidates are advised to refer to the latest Guidelines for the Preparation of Research Reports.

### **Programme Coordinator**



#### **ASSOCIATE PROFESSOR DR. NORHANIM ZAKARIA**

*Coordinator for Master programmes*

*PhD (Real Estate/Project Management), Universiti Teknologi Malaysia*

*MSc (Construction Management), Universiti Teknologi Malaysia*

*B (Hons) Quantity Surveying, Universiti Teknologi Malaysia*

*Diploma in Quantity Surveying, Universiti Teknologi Malaysia*

*Reg. Provisional QS (BQSM), MIVMM, Graduate Member (RISM)*

**Tel : 03-7967 6875**

**e-mail : norhanimz@um.edu.my**

## **Administrative Staff**



### **NORIZAN MAT SAMAN**

Senior Administrative Assistant (Master by Research)  
Higher Degrees Office  
Level 8, Mercu Alam Bina, Faculty of Built Environment  
University of Malaya  
03 – 7967 6807  
lzan2080@um.edu.my



# **MASTER OF REAL ESTATE**

(Coursework & Remote Learning )

# **[BQA] MASTER OF REAL ESTATE (COURSEWORK & REMOTE LEARNING)**

## **Program Overview**

This program aims to create reflective practitioners in the Real Estate Industry, with enhanced knowledge and skills in land and property development. This cutting edge program, designed with inputs from the real estate industry, will significantly strengthen and develop the expertise of contemporary real estate professionals besides meeting the needs of aspiring real estate professionals.

## **Delivery and Attendance**

- The minimum duration of the program is two (2) normal semesters (one year) and one (1) special semester, with the maximum is eight (8) semesters (four years).
- Classes will be conducted through after-office and / or weekend session.
- The program is offered at University of Malaya's Faculty of Built Environment, Kuala Lumpur.
- The program is delivered through lectures, tutorials and coursework.

## **Conferment of Degree**

Upon successful completion of the program, students will be conferred the **Master of Real Estate** degree from the University of Malaya.

## **Programme Fees**

| <b>Candidate</b>  | <b>Fees (RM)<br/>Conventional</b> | <b>Fees (RM)<br/>Remote Learning</b> |
|-------------------|-----------------------------------|--------------------------------------|
| Local (Malaysian) | RM 16,900                         | RM 20,230                            |
| International     | RM 30,800                         | RM 29,373                            |

Source: <https://study.um.edu.my>

## **Program Structure and Assessment**

This program consists of 11 courses apportioned as follows: Semester 1 has four compulsory courses, Semester 2 has four compulsory courses and two elective courses from three choices and Semester 3 (Special Semester) has one progressive course. Altogether students must undertake 10 courses. Each course is delivered over a 14-week period, except for BQA7002 (Research Project) which is conducted over two semesters. The courses are assessed by examination and / or continuous assessment.

## **Programme Outcomes**

Graduate will be able to:



|     |  |
|-----|--|
| PO1 | Enhance the knowledge of property development to meet academic and industry needs locally and internationally          |
| PO2 | Apply knowledge and skills in coordinating and managing various types of property effectively                          |
| PO3 | Undertake social responsibility in providing real estate consulting and valuation services                             |
| PO4 | Demonstrate professionalism in implementing property management services to meet the needs of industry and communities |
| PO5 | Communicate and work effectively in industry and communities to make investment decisions and property development     |
| PO6 | Develop analytical capabilities and problem solving skills   |
| PO7 | Possess relevant information and knowledge in property consulting and valuation services                               |

### Course Structure

| COMPO<br>NENTS                       | SEMESTERS              |  |     |                        |   |     |                         |  |     | TOTAL<br>CREDIT |
|--------------------------------------|------------------------|--|-----|------------------------|---|-----|-------------------------|--|-----|-----------------|
|                                      | SEM 1: NORMAL SEMESTER |  |     | SEM 2: NORMAL SEMESTER |   |     | SEM 3: SPECIAL SEMESTER |  |     |                 |
|                                      | CODE                   | COURSE   | CDT | CODE                   | COURSE  | CDT | CODE                    | COURSE   | CDT |                 |
| CORE SUBJECTS                        | BQA<br>7001            | Research<br>Methodology in<br>Real Estate      | 3   | BQA<br>7002            | Research<br>Project<br><i>( Progressive I )</i> | 6   | BQA<br>7002             | Research<br>Project<br><i>( Progressive II )</i> | 6   | 42              |
|                                      | BQA<br>7003            | Development<br>Economics and<br>Planning       | 4   | BQA<br>7006            | Real Estate<br>Development<br>Process           | 4   |                         |  |     |                 |
|                                      | BQA<br>7004            | Property Law and<br>Institutional<br>Framework | 4   | BQA<br>7007            | Property Market<br>Research and<br>Marketing    | 4   |                         |  |     |                 |
|                                      | BQA<br>7005            | Property Finance<br>and Investment<br>Analysis | 4   | BQA<br>7008            | Valuation and<br>Investment<br>Appraisal        | 4   |                         |  |     |                 |
| ELECTIVE SUBJECTS<br>(CHOOSE 1 ONLY) | BQA<br>7009            | Corporate Real<br>Estate                       | 3   | BQA<br>7009            | Corporate Real<br>Estate                        | 3   |                         |  |     | 3               |
|                                      | BQA<br>7010            | Real Estate<br>Project<br>Management           |     | BQA<br>7010            | Real Estate<br>Project<br>Management            |     |                         |  |     |                 |
|                                      | BQA<br>7011            | Sustainable Real<br>Estate<br>Development      |     | BQA<br>7011            | Sustainable<br>Real Estate<br>Development       |     |                         |  |     |                 |
| TOTAL CREDIT                         |                        |  |     |                        |   |     |                         |  |     | 45              |

**PROGRESSIVE COURSE :**

Candidates need to register and complete the **BQA7002 – Research Project (progressive I & progressive II) in two (2) semesters (Semester II and Special Semester)**. BQA7002 (Progressive1) is given Grade P (progressive) in the first semester of registration. Final grade will be given once the candidates are completed the BQA 7002 (progressive 2) in Special Semester.

**Syllabus Summary**

| <b>BQA7001 RESEARCH METHODOLOGY IN REAL ESTATE</b> |  |
|--|--|
| 3 Credits  | <p>Students will be exposed to real estate research elements and processes of problem and hypothesis formulation, research design, data collection and analysis methods, developing the conclusion, and writing the research report. Data collection and sources of data, library research, research methodologies in terms of the general philosophies and detailed research methods. Computer usage: SPSS and other relevant software.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Apply qualitative and quantitative methods that are applicable to evaluate real estate related research.</li> <li>2. Apply the theory and techniques of developing and conducting research in real estate development.</li> <li>3. Illustrate communication skills that contain critical thinking and problem solving elements.</li> <li>4. Structure a research proposal.</li> </ol> |
| <b>BQA7002 RESEARCH PROJECT (P)</b>                |  |
| 12 Credits   | <p>This course requires the students to conduct research and write a research report under supervision.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Develop a research framework</li> <li>2. Apply appropriate research methodology</li> <li>3. Demonstrate data collection and analysis using appropriate techniques</li> <li>4. Synthesize research results and findings</li> <li>5. Relate information and express ideas clearly and effectively</li> </ol> <p><i>Candidates need to register and complete the <b>BQA7002 – Research Project (progressive I &amp; progressive II) in two (2) semesters (Semester II and Special Semester)</b>. BQA7002 (Progressive1) is given Grade P (progressive) in the first semester of registration. Final grade will be given once the candidates are completed the BQA 7002 (progressive 2) in Special Semester.</i></p>       |
| <b>BQA7003 DEVELOPMENT ECONOMICS AND PLANNING</b>  |  |
| 4 Credits  | <p>Characteristics of land as an investment, its importance, market trend and property performance in various economic condition; rent and location theories as well as theories related to urban structure and growth; government intervention in property market, and urban problems.</p>  |

|   |  |
|---|--|
|   | <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Classify the theories and issues related to development and planning</li> <li>2. Distinguish urban real estate issues in land development.</li> <li>3. Predict potential property development</li> <li>4. Evaluate problem solving measures in the context of real estate development process.</li> </ol>  |
| <b>BQA7004 PROPERTY LAW AND INSTITUTIONAL FRAMEWORK</b> |  |
| 4 Credits   | <p>Relevant governance and legislation related to real estate development which includes land, building and environmental laws (Federal Constitutions, National Land Code 1965, Local Government Act 1976, Town and Country Planning Act 1976, Street, Drainage and Building Act 1974, Building by-Law 1984, Environmental Quality Act 1974, Environmental Quality Order 1985, Strata Title Act 1985/ Strata Management Act 2013, Housing Development Act (Control and Licensing) 1966.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify relevant legislation framework suitable for land development</li> <li>2. Integrate knowledge in determining requirements and restrictions to be adhered to in land development.</li> <li>3. Relate the development laws to the environmental management aspect of sustainable development</li> <li>4. Criticise the current regulatory framework</li> </ol> |
| <b>BQA7005 PROPERTY FINANCE AND INVESTMENT ANALYSIS</b> |  |
| 4 Credits   | <p>Financial and capital market (secondary mortgage market REITs); the relationship between investment and property development; investment technique and financing (financing property development, residential product, income-generating property); financial and investment analysis; capital budgeting and portfolio theory.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify the principles of financial and investment property</li> <li>2. Distinguish techniques of financial analysis and investment-related</li> <li>3. Evaluate the performance of real estate investment</li> <li>4. Choose the best option for real estate investment devise.</li> </ol>   |
| <b>BQA7006 REAL ESTATE DEVELOPMENT PROCESS</b>          |  |
| 4 Credits   | <p>Parties and institutions involved in property development; development process from initial stage to handing over vacant possession, development process models; impact of public policy and legislation restrictions; fundamental of project management and project appraisals; risk management.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify real estate development process models</li> </ol>  |

