FACULTY OF BUILT ENVIRONMENT

UNIVERSITI MALAYA

# ACADEMIC PROGRAMME HANDBOOK

2024/2025

# ACADEMIC PROGRAMME HANDBOOK SESSION 2024/2025

For Undergraduate and Postgraduate Programmes
Faculty of Built Environment
Universiti Malaya

# DEAN'S MESSAGE

"For over two decades, our faculty has been synonymous with academic excellence and pioneering research in the built environment. We are committed to providing transformative learning experiences and educating global professionals who can make significant contributions to the construction and real estate industries."

Assalamu'alaikum Warahmatullahi Wabarakatuh and Selamat Sejahtera.

Greetings and congratulations to the new students of the Faculty of Built Environment (FBE). On behalf of the faculty, I am delighted to welcome you to our esteemed degree program. We look forward to seeing you join our community of budding architects, urban planners and surveyors.

For over two decades, our faculty has been synonymous with academic excellence and pioneering research in the built environment. We are committed to providing transformative learning experiences and educating global professionals who can make significant contributions to the construction and real estate industries. Our distinguished faculty bring a wealth of expertise and practical experience to the classroom to ensure you receive a comprehensive education that blends theory and practical application.

Our diverse range of degree programs is unique in Malaysia and Southeast Asia. All degree programs are accredited by the Malaysian Qualifications Agency (MQA) and relevant professional bodies in Malaysia. In addition, several courses have been accredited by reputable international organizations such as the Royal Institution of Chartered Surveyors (RICS) and the Royal Institute of British Architects (RIBA).

We offer unique teaching and learning opportunities tailored to students in an environment that fosters intellect, choice and critical rigor. Our programs are designed to equip students with the latest skills and knowledge to achieve academic and professional excellence. Outside the classroom, we also offer

a vibrant and inclusive community that fosters collaboration, creativity and innovation. From competitions and workshops to guest lectures and industry networking events, there are plenty of opportunities to get involved.

Our faculty supports students' learning and research endeavors with excellent facilities and resources. Our online library provides access to high quality research publications from around the world, while our faculty library provides a rich range of resources relevant to the built environment. Students benefit from facilities such as a dedicated student lounge, laboratories and campus-wide internet access to facilitate remote learning. We ensure a first-class learning experience with state-of-the-art ICT equipment and other essential facilities.

As you embark on this exciting academic journey, I urge you to seize every opportunity to challenge yourself and strive for excellence. The knowledge and experience you gain here will not only shape your professional career, but also drive your personal development.

Once again, a warm welcome to the faculty's new students. We are thrilled to have you in our community and look forward to witnessing your success on this enriching educational journey.

We wish you all the best and hope you enjoy your time at FBE!

*Home of the Bright, Land of the Brave*

*Di Sini Bermulanya Pintar, Tanah Tumpahnya Berani*

**Professor Sr Ts. Dr. Azlan Shah Ali,**
FRISM FRICS FCABE
**Dean**

# EDITORIAL COMMITTEES



Original cover design artwork by undergraduate student Najihah Ngadiran

# TABLE OF CONTENTS

# ABOUT THE UNIVERSITY

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 three 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 Universiti 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 13 faculties, two academies and three academic centres. In 2025 QS World University Rankings, UM ranked at 60th in the world the highest ranked learning institution in Malaysia.

# ABOUT THE FACULTY

Initially started with the Architecture programme at the Faculty of Engineering in 1995 and later established as the Faculty of Built Environment (FBE) in 2000, 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 offers five undergraduate professional programmes tailored to meet the nation's development 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 has been 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). The programme has also been accredited by the Royal Institution of Chartered Surveyors (RICS, UK) since 2004.

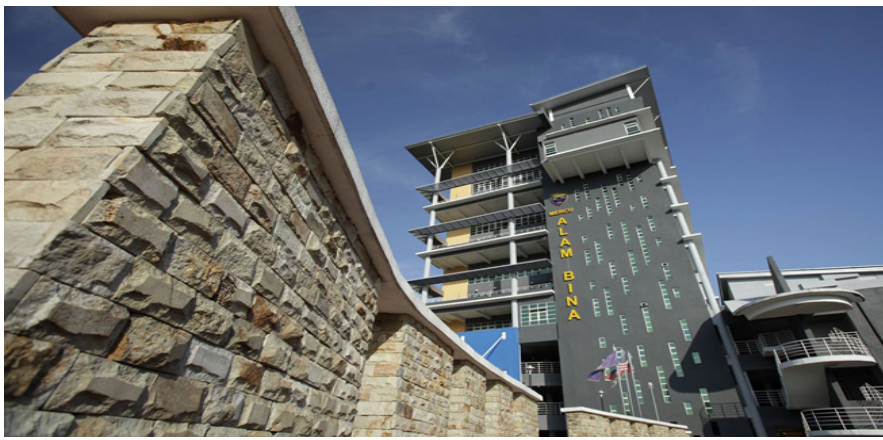
Established in 2011, the Bachelor of Urban and Regional Planning is the fifth undergraduate programme in FBE and is accredited by the Board of Town

Planners Malaysia (in Malay known as Lembaga Perancang Bandar Malaysia or "LPBM").