|   |   |
|---|---|
|   | <ol style="list-style-type: none"> <li>2. Establish relevant attributes of a successful property development</li> <li>3. Identify relevant negotiation techniques</li> <li>4. Assess the performance and viability of the development project.</li> </ol>   |
| <b>BQA7007 PROPERTY MARKET RESEARCH AND MARKETING</b> |   |
| 4 Credits   | <p>Property market research: data collection; types and methods, survey design, sampling, data analysis, forecasting: economy and property market (behaviour and trends, economy/ property cycle) and research findings.</p> <p>Property marketing: characteristics and market segment, market catchment, market positioning, principles and strategies in marketing management, marketing skills</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify marketing techniques and real estate market research</li> <li>2. Develop the relevant attributes towards a successful real estate marketing</li> <li>3. Produce a real estate market study report</li> <li>4. Evaluate real estate market research findings</li> </ol> |
| <b>BQA7008 VALUATION AND INVESTMENT APPRAISAL</b>     |   |
| 4 Credits   | <p>Methods of valuation and discounting techniques; Market, Cost and Income methods as outlined by the International Valuation Standard and the 5 methods by the Malaysian Valuation Standard in determining the Market Value of various types of landed property. Explain and apply the various types of investment appraisals.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Determine the different property valuation approaches</li> <li>2. Apply the valuation methods and discounting techniques</li> <li>3. Appraise the suitability of valuation methods for different types of property.</li> <li>4. Explain and apply the various types of investment appraisals</li> </ol>  |
| <b>BQA7009 CORPORATE REAL ESTATE</b>                  |   |
| 3 Credits   | <p>Strategies in managing effective real estate portfolio, operational and non-operational real estate; strategic planning and analysis; legal, economic and technical aspects in execution of portfolio management; space planning; lease and tenancy; merger, acquisition and disposal; corporate financing.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Recognise corporate holdings in real estate.</li> <li>2. Perform strategic decision-making in real estate investment portfolio.</li> <li>3. Evaluate performance of real estate</li> <li>4. Appraise real estate tenure decisions</li> </ol>   |

| <b>BQA7010 REAL ESTATE PROJECT MANAGEMENT</b>      |  |
|--|--|
| 3 Credits  | <p>This course provides basic knowledge and skills required to manage a project or to be an effective member of a project team. It covers the nine functions of project management (cost, time, quality, scope, risk, communication, human resource, procurement and integration) tracking a project through its various lifecycles from inception through to completion.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Determine the development of modern project management</li> <li>2. Identify project stakeholders' key factors associated with successful execution of projects.</li> <li>3. Formulate measurable criteria for assessment of project performance and success.</li> <li>4. Evaluate constraints and assumptions, related projects and out of scope activities</li> </ol> |
| <b>BQA7011 SUSTAINABLE REAL ESTATE DEVELOPMENT</b> |  |
| 3 Credits  | <p>Sustainability is a wide topic in real estate. This course provides the basic knowledge of sustainable development principles in real estate development. It translates the abstract concepts of sustainability into tangible trends and cases to assist in understanding of sustainable real estate development including, but not limited to, the green building movement and city development concepts.</p> <p>At the end of the course students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify sustainable development principles and practices in real estate development.</li> <li>2. Apply sustainable development principles in real estate development.</li> <li>3. Appraise institutional factors that could affect sustainable real estate development.</li> </ol>  |

#### Programme Coordinator



#### **DR. ZAIRUL NISHAM MUSA**

*Coordinator for Master of Real Estate (by Coursework)*

*PhD [Built Environment (Facilities Management)], Liverpool John Moores University, UK  
MSc. (Facilities Management), University of Greenwich, UK  
BSc. (Hons) (Estate Management), University of Luton, UK  
Diploma (Valuation), UTM*

Tel: 03-7967 4490

e-mail: zairul@um.edu.my

## **Administrative Staff**



### **NORIZAN BINTI ABD. RAJI**

Senior Administrative Assistant (Master by Coursework)  
Higher Degrees Office  
Level 8, Mercu Alam Bina, Faculty of Built Environment  
University of Malaya  
Tel: 03 – 7967 5320  
e-mail: [norizanabd@um.edu.my](mailto:norizanabd@um.edu.my)



# **MASTER OF PROJECT MANAGEMENT**

(Coursework & Remote Learning)

## **[BQB] MASTER OF PROJECT MANAGEMENT (COURSEWORK & REMOTE LEARNING)**

### **Program Overview**

This program intends to produce knowledgeable and competent project management professionals who are ethically and socially responsible, and sensitive to the needs for promoting sustainability. Students are trained with the skills to handle problems, challenges and a project management perspective in a global context. Among others, disciplines stressed in this program include Principles of Project Management, Project Management Professional Development, Project Investment and Financial Management, Organisational and Strategic Management, and also Value and Risk Management. The multi-disciplinary approach in the program also allows exploration of other disciplines that are relevant to project management including Health and Safety Management, Information Technology Management for Projects, Legal Studies for Project Management as well as Assets and Facilities Management. The component that is given emphasis in this program is research in selected areas specific to project management, so that students are trained to become effective analyzers and develop skills towards problem solving using scientific approach.

### **Program Objectives**

- To produce project management graduates who are skilled, knowledgeable, and professional in managing projects as required by the industries;
- To produce project management graduates who are critical, creative, innovative, able to lead and competitive; and
- To produce project management graduates who are alert to technological advancement, professional, ethical and having responsibilities towards community and environment.

### **Additional Requirements**

Beside the general entry requirement that is stated by the University, below are the additional requirements for candidates specific requirements for the Master of Project Management programme:

- a. Bachelor's Degree in Built Environment, Engineering, Management, IT, Sciences, Social Sciences, Economy, Finance or equivalent qualification in a relevant discipline with CGPA of 3.00 and above; OR
- b. Professional qualification from a recognized professional body; OR
- c. Other qualifications as written by the Senate from time to time; AND
- d. Have at least one (1) year of working experience in related field; OR
- e. Bachelor's Degree with CGPA of less than 3.00 (2.70 to 2.99) with a minimum of three (3) years of working experience in related field; OR
- f. Bachelor's Degree with CGPA of less than 2.70 (2.50 to 2.69) with a minimum of three (3) years of working experience in related field; AND University of Malaya graduate; OR Produce at least one (1) publication in related fields; OR Scholarship recipient; OR
- g. Bachelor's Degree with CGPA of less than 2.50 (2.10 to 2.49) with a minimum of five (5) years of working experience in related field; AND University of Malaya graduate; AND Produce at least one (1) publication in related fields; OR Scholarship recipient.



### Delivery and Attendance

- The minimum duration of the program is three (3) normal semesters or one and a half (1½) years while the maximum duration is eight (8) semesters or four (4) years.
- Classes will be conducted through after-office and / or weekend session.
- The program is offered at University of Malaya's Faculty of Built Environment.
- The program is delivered through lectures, tutorials and coursework.

### Conferment of Degree

Upon successful completion of the program, students will be conferred the **Master of Project Management** degree from the University of Malaya.

### Programme Fees

| Candidate         | Fees (RM)<br>Conventional | Fees (RM)<br>Remote Learning |
|-------------------|---------------------------|------------------------------|
| Local (Malaysian) | RM 16,600                 | RM 20,876                    |
| International     | RM 36,300                 | RM 32,561                    |

Source: <https://study.um.edu.my>

### Programme Structure and Assessment

This program consists of 12 courses. Each course is delivered over a 14-week period (normal semester). The courses are assessed by examination and/or continuous assessment.

### Programme Outcomes

Graduate will be able to:

|     |  |
|-----|--|
| PO1 | Demonstrate in-depth comprehension of the 10 areas of project management as identified in the Project Management Body of Knowledge Guide (PMBOK).                      |
| PO2 | Apply project management skills in a project environment.  |
| PO3 | Apply the right techniques and technology of project management in work environment.   |
| PO4 | Demonstrate the required level of professionalism and commitment to ethical practice.  |
| PO5 | Demonstrate the ability to provide clear, reasonable and professional views in all forms of communication and ability to work independently and in groups as a leader. |

|     |  |
|-----|--|
| PO6 | Analyse the problem of assessing strategic options and being able to make decisions with supporting evidence and providing good judgement. |
| PO7 | Demonstrate the ability to improve knowledge to enhance self-formation.  |

### Course Structure

| COMPO<br>NENTS                       | SEMESTERS              |   |     |                        |   |     |                        |   |     | TOTAL<br>CREDIT |
|--------------------------------------|------------------------|---|-----|------------------------|---|-----|------------------------|---|-----|-----------------|
|                                      | SEM 1: NORMAL SEMESTER |   |     | SEM 2: NORMAL SEMESTER |   |     | SEM 3: NORMAL SEMESTER |   |     |                 |
|                                      | CODE                   | COURSE  | CDT | CODE                   | COURSE  | CDT | CODE                   | COURSE  | CDT |                 |
| CORE SUBJECTS                        | BQB<br>7001            | Research<br>Methodology for<br>Project<br>Management<br><i>(prerequisite subject)</i> | 3   | BQB<br>7002            | Research<br>Project I<br><i>(prerequisite subject)</i>  | 5   | BQB<br>7003            | Research<br>Project II<br><i>(prerequisite subject)</i> | 5   | 37              |
|                                      | BQB<br>7004            | Principles of<br>Project<br>Management  | 3   | BQB<br>7007            | Integrated<br>Project                                   | 6   | BQB<br>7009            | Value and Risk<br>Management for<br>Projects            | 3   |                 |
|                                      | BQB<br>7005            | Project<br>Management<br>Professional<br>Development                                  | 3   | BQB<br>7008            | Project<br>Management<br>Professional<br>Development II | 3   | BQB<br>7010            | Project<br>Investment and<br>Financial<br>Management    | 3   |                 |
|                                      | BQB<br>7006            | Organizations<br>and Strategic<br>Management for<br>Projects                          | 3   |                        |   |     |                        |   |     |                 |
| ELECTIVE SUBJECTS<br>(CHOOSE 2 ONLY) |                        |   |     | BQB<br>7011            | Health and<br>Safety<br>Management                      | 3   | BQB<br>7011            | Health and<br>Safety<br>Management                      | 3   | 6               |
|                                      |                        |   |     | BQB<br>7012            | Legal Studies<br>for Project<br>Management              |     | BQB<br>7012            | Legal Studies<br>for Project<br>Management              |     |                 |
|                                      |                        |   |     | BQB<br>7013            | Assets and<br>Facilities<br>Management                  |     | BQB<br>7013            | Assets and<br>Facilities<br>Management                  |     |                 |
|                                      |                        |   |     | BQB<br>7014            | IT Management<br>for Projects                           |     | BQB<br>7014            | IT Management<br>for Projects                           |     |                 |
| TOTAL CREDIT                         |                        |   |     |                        |   |     |                        |   |     | 43              |

#### PREREQUISITE COURSE :

Candidates need to register and complete the **BQB7001 – Research Methodology for Project Management** before proceed with **BQB7002 - Research Project I** and then after with **BQB7003 - Research Project II** in the following semester.

## Syllabus Summary

| <b>BQB7001 RESEARCH METHODOLOGY FOR PROJECT MANAGEMENT</b> |   |
|--|---|
| 3 Credits  | <p>Students will be exposed to the elements and processes of scientific research problem and hypothesis formulation, research design, data collection and analysis methods, forming conclusions, and writing research reports. Data collection and data sources, library research, research methodology, philosophy of science in general and research methods in detail. The use of computers: SPSS, and other software.</p> <p>Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Practice different types of qualitative and quantitative methods related to the assessment, methods of project management, data interpretation and report writing.</li> <li>2. Communicate with critical thinking and problem solving skills.</li> <li>3. Apply the theory and technique development and implementation of research in related fields.</li> </ol>  |
| <b>BQB7002 RESEARCH PROJECT I</b>                          |   |
| 5 Credits  | <p>Research projects involving the production of scientific information through research methodologies that have been studied. Research will be conducted on the basis of the title and the scope proposed by students and supervised regularly by designated supervisors. Time commitment involves the formation justification of project planning, project implementation, collecting research data, reading or literature search, and the writing of the results of the project. At this stage, students will produce 3 chapters which include the introduction, literature review and research methodology.</p> <p>Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Identify and write with a concise explanation of why the project is needed.</li> <li>2. Have the skills and knowledge in the application of concepts and strategies in a research project.</li> <li>3. Apply the skills of problem solving and scientific skills.</li> </ol> |
| <b>BQB7003 RESEARCH PROJECT II</b>                         |   |
| 5 Credits  | <p>Research projects involving the production of scientific information through research methodologies that have been studied. Research will be conducted on the basis of the title and the scope proposed by students and supervised regularly by designated supervisors. Time commitment involves the formation justification of project planning, project implementation, collecting research data, reading materials or literature search, and the writing of the results of the project. At this stage, students will produce a balance of about 6 chapters comprising of data collection, analysis discussion and conclusions. It also includes a complete research report produced by integrated with previous chapters that have been generated during the course investigational of Research Project I and comply with the procedures earnings reports research</p>  |

|  |   |
|--|---|
|  | <p>projects required by the university.</p> <p>Students will be able to:</p> <ol style="list-style-type: none"> <li>1. Apply the theories learned to the academic research.</li> <li>2. Apply the data collection and analysis skills learned to the research.</li> <li>3. Present the research results and findings in an academic manner</li> </ol>   |
| <b>BQB7004 PRINCIPLES OF PROJECT MANAGEMENT</b>                    |   |
| 3 Credits  | <p>The course contains the fundamentals of the project, the project management process, project planning and project execution and closure. These include the establishment of the project organization, the establishment of effective leadership, team preparation, settlement issues, effective implementation (performance measurement, monitoring and control, coordination, record, report status, communication, conflict management), and the closure of the project (measurement of project success, closure contracts, data transfer, learning, and administrative closure)</p> <p>At the end of this course, students can:</p> <ol style="list-style-type: none"> <li>1. Explain the concept and principles of project management.</li> <li>2. Analyse effective project management methodology towards a successful and effective projects.</li> <li>3. Apply effective project plan covering the period of the project, monitoring and controlling the project delivery (including implementation and closure).</li> </ol> |
| <b>BQB7005 PROJECT MANAGEMENT PROFESSIONAL DEVELOPMENT I</b>       |   |
| 3 Credits  | <p>This course provides an overview of the aspects covered by the Project Management Institute (PMI) Project Management Professional certification (PMP) by the Project Management Body of Knowledge (PMBOK). Five of the ten knowledge areas contained in the PMBOK that will be covered are:</p> <ul style="list-style-type: none"> <li>• Project Integration Management,</li> <li>• Project Scope Management,</li> <li>• Project Schedule Management,</li> <li>• Project Cost Management, and</li> <li>• Project Quality Management.</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Discuss about Project Management Body of Knowledge (PMBOK).</li> <li>2. Identify best practices recognized by the discipline of project management for implementation into a successful project management.</li> <li>3. Apply a successful project management disciplines through a strong foundation, intellectually, and professionally.</li> </ol>                               |
| <b>BQB7006 ORGANIZATIONS AND STRATEGIC MANAGEMENT FOR PROJECTS</b> |   |
| 3 Credits  | <p>The course includes a review of scientific results in organization and strategic management for the project. The course will also look at how to formulate corporate decisions related to the project.</p>   |

|   |  |
|---|--|
|   | <p>At the end of this course, students can:</p> <ol style="list-style-type: none"> <li>1. Explain the concept and principles of organization and strategic management for the project.</li> <li>2. Understand the context of strategic management and project organization.</li> <li>3. Analyse and relate it to another level in project management.</li> </ol>   |
| <b>BQB7007 INTEGRATED PROJECT</b>                             |  |
| 6 Credits   | <p>Students will be guided and supervised by the lecturer. The theme for the given issues and problems in the course of project work is based on the elements of one or a combination of knowledge related to project management. Students are required to present and defend the results of project work courses given in the seminar.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Understand the interests of the combination and integration of knowledge.</li> <li>2. Relate concepts, principles, techniques and the academic knowledge acquired.</li> <li>3. Apply the knowledge gained and confidence to solve problems.</li> </ol>  |
| <b>BQB7008 PROJECT MANAGEMENT PROFESSIONAL DEVELOPMENT II</b> |  |
| 3 Credits   | <p>This course provides an overview of the aspects covered by the Project Management Institute (PMI) Project Management Professional certification (PMP) by the Project Management Body of Knowledge (PMBOK). Five of the ten knowledge areas contained in the PMBOK that will be covered are:</p> <ul style="list-style-type: none"> <li>• Project Resource Management,</li> <li>• Project Communication Management,</li> <li>• Project Risk Management,</li> <li>• Project Procurement Management, and</li> <li>• Project Stakeholder Management.</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Discuss about Project Management Body of Knowledge (PMBOK).</li> <li>2. Identify best practices recognized by the discipline of project management for implementation into a successful project management.</li> <li>3. Apply a successful project management disciplines through a strong foundation, intellectually, and professionally</li> </ol> |
| <b>BQB7009 VALUE AND RISK MANAGEMENT FOR PROJECTS</b>         |  |
| 3 Credits   | <p>This course introduces the general theories of value engineering/ value management and risk management as part of the process involved in project management. Each element will be emphasized in terms of theory, methodology and practical applications for the project.</p>   |

|  |   |
|--|---|
|  | <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify the value and risk management aspects that are needed in projects.</li> <li>2. Explain the concepts and principles of value and risk management in projects.</li> <li>3. Develop the skills and methods of implementation of value and risk management in the context of projects.</li> </ol>   |
| <b>BQB7010 PROJECT INVESTMENT AND FINANCIAL MANAGEMENT</b> |   |
| 3 Credits  | <p>This course provides an in-depth view of the processes in project finance, project costs and entrepreneurial project management. Project finance includes the allocation, management and funding of financial resources. This partly involves short-term dealing with day-to-day working capital decisions; another part is longer-term, involving major capital investment decisions and raising long-term finance. Private Finance Initiative (PFI) and Public Private Partnership (PPP) procurement systems will also be explored during the course of this subject.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Explain the financial concepts, especially opportunity cost and time value of money.</li> <li>2. Discuss the ways in which business plans are developed and the role of projected financial statements in the planning process.</li> <li>3. Analyze capital budgeting projects and focus on the short-term and long-term financial implications of business decisions.</li> </ol> |
| <b>BQB7011 HEALTH AND SAFETY MANAGEMENT</b>                |   |
| 3 Credits  | <p>Students will be exposed to the latest safety management and comprehensive. Statutory requirements, regulations and laws related to security such as the Occupational Safety and Health Act 1994 (OSHA) and the Factories and Machinery Act 1967 (MFA) will be studied in depth. Coverage of topics related to the establishment and implementation of safety and health programs such as pre-bid consideration, planning and scheduling, personal training, orientation and health and safety audit.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Exposure to current and comprehensive occupational safety and health management</li> <li>2. Identify the safety and health problems individually, conduct an investigation and preparing safety plan activities</li> <li>3. Evaluate the impact and capable of using the program and procedures for effective safety and health in the project.</li> </ol>  |
| <b>BQB7012 LEGAL STUDIES FOR PROJECT MANAGEMENT</b>        |   |
| 3 Credits  | <p>This module provides an overview of the legal issues that will be faced during the project life cycle.</p> <p>At the end of the course, students are able to:</p>  |

|   |  |
|---|--|
|   | <ol style="list-style-type: none"> <li>1. Describe the knowledge of the management rights and responsibilities, agency and representation, contract formation and negotiation of contracts, dispute prevention and settlement.</li> <li>2. Identify the legal implications of the associated issues by taking into account ethical project management contract procurement.</li> <li>3. Assess the acquisition strategy in project management contract by concrete evidences.</li> </ol>   |
| <b>BQB7013 ASSETS AND FACILITIES MANAGEMENT</b> |  |
| 3 Credits                                       | <p>This module explores the strategy and operation of facilities management. Facility management strategy includes the introduction of discipline to the management of facility management. Facilities management operation look to external constraints in corporate priorities including issues that affect the theory of why the organization determine its position and overall look of the four main areas of facility management in the management plan; security, cleaning; energy, and repair &amp; maintenance; which use higher cost of facilities.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Understand the strategies and operational facility management.</li> <li>2. Translating the main capital through proper maintenance and achieve the value of the cost of daily operations</li> <li>3. Apply appropriate management theory to meet the core objectives of a business</li> </ol>   |
| <b>BQB7014 IT MANAGEMENT FOR PROJECTS</b>       |  |
| 3 Credits                                       | <p>The course aims to introduce different techniques for managing projects and increased project management skills. These include exposure to a variety of concepts and project management application using information technology. Course contents include information technology tools and techniques used in the design and implementation of projects that involve budgeting, human resources, and physical resources. It also touches on the scope of the project, time management, cost management, project integration management, risk management, human resources and quality.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Develop knowledge in a business context and technical developments of the management aspects of information technology in contemporary projects.</li> <li>2. Build good relationships and interaction through the management of information technology projects.</li> <li>3. Use conceptual and analytical approaches to the management of information technology projects.</li> </ol> |

## Programme Coordinator



**Sr DR. LOO SIAW CHUING**, PQS

*Coordinator for Master of Project Management (by Coursework)*

*PhD (Project & Construction Management), Universiti Malaya*

*MSc (Building), Universiti Malaya*

*B (Hons) Quantity Surveying, Universiti Malaya*

*Reg. Professional QS (BQSM), MRISM*

Tel : 03-7967 7959

e-mail : siawchuing@um.edu.my

## Administrative Staff



**NORIZAN BINTI ABD. RAJI**

Senior Administrative Assistant (Master by Coursework)

Higher Degrees Office

Level 8, Mercu Alam Bina, Faculty of Built Environment

University of Malaya

Tel: 03 – 7967 5320

e-mail: norizanabd@um.edu.my





# **MASTER OF FACILITIES AND MAINTENANCE MANAGEMENT**

(Coursework & Remote Learning)

# [BQC] MASTER OF FACILITIES AND MAINTENANCE MANAGEMENT (COURSEWORK & REMOTE LEARNING)

## Program Overview

The programme aims to produce professional Facilities Management and Maintenance graduates who are critical and innovative towards sustainable development globally

## Delivery and Attendance

- The minimum duration of this programme is two (2) normal semesters and one (1) special semester or one (1) year. The maximum period is eight (8) semesters or four (4) years.
- Classes will be conducted through after-office and/or weekend sessions.
- The medium of instruction are in English.
- The programme is offered by attendance at the Faculty of Built Environment, University of Malaya, Kuala Lumpur.
- The programme is delivered through formal lectures, laboratory, tutorials and coursework.

## Conferment of Degree

Upon successful completion of the programme, students will be conferred the **Master of Facilities & Maintenance Management** degree from the University of Malaya.

## Programme Fees

| Candidate         | Fees (RM)<br>Conventional | Fees (RM)<br>Remote Learning |
|-------------------|---------------------------|------------------------------|
| Local (Malaysian) | RM 14,500                 | RM 20,647                    |
| International     | RM 31,300                 | RM 29,869                    |

Source: <https://study.um.edu.my>

## Programme Structure and Assessment

This program consists of 10 courses. Each course is delivered over a 14-week period (normal semester) or 8-week period (special semester). The courses are assessed by examination and/or continuous assessment.

## Programme Outcomes

Graduate will be able to:

|     |  |
|-----|--|
| PO1 | Synthesize knowledge, skills and good management practice in the field of facilities management and building maintenance |
|-----|--|

|     |  |
|-----|--|
| PO2 | Integrate knowledge and ability in solving building facilities problems with critical, creative and innovative approach              |
| PO3 | Demonstrate communication and interaction skills among team members in the context of facilities management and building maintenance |
| PO4 | Propose consultation works in the context of facilities management and building maintenance  |
| PO5 | Express high leadership qualities and ability to work in groups  |
| PO6 | Develop and apply techniques, resources and tools for research on facilities and building maintenance research                       |
| PO7 | Inculcate awareness and ethics regarding social, health, safety, and legislation issues in facilities management and maintenance     |
| PO8 | Cultivate awareness on the importance of entrepreneurship and sustainable development; and   |
| PO9 | Cultivate readiness in the facilities management and maintenance career development for lifelong learning                            |

### Course Structure

| COMPO<br>NENTS                     | SEMESTERS              |   |     |                        |   |     |                         |                      |     | TOTAL<br>CREDIT |
|------------------------------------|------------------------|---|-----|------------------------|---|-----|-------------------------|----------------------|-----|-----------------|
|                                    | SEM 1: NORMAL SEMESTER |   |     | SEM 2: NORMAL SEMESTER |   |     | SEM 3: SPECIAL SEMESTER |                      |     |                 |
|                                    | CODE                   | COURSE  | CDT | CODE                   | COURSE  | CDT | CODE                    | COURSE               | CDT |                 |
| CORE SUBJECTS                      | BQC 7001               | Research Methodology<br><i>(prerequisite subject)</i> | 3   | BQC 7002               | Research Project<br><i>(prerequisite subject)</i> | 12  | BQC 7009                | Strategic FM Project | 5   | 43              |
|                                    | BQC 7003               | Organisational Behaviour and Resource Management      | 3   | BQC 7007               | Building Performance, Productivity & Wellbeing    | 4   |                         |                      |     |                 |
|                                    | BQC 7004               | Operation & Maintenance                               | 4   | BQC 7008               | Financial & Business Management                   | 4   |                         |                      |     |                 |
|                                    | BQC 7005               | Total Asset & Facilities Management                   | 4   |                        |   |     |                         |                      |     |                 |
|                                    | BQC 7006               | Procurement & Contract Management                     | 4   |                        |   |     |                         |                      |     |                 |
| ELECTIVE<br>SUBJECTS<br>(CHOOSE 4) | BQC 7010               | Sustainable & Environmental Management                | 3   |                        |   |     |                         |                      |     | 3               |
|                                    | BQC 7011               | Corporate Real Estate                                 | 3   |                        |   |     |                         |                      |     |                 |

|              |          |                                  |   |  |  |  |  |  |  |    |
|--------------|----------|----------------------------------|---|--|--|--|--|--|--|----|
|              | BQC 7012 | Principles of Project Management | 3 |  |  |  |  |  |  |    |
| TOTAL CREDIT |          |                                  |   |  |  |  |  |  |  | 46 |

**PREREQUISITE COURSE :**

Candidates need to register and complete the **BQC7001 – Research Methodology** before proceed with **BQC7002 - Research Project** in the following semester.

**Syllabus Summary**

| <b>BQC7001 RESEARCH METHODOLOGY</b> |   |
|-------------------------------------|---|
| 3 Credits                           | <p>This course introduces the students to the field of research. It examines in depth the research process and introduces the student to the various aspect of doing social and scientific research related to facilities and maintenance management. The topics covered include research process, research design, data collection and analysis process, and reporting of research results.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Interpret research principles, processes and the requirements for conducting research within facilities and maintenance management</li> <li>2. Develop critical theoretical literature reviews, research methods and systematic approaches applicable to facilities and maintenance management</li> <li>3. Practise awareness and ethics in executing good research project</li> </ol>  |
| <b>BQC7002 RESEARCH PROJECT</b>     |   |
| 12 Credits                          | <p>Research projects will involve the generation of new scientific information and a review and understanding of the pertinent scientific literature. The research may be conducted in a university laboratory, organisation, etc., depending upon the project and the supervisor. The time commitment includes developing a justified research plan, implementing that plan, gathering the research data, reading or searching literature, and writing up the results of the project.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Apply skills, knowledge and good management on the application of concepts and strategies in research project.</li> <li>2. Integrate knowledge, communication skills and critical thinking in solving research problems</li> <li>3. Apply theory and techniques of facilities management in formulating research project.</li> <li>4. Practise ethics in the research project.</li> </ol> <p><b>*** Pre-requisite: BQC7001 Research Methodology</b></p> |

| <b>BQC7003 ORGANIZATIONAL BEHAVIOUR AND RESOURCE MANAGEMENT</b> |  |
|---|--|
| 3 Credits   | <p>This course is about theories of organisational behaviour and resource management. Topics include management theories and concept, effective communication, leadership, decision making process, human resource management, ethics and performance evaluation.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify teamwork skills in management organization which include relationship of individual, industries and workplace environment</li> <li>2. Interpret knowledge of theories in organizational concept and effective resource management</li> <li>3. Explain issues and problems in organization and human behaviour through critical and practical approach</li> </ol>   |
| <b>BQC7004 OPERATION &amp; MAINTENANCE</b>                      |  |
| 4 Credits   | <p>This course aims to devise and develop a strategic approach to the understanding of the role of asset and facilities maintenance in meeting corporate objectives; and reviews the principles of the guideline and legislation affecting asset maintenance. The course will also examine the building services and fabric, their life cycle and the maintenance, refurbishment, maintenance strategy and effectiveness; management organization; planning and co-ordination techniques; and managing cost effectiveness.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Discuss procedures for operation and maintenance of asset and facilities</li> <li>2. Analyse guideline and legislation in the current practices of asset and facilities maintenance</li> <li>3. Appraise techniques and technologies in asset and facilities maintenance</li> </ol>  |
| <b>BQC7005 TOTAL ASSET AND FACILITIES MANAGEMENT</b>            |  |
| 4 Credits   | <p>This module examines the strategic and operational total asset and facilities management. Strategic facilities management include the introduction of management discipline to the facilities management. Operational facilities management looks at external constraints on corporate priorities which include the theoretical issues influencing why an organization locates where it does and take an overview of four of the major facility operational areas that are amenable to management: Security, Cleaning, Energy, and Repairs &amp; Maintenance, which consume major portion of facilities costs.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify the total asset &amp; facilities management theory</li> <li>2. Apply strategic and operational total facilities management to fulfill the core organizational objectives</li> <li>3. Decide appropriate management system in achieving value added in operational maintenance and facilities management</li> </ol> |

| <b>BQC7006 PROCUREMENT &amp; CONTRACT MANAGEMENT</b>            |  |
|---|--|
| 4 Credits   | <p>This course introduces how business support are developed and outsourced competitively via strategic or conventional FM service delivery framework. Student will also learn a how FM contracts is managed that are made as part of the delivery of a built asset. It involves the creation, analysis and execution of contracts by the parties to those contracts to ensure operational and financial performance is maximised, and risks are minimised between a service provider (either internal or external) and the end user that defines the level of service expected from the service provider.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify the type, process, procedure, procurement and liability of contract.</li> <li>2. Determine the key component parts in a Service Level Agreement.</li> <li>3. Evaluate contract performance measurement systems in facilities management.</li> <li>4. Prepare a service level agreement</li> </ol> |
| <b>BQC7007 BUILDING PERFORMANCE, PRODUCTIVITY AND WELLBEING</b> |  |
| 4 Credits   | <p>Introduction to environmental quality in buildings, and ways of producing desirable environments in energy, resourceful and efficient manner. This module aims to enable students to understand the role and utilisation of the physical asset within facilities management that could affect its occupant's productivity and wellbeing as well as the energy usage.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify green building principles and practices.</li> <li>2. Discuss various methods of implementation in energy audit.</li> <li>3. Propose sustainable or green building solutions.</li> </ol>  |
| <b>BQC7008 FINANCIAL AND BUSINESS MANAGEMENT</b>                |  |
| 4 Credits   | <p>This module examines the financial and business management elements within facilities management context. Focus is given to the fundamental principles of financial management and the concept of best value in facilities management. Among the core components of this course appraise on the strategic analysis of business requirements, financial control, fundamental financial analysis tools and facilities management financial models. This module also covers on the theories in forecasting and managing future financial requirements.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify the theories and application of business and financial management in facilities management</li> <li>2. Appraise the suitable financial management tools towards effective facilities and business performance</li> <li>3. Integrate the function of financial analysis in organizational decision making</li> </ol>                                   |

| <b>BQC7009 STRATEGIC FACILITIES MANAGEMENT PROJECT</b>  |   |
|---|---|
| 5 Credits   | <p>Candidate will learn and demonstrate how strategic FM delivery framework can be applied to business organisation. This course aims to enable students to understand FM business strategy, appraise and analyse the diverse nature of developing strategic facility project. Student will acquire the way to optimise FM knowledge by means of appropriate management of information system and operational processes. Students are required to present the results of FM project work courses in seminar.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Determine relationship between strategic facility planning and business strategy for FM project.</li> <li>2. Identify appropriate framework for strategic facility planning, with appropriate procurement method.</li> <li>3. Structuring the management of key information on FM system for business performance.</li> <li>4. Critically evaluate the impact (benefits and challenges) and use of FM system on facility life cycle.</li> </ol> |
| <b>BQC7010 SUSTAINABLE AND ENVIRONMENTAL MANAGEMENT</b> |   |
| 3 Credits   | <p>Understanding of sustainability and climate change is vital topic in development. This course provides fundamental knowledge of sustainable development principles and effects of climate change. It Integrates sustainable development issues including, but not limited to, sustainable economics &amp; policy, green building movement and life-cycle assessments. It translates the abstract concepts of sustainability into Environmental Management System (EMS) practice of development and facilities management.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify sustainable development principles and practices in facilities management</li> <li>2. Apply sustainable development principles in facilities management to mitigate environmental risks</li> <li>3. Integrate professional skills in achieving sustainable environmental management system</li> </ol>  |
| <b>BQC7011 CORPORATE REAL ESTATE</b>                    |   |
| 3 Credits   | <p>Strategies in managing effective real estate portfolio, operational and non-operational real estate; strategic planning and analysis; legal, economic and technical aspects in execution of portfolio management; space planning; lease and tenancy; merger, acquisition and disposal; corporate financing</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Identify corporate holdings in real estate.</li> <li>2. Select strategic decision-making in real estate investment portfolio.</li> <li>3. Evaluate performance of real estate</li> <li>4. Appraise real estate tenure decisions</li> </ol>   |

## BQC7012 PRINCIPLES OF PROJECT MANAGEMENT

|           |   |
|-----------|---|
| 4 Credits | <p>The course contains the fundamentals of the project, the project management process, project planning and project execution and closure. These include the establishment of the project organization, the establishment of effective leadership, team preparation, settlement issues, effective implementation (performance measurement, monitoring and control, coordination, record, report status, communication, conflict management), and the closure of the project (measurement of project success, closure contracts, data transfer, learning, and administrative closure)</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"><li>1. Explain the concept and principles of project management.</li><li>2. Analyse effective project management methodology towards successful and effective projects.</li><li>3. Apply effective project plan covering the period of the project, monitoring and controlling the project delivery (including implementation and closure)</li></ol> |
|-----------|---|

### Programme Coordinator



#### **DR. SHIRLEY CHUA JIN LIN**

*Coordinator for Master of Facilities & Maintenance Management  
(by Coursework)*

*PhD (Asset & Facilities Management), University of Malaya  
B (Hons) (Building Surveying), University of Malaya  
Graduate Member RISM*

Tel : 03-7967 7952

e-mail: shirleychua88@um.edu.my

### Administrative Staff



#### **NORIZAN BINTI ABD. RAJI**

Senior Administrative Assistant (Master by Coursework)  
Higher Degrees Office

Level 8, Mercu Alam Bina, Faculty of Built Environment  
University of Malaya

Tel: 03 – 7967 5320

e-mail: norizanabd@um.edu.my





# **MASTER OF ARCHITECTURE**

(Coursework)

# [BVH] MASTER OF ARCHITECTURE (BY COURSEWORK)

## Program Overview

The programme is serviced by highly qualified and experienced academic staff including one (1) Professor, four (24) Associate Professors, three (3) Associate Professor (Industry) and ten (10) lectures. Students are frequently assessed by professionally qualified architects who are at the forefront of the building industry through regular 'crit' sessions and reviews. This Master by coursework programme is run in a self-contained facility with well-equipped studios, wood and model workshop, building laboratory, computing and printing facilities. More than 150 graduates have successfully graduated from the predecessor for this programme (the Bachelor of Architecture; LAM/RIBA Part II accredited/validated) and continued to fulfil their aspirations.

## Additional Requirements

Beside the general entry requirement that is stated by the University, below are the additional requirements for candidates specific requirements for the Master of Architecture programme:

- A. **UM graduates with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:
1. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation.
    - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of six (6) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test).
  2. Candidates with CGPA of 3.0 and above
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)
  3. Candidates with CGPA of 2.70 – 2.99
    - a. Obtained LAM Part 1 accreditation
    - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
    - c. Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
    - d. Pass competency interview (Interview, portfolio & technical drawing test)

4. Candidates with CGPA of 2.70 – 2.99
  - a. Obtained LAM Part 1 accreditation
  - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
  - c. Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
  - d. Pass competency interview (Interview, portfolio & technical drawing test)

**B. Non UM graduates and International students with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:

1. Candidates with CGPA of 3.0 and above
  - a. Obtained LAM Part 1 accreditation.
  - b. Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
  - c. Completed a minimum of twelve (12) months working experience upon completion of the undergraduate degree.
  - d. Pass competency interview (Interview, portfolio & technical drawing test).
2. Candidates with CGPA of 3.0 and above
  - a. Obtained LAM Part 1 accreditation
  - b. Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
  - c. Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
  - d. Pass competency interview (Interview, portfolio & technical drawing test)

Non UM graduate and International students with CGPA of 2.99 and below are not eligible to apply for the Master of Architecture program

### **Delivery and Attendance**

- The minimum duration of the programme is four (4) normal semesters and one (1) special semester or two (2) years and the maximum period is eight (8) semesters or four (4) years.
- The programme is offered by attendance at University of Malaya's Faculty of the Built Environment, Kuala Lumpur.
- The programme is delivered through formal lectures, studios, field trip, tutorials and coursework.

### **Conferment of Degree**

Upon successful completion of the programme, students will be conferred the **Master of Architecture** degree from the University of Malaya.

## Programme Fees

| Candidate         | Fees (RM)<br>Conventional |
|-------------------|---------------------------|
| Local (Malaysian) | RM 16,800                 |
| International     | RM 42,100                 |

Source: <https://study.um.edu.my>

## Program Structure and Assessment

This program consists of 13 core courses and two (2) elective courses. Each course is delivered over a 14-week period (normal semester) or 8-week period (special semester). The courses are assessed by examination and/or continuous assessment. In the Master of Architecture programme, all design-related courses will have 100% continuous assessment. In courses where final examination is carried out, coursework assignment constitutes 40% while end of semester examination constitutes 60% of the overall marks.

## Programme Outcomes

Graduate will be able to:

|     |  |
|-----|--|
| PO1 | Command adequate knowledge in the areas of design, research, technology, management practices law, culture and theory related to the field of architecture.  |
| PO2 | Use practical skills and computer software in researching, designing, and managing projects spanned architecture to achieve the requirements of clients and stakeholders in the construction industry. |
| PO3 | Demonstrate social skills and responsibility towards society and the environment in designing, researching, managing and implementing architectural projects.  |
| PO4 | Applying ethical values, professionalism and integrity in advising clients and dealing with parties interested in the construction industry.   |
| PO5 | Communicate effectively, capable of teamwork and leadership skills in managing architectural projects.   |
| PO6 | Using scientifically researching skills in problem solving and decision making and technical design for architectural projects.  |
| PO7 | Using information management skills and the ability to lifelong learning for designing architectural projects.   |
| PO8 | Using managerial and entrepreneurial skills in managing architectural projects and presenting ideas to clients to ensure the benefits and use of resources fully.                                      |

## Course Structure

| No | Group   | Code     | Courses                                | SEMESTER |    |     |   |   | Credit |
|----|---|----------|--|----------|----|-----|---|---|--------|
|    |   |          |  | 1        | 2  | K-1 | 3 | 4 |        |
| 1  | DESIGN<br>33 credits<br>(51%)                       | BAGS6101 | Advanced Architectural Design I        | 7        |    |     |   |   | 7      |
|    |   | BAGS6102 | Advanced Architectural Design II       |          | 7  |     |   |   | 7      |
|    |   | BAGS6203 | Pre-Thesis Research                    |          |    | 3   |   |   | 3      |
|    |   | BAGS6204 | Architectural Design Thesis I          |          |    |     | 8 |   | 8      |
|    |   | BAGS6205 | Architectural Design Thesis II         |          |    |     |   | 8 | 8      |
| 2  | TOPICAL<br>RESEARCH<br>11 credits<br>(17%)          | BAGS6106 | Research Methodology                   |          | 3  |     |   |   | 3      |
|    |   | BAGS6207 | Architectural Research I               |          |    |     | 5 |   | 5      |
|    |   | BAGS6208 | Architectural Research II              |          |    |     |   | 3 | 3      |
| 3  | TECHNOLOGY &<br>ENVIRONMENT<br>6 credits<br>(9%)    | BAGS6109 | Sustainable & Green Technology I       | 3        |    |     |   |   | 3      |
|    |   | BAGS6110 | Sustainable & Green Technology II      |          |    |     |   | 3 | 3      |
| 4  | LAW, PRACTICE &<br>MANAGEMENT<br>9 credits<br>(14%) | BAGS6111 | Professional Practice I                | 3        |    |     |   |   | 3      |
|    |   | BAGS6112 | Professional Practice II               |          | 3  |     |   |   | 3      |
|    |   | BAGS6213 | Architects and Construction Management |          |    |     | 3 |   | 3      |
| 5  | CULTURAL &<br>CONTEXT<br>(Electives)                |          | Choose any two                         | 3        | 3  |     |   |   | 6      |
|    |   | BAGS6314 | Architecture Theory & Philosophy       |          |    |     |   |   |        |
|    |   | BAGS6315 | Architectural Comparative Studies      |          |    |     |   |   |        |
|    |   | BAGS6316 | Building Conservation                  |          |    |     |   |   |        |
|    |   | BAGS6317 | Design –Built Project                  |          |    |     |   |   |        |
|    |   | BAGS6318 | Urban Planning                         |          |    |     |   |   |        |
|    |   | BAGS6319 | Interior Architecture                  |          |    |     |   |   |        |
|    |   | BAGS6320 | Landscape Architecture                 |          |    |     |   |   |        |
|    |   | BAGS6321 | Universal Design                       |          |    |     |   |   |        |
|    |   |          | Total/Semester                         | 16       | 16 | 3   | 6 | 4 | 65     |

## Syllabus Summary

| BAGS6101 ADVANCED ARCHITECTURAL DESIGN I |   |
|--|---|
| 7 Credits                                | <p>Students will design a cultural building and apply relevant passive design strategies; and design a complex building within an urban context. This course entails possible collaboration with students from other institution.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Summarize precedent studies on climactically responsive buildings.</li> <li>2. Apply passive design strategies on the architectural solutions of a small cultural</li> </ol> |

|  |  |
|--|--|
|  | <p>building typology.</p> <p>3. Integrate green building approach into a project related to a complex building typology.</p> <p>4. Design appropriate architectural solutions comprising drawings and models incorporating the architectural project issues that comprise sustainable design strategies.</p>   |
| <b>BAGS6102 ADVANCED ARCHITECTURAL DESIGN II</b> |  |
| 7 credits  | <p>Students will design and affordable high-density housing project; focus on the psychological and physiological aspects of a human being, communal living and socio-cultural issues and; apply theories and principles of housing design such as defensible spaces, security by design, crime prevention through environmental design (CPTED) and clustering or block grouping to accelerate social interaction</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Summarize lessons learned from research on precedent studies into a project brief of complex buildings or high density housing in an urban context.</li> <li>2. Apply building statutory and other development requirements, taking into consideration the feasibility study to inform and justify the viability of the project.</li> <li>3. Share views and opinions academically through discussions with people from different cultural backgrounds or related disciplines.</li> <li>4. Design appropriate architectural solutions comprising drawings and models incorporating the architectural project issues which comprises of site planning, contextual studies, social-cultural issues and universal design.</li> </ol> |
| <b>BAGS6203 PRE THESIS RESEARCH</b>              |  |
| 3 credits  | <p>Students will conduct an in depth study to form a viable and suitable architectural design thesis project with adequate complexity; involve identification, analysis and development of the proposal for the design thesis project and; verbally present their proposals with appropriate visuals accompanied with a written document. This written document will be the foundation for the design thesis project in the following semesters.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Determine the conceptual framework based on research topic to assist the formulation of a design brief.</li> <li>2. Prepare a comprehensive report for proposed topic.</li> <li>3. Justify selection of design topic / project.</li> </ol>   |
| <b>BAGS6204 ARCHITECTURAL DESIGN THESIS I</b>    |  |
| 8 credits  | <p>Students will develop works that were produced in BAGS 6203, Pre Thesis Research to get a design concept that can be applied based on acquired hypotheses and problem statements. Through this course, students will refine and develop the design concept up to the design development stage.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Discuss design thesis concept based on areas of research such as</li> </ol>   |

|  |  |
|--|--|
|  | <p>sustainable design, building typology, conservation/adaptive reuse, site/issue-driven arguments and community architecture.</p> <ol style="list-style-type: none"> <li>2. Translate design concept into detailed architectural design scheme.</li> <li>3. Analyse site through series of studies from macro to micro level.</li> <li>4. Defend design thesis project through verbal and architectural graphics.</li> </ol>  |
| <b>BAGS6205 ARCHITECTURAL DESIGN THESIS II</b> |  |
| 8 credits                                      | <p>This course is a continuation of the development of conceptual design, ideas and scheme explored in BAGS 6204 Architectural Design Thesis I. The emphasis is on the development of: an architectural design proposal; design of the special studies and; design proposal report</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Translate design concept into a detailed architectural design proposal.</li> <li>2. Report a special study that focuses on the core ideas of the design thesis project.</li> <li>3. Defend design thesis project through verbal and architectural graphics.</li> <li>4. Justify design proposal in a written report.</li> </ol>  |
| <b>BAGS6106 RESEARCH METHODOLOGY</b>           |  |
| 3 credits                                      | <p>Students will be exposed to: library search; research methodology; scientific research elements; problem formulation process and hypotheses; research design; data collection; data analysis; research findings; writing up and; the use of computer software SPSS</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Apply qualitative and/or quantitative research methods suitable to the research scope, data analysis and academic writing.</li> <li>2. Apply theory and techniques of research development and implementation.</li> <li>3. Debate effectively based on critical thinking and problem solving skills.</li> </ol>   |
| <b>BAGS6207 ARCHITECTURAL RESEARCH I</b>       |  |
| 5 credits                                      | <p>This course guides the students on how to write a major piece of academic writing as a partial requirement for the conferment of the degree. The students are encouraged to select a topic or issue for dissertation in design or a related field. It may be concerned with any aspect of architecture such as history, theory, aesthetics, technology, sociology, philosophy, anthropology, town planning, conservation or landscape design. For each dissertation, a supervisor will be appointed to monitor the student progress and advice on source material and writing up.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Enumerate critically literature review.</li> <li>2. Report primary and related data.</li> <li>3. Analyse data and syntheses findings.</li> </ol> |
| <b>BAGS6208 ARCHITECTURAL RESEARCH II</b>      |  |
| 3 credits                                      | <p>This course totally depends totally on discussions between the student and supervisor. Discussions cover: various levels of journals; communication with</p>  |

|   |  |
|---|--|
|   | <p>journals; writing research papers; writing for publication and; presentation techniques.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Organise architectural research thesis outcome.</li> <li>2. Experiment ready-made information.</li> <li>3. Compose an academic paper.</li> </ol>  |
| <b>BAGS6109 GREEN AND SUSTAINABLE TECHNOLOGY I</b>  |  |
| 3 credits   | <p>The course will enhance students' ability in applying various green building technologies available and the ability to solve specific design problems by appropriate technical means, covering:</p> <ul style="list-style-type: none"> <li>• Building Physics</li> <li>• Design &amp; Fire Engineering</li> <li>• Environmental Performance</li> <li>• Design Integration of Services</li> <li>• Other related topics</li> <li>• The course will also involve precedents studies.</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Determine the advantages and disadvantages of conventional and 'green' building services.</li> <li>2. Illustrate elements of green building services and building environmental control strategies to enhance the ability to design according to the concept of sustainability.</li> <li>3. Analyse the applicability of green building services and building environmental control.</li> </ol> |
| <b>BAGS6110 GREEN AND SUSTAINABLE TECHNOLOGY II</b> |  |
| 3 credits   | <p>This course introduces the technical definition of working drawings, Differences between design sketch analyses, discussions and applications of the sustainability concept</p> <ul style="list-style-type: none"> <li>• green building construction</li> <li>• green building materials in green building design</li> <li>• environmental impact assessments (EIA)</li> <li>• green building rating methods</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Appraise various methods of 'green' building construction and the characteristics of green building materials.</li> <li>2. Propose green building solutions into the studio architectural design project.</li> <li>3. Anticipate the sustainability, performance and cost-effectiveness of green buildings utilising available building assessment software</li> </ol>   |
| <b>BAGS6111 PROFESSIONAL PRACTICE I</b>             |  |
| 3 credits   | <p>This course introduces the:</p> <ul style="list-style-type: none"> <li>• Concept of ethics, moral and professional obligations</li> <li>• Principles of professionalism, competency, responsibilities and due diligence</li> <li>• The architect's roles and responsibilities in the building team and society</li> </ul>   |



|   |  |
|---|--|
|   | <ul style="list-style-type: none"> <li>• The laws and regulations that govern the architectural profession and its practice</li> <li>• The scope of architectural services and the relevant terms of appointment of an architect</li> </ul> <p>This course also exposes the legislative aspects including:</p> <ul style="list-style-type: none"> <li>• Statutory controls and their application in practice:</li> <li>• Land and property legislation;</li> <li>• Planning control – Legislation on town and country planning and its administration;</li> <li>• Building control, Building Legislation and Regulations, Local authority guidelines.</li> </ul> <p>At the end of the course, students are able to:</p> <ul style="list-style-type: none"> <li>• Determine the architect's professional ethics and their role in the building industry.</li> <li>• Relate to the architect's scope of work, in terms of his/her ethical obligations, responsibilities, moral values that are required in the building industry.</li> <li>• Explain the types of architectural services based on terms of appointment and current Malaysian legislation.</li> </ul> |
| <b>BAGS6112 PROFESSIONAL PRACTICE II</b>              |  |
| 3 credits   | <p>To provide an overview of the architect's practice as a professional business entity under the Architect Act (1967) and Rules (1996) and Scale of Minimum Fees (2010). Among the scope of discussion are:</p> <ul style="list-style-type: none"> <li>• Types of practice</li> <li>• Marketing strategies</li> <li>• Financial management, fees, remuneration and expenses</li> <li>• Managing work distribution and human resources</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Explain different types of architectural practices as professional business entities.</li> <li>2. Interpret principles of marketing strategies for architectural practices.</li> </ol>  |
| <b>BAGS6213 ARCHITECT AND CONSTRUCTION MANAGEMENT</b> |  |
| 3 credits   | <p>Through this course, students will recognise the role and responsibility of a practicing architect during the construction management stage and the processes and procedures from award of tender to final account.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Illustrate the course of a construction project from the letter of appointment of contractor to the handover of site to the project owner.</li> <li>2. Apply management knowledge and tools in managing construction and work progress in accordance with the building contract.</li> <li>3. Determine the role of an architect during the construction phase.</li> </ol>  |

## EVECTIVE COURSES

| <b>BAGS6314 ARCHITECTURAL THEORY AND PHILOSOPHY</b> |  |
|---|--|
| 3 credits   | <p>Study on: Modernism (rationalism, structuralism, phenomenology); Post-modernism (post-structuralism, de-constructivism, critical regionalism, abstract expressionism, algorithmic design, sustainable/green design)</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Analyze the influence of various architectural movements of different eras, from the inception of architectural ideas and concepts to their final expressions in built form.</li> <li>2. Conclude theories, philosophies and manifestos of various architects or architectural movements based on their differing characters and values.</li> <li>3. Enumerate theories and philosophies of various architects or architectural movements based on their salient features.</li> </ol>  |
| <b>BAGS6315 ARCHITECTURAL COMPARATIVE STUDIES</b>   |  |
| 3 credits   | <p>This course introduces the students to:</p> <ul style="list-style-type: none"> <li>• the culture, site and context in architecture</li> <li>• design impact of the building</li> <li>• comparative studies between local and abroad</li> <li>• building styles</li> <li>• significant cultural and social aspects</li> <li>• specific technical and/or environmental studies.</li> <li>• Students will have the opportunity to present research findings effectively and professionally.</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Analyze issues of culture, site and context in architecture of a site outside Malaysia and the influence of different civilisations on architecture.</li> <li>2. Analyze the design of selected buildings and sites to include concept, spaces, structure, material, sustainability and uniqueness.</li> <li>3. Perform the presentation of research findings effectively and professionally.</li> </ol>   |
| <b>BAGS6316 BUILDING CONSERVATION</b>               |  |
| 3 credits   | <p>The course introduces the students to the rigorous conservation process from the need for significant research to preparation of measured drawing, survey of building condition and defects and preparation of conservation statements. The course also introduces the principles and methods of building conservation as recommended by the UNESCO and ICOMOS, as well as Malaysian legislations that placed authenticity and integrity as the primary objectives.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Indicate the principles of building conservation that emphasizes on the importance of cultural significance, authenticity and integrity of built forms.</li> <li>2. Explain various forms of conservation practice in architecture, international conventions and guidelines on conservation of cultural properties and relevant existing Malaysian legislations.</li> <li>3. Analyze best conservation practices related to the use of materials, techniques, approaches, philosophies, measured drawings, dilapidation surveys and conservation statements.</li> </ol> |

| <b>BAGS6317 DESIGN - BUILD PROJECT</b> |  |
|--|--|
| 3 credits                              | <p>This course introduces the students to:</p> <ul style="list-style-type: none"> <li>the process of design and building the real construction site</li> <li>simple design, build task and familiarize with tools and trade of construction</li> <li>design a usable project and the best design will be selected to be constructed</li> <li>Students will also be working with builders and exposed construction technical aspect.</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Translate design ideas into construction detail.</li> <li>2. Assemble small physical structure to 1:1 scale.</li> <li>3. Appraise the performance of the built structure.</li> </ol> |
| <b>BAGS6318 URBAN PLANNING</b>         |  |
| 3 credits                              | <p>Study on an overview of basic urban planning and design techniques; urban development policies, land use policies; housing policies, transport policies and traffic management policies and; basic city structure and form.</p> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Determine basic urban planning and design techniques.</li> <li>2. Discuss basic urban planning and design policies and strategies.</li> <li>3. Analyze an existing urban development area to planning and urban design theories and concepts.</li> </ol>   |
| <b>BAGS6319 INTERIOR ARCHITECTURE</b>  |  |
| 3 credits                              | <p>Synopsis of Course Contents</p> <ul style="list-style-type: none"> <li>Study on planning and layout of interior spaces; colour theory; finishes and furniture; lighting and acoustics; M &amp; E services; structure and; information technology applications</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Discuss the history, philosophy and essentials of interior architecture.</li> <li>2. Apply knowledge obtained with regards to all aspects of interior design.</li> <li>3. Prepare a sketch design proposal and detail design drawings for an interior space of medium complexity.</li> </ol>  |
| <b>BAGS6320 LANDSCAPE ARCHITECTURE</b> |  |
| 3 credits                              | <p>This course provides opportunities for students to develop and demonstrate knowledge, understanding and skills in the following areas:</p> <ul style="list-style-type: none"> <li>knowledge and understanding of landscape design</li> <li>planting design</li> <li>theoretical studies</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Criticize the qualities of landscape spaces.</li> <li>2. Appraise critically landscape design works.</li> </ol>   |

|                                  |  |
|----------------------------------|--|
|                                  | 3. Integrate basic principles of planting design, maintenance and management in design projects.   |
| <b>BAGS6321 UNIVERSAL DESIGN</b> |  |
| 3 credits                        | <p>The students will be exposed to:</p> <ul style="list-style-type: none"> <li>• obtain basic skills and eventually build on those skills to be Universal Design advisors or facilitators</li> <li>• assist in conducting 'access audit' training</li> <li>• do access audit reports</li> <li>• appraise building plans on accessibility issues</li> <li>• interview the user with special needs</li> </ul> <p>At the end of the course, students are able to:</p> <ol style="list-style-type: none"> <li>1. Investigate building plans for accessibility.</li> <li>2. Apply knowledge and skills of Universal Design.</li> <li>3. Propose solutions for accessible building plans.</li> </ol> |

#### Programme Coordinator



##### **DR. NORAFIDA AB GHAFAR**

*Coordinator for Master of Architecture (by coursework)*

*PhD (Sustainable Architecture), University of Nottingham, UK*

*MA (Urban Design), Oxford Brookes University, UK*

*Pg.Dipl. (Architecture), Oxford Brookes University, UK*

*Pg.Dipl. (Urban Design), Oxford Brookes University, UK*

*Dipl. (Architecture), Institute Technology MARA*

Tel: 03- 7967 5392

E-mail: norafida@um.edu.my

#### Administrative Staff



##### **NORIZAN BINTI ABD. RAJI**

Senior Administrative Assistant (Master by Coursework)

Higher Degrees Office

Level 8, Mercu Alam Bina, Faculty of Built Environment

University of Malaya

Tel: 03 – 7967 5320

e-mail: norizanabd@um.edu.my



# **MISCELLANEOUS INFORMATION**

## MISCELLANEOUS INFORMATION

- (1) All Postgraduate Candidates should adhere to the following where and when necessary:-
- (a) University of Malaya (Degree of Doctor of Philosophy) Rules and Regulations 2019
  - (b) University of Malaya (Master Degree) Rules and Regulations 2019
  - (c) University of Malaya (Discipline of Students) Rules 1999
  - (d) Any other rules & regulations of the University
- (2) You may refer to the following for more information on our program(s) and / or miscellaneous matters pertaining to your candidacy:-
- (a) <http://fbe.um.edu.my>
  - (b) <https://um.edu.my>
  - (c) <https://myum.um.edu.my>
  - (d) <https://epay.um.edu.my>
  - (e) <https://umsitsguide.um.edu.my/>
  - (f) <https://maya.um.edu.my>
- (3) Important Contacts and reference person:-

### FACULTY OF BUILT ENVIRONMENT

- **Deputy Dean (Higher Degree)**  
Tel: 603- 7967 6880 / 5320 / 6899  
[tdit\\_fab@um.edu.my](mailto:tdit_fab@um.edu.my)
- **Assistant Registrar (Higher Degree)**  
Tel: 603- 7967 4449  
[muhammad@um.edu.my](mailto:muhammad@um.edu.my)
- **Program Coordinator, PhD and Master by Research**  
[coordinator\\_pgresearch@um.edu.my](mailto:coordinator_pgresearch@um.edu.my)
- **Program Coordinator, Master of Real Estate**  
[coordinator\\_mre@um.edu.my](mailto:coordinator_mre@um.edu.my)
- **Program Coordinator, Master of Project Management**  
[coordinator\\_mpm@um.edu.my](mailto:coordinator_mpm@um.edu.my)
- **Program Coordinator, Master of Facilities and Maintenance Management**  
[coordinator\\_mfmm@um.edu.my](mailto:coordinator_mfmm@um.edu.my)
- **Programme Coordinator, Master of Architecture**  
[coordinator\\_march@um.edu.my](mailto:coordinator_march@um.edu.my)

### ACADEMIC ADMINISTRATION & SERVICE CENTRE (AASC)

- **International Students Service Centre (visa)**  
Tel: 603- 7967 7857/ 7858/ 7859  
e-mail: [iss\\_aasc@um.edu.my](mailto:iss_aasc@um.edu.my)

- **Admission & Registration Section**  
Tel: 603- 7967 4404/ 4407/ 4517/ 4528  
e-mail: skp\_aasc@um.edu.my
- **Examination & Graduation Sections**  
Tel: 603- 7967 3266/ 3402/ 3450/ 3585/ 7017/ 7018/ 3401/ 4603  
e-mail: spp\_aasc@um.edu.my
- **Scholarship & Sponsorship Unit**  
Tel: 603- 7967 6996/ 6999  
e-mail: sponsorship\_aasc@um.edu.my
- **Student & College Financial Management Division**  
Tel: 603- 7967 4604/ 4605  
e-mail: Bursar\_student@um.edu.my

#### **CENTRE FOR RESEARCH SERVICES (PPP)**

Research Management & Innovation Complex

Tel : 03-7967 4651

e-mail: pengarah\_ppp\_ippp@um.edu.my

Website: umresearch.um.edu.my

#### **STUDENT AFFAIRS DIVISION**

Level 2, Block E, Perdanasiswa Complex

Tel: 03 7967 3506

e-mail: hep@um.edu.my

#### **SECURITY OFFICE (AUXILIARY POLICE)**

Level 2, The Old Bursary Building

Tel: 03-7967 7070 (Hotline -24 hours)

e-mail: keselamatan@um.edu.my

#### **STUDENT HEALTH CLINIC**

Bangunan Siswarama, Faculty of Arts and Social Science

Tel : 03-7967 6445

e-mail: kkpum@um.edu.my

#### **UNIVERSITY OF MALAYA LIBRARY**

University of Malaya

Tel: 03- 7956 7800

e-mail: query\_perpustakaan@um.edu.my

#### **CENTRE FOR INFORMATION TECHNOLOGY (PTM)**

University of Malaya

PTM Hotline: 03-7967 4001 (Helpdesk)

Fax : 03-7967 4160

e-mail :pengarah\_ptm@um.edu.my

#### **UNIVERSITY OF MALAYA MEDICAL CENTRE (UMMC)**

University of Malaya

Tel: +603-7949 4422

e-mail: ummc@ummc.edu.my

# CAMPUS MAP





*Updated as of 19 September 2021*



**UNIVERSITI  
MALAYA**

Fakulti Alam Bina

HIGHER DEGREE OFFICE  
LEVEL 8, MERCU ALAM BINA  
FACULTY OF BUILT ENVIRONMENT  
UNIVERSITI MALAYA  
50603 KUALA LUMPUR  
MALAYSIA