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, Australia, New Zealand, the Middle East countries, Singapore, China, Hong Kong SAR, Brunei and Indonesia. Thus, FBE is at the forefront of training students with a high degree of international recognition consistent with national aspirations of creating 'Globalised Malaysians'.

Upon completing the undergraduate degree, students may pursue any of the master by coursework programmes offered at FBE, i.e., Master of Real Estate (MRE), Master of Project Management (MPM), Master of Facilities and Maintenance Management (MFMM) and 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, whereas MPM is accredited by the Project Management Institute (PMI) from the United States. Additionally, the FBE also offers two postgraduate research programmes namely Master of Built Environment and PhD in Built Environment.

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 been occupying the 10-storey Mercu Alam Bina since October 2012, which is a state-of-d'art building while transforming it as a living lab for research.



## VISION, MISSION AND OBJECTIVES

# 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.

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*Updated as of July 2024*

# ACADEMIC SESSION 2024/2025

| SEMESTER I | | |
|---|---|---|
| Orientation Week of Welcome - WOW | 1 week* | 29.09.2024 – 06.10.2024 |
| Lectures | 7 weeks* | 07.10.2024 – 24.11.2024 |
| Mid Semester I Break | 1 week | 25.11.2024 - 01.12.2024 |
| Lectures | 7 weeks* | 02.12.2024 - 19.01.2025 |
| Revision Week | 1 week* | 20.01.2025 – 26.01.2025 |
| Semester I Final Examination | 3 weeks* | 27.01.2025 - 16.02.2025 |
| Semester Break | 4 weeks* | 17.02.2025 - 16.03.2025 |
| | 24 weeks | |

| SEMESTER II | | |
|---|---|---|
| Lectures | 7 weeks* | 17.03.2025 - 04.05.2025 |
| Mid Semester II Break | 1 week | 05.05.2025 – 11.05.2025 |
| Lectures | 7 weeks* | 12.05.2025 – 29.06.2025 |
| Revision Week | 1 week* | 30.06.2025 – 06.07.2025 |
| Semester II Final Examination | 3 weeks* | 07.07.2025 – 27.07.2025 |
| Semester II Break | 4 weeks | 28.07.2025 – 24.08.2025 |
| | 23 weeks | |

| SPECIAL SEMESTER | | |
|---|---|---|
| Lectures | 7 weeks* | 28.07.2025 – 14.09.2025 |
| Special Semester Final Examination | 1 week | 15.09.2025 – 21.09.2025 |
| Semester Break | 1 week | 22.09.2025 – 28.09.2025 |
| | 9 weeks | |

Note:
(1) Course Registration (Module) schedule: *https://umsitsguide.um.edu.my.*
(*) The Academic Calendar has taken into account public and festive holidays:

Maulidur Rasul (16 September 2024)
Deepavali (01 November 2024)
Christmas Day (25 December 2024)
New Year (01 January 2025)
Chinese New Year (29 & 30 January 2025)
Federal Territory Day (01 February 2025)
Thaipusam (11 February 2025)
Nuzul Al-Quran (17 Mac 2025)
Eidul Fitri (31 Mac & 01 April 2025)
Labour Day (01 May 2025)
Wesak Day (12 May 2025)
His Majesty's King's Birthday (02 June 2025)
Eidul Adha (06 June 2025)
Awal Muharam (27June 2025)
National Day (31 August 2025)
Malaysia Day (16 September 2025)

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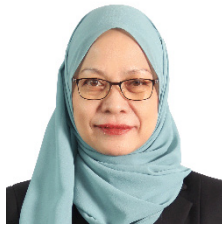

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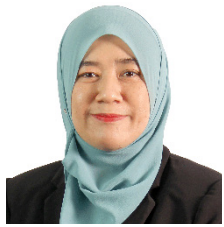

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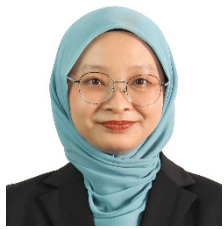

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## EXTERNAL EXAMINER

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# SUPPORT SERVICES

## 1. LIBRARY

With the growing interest in information, knowledge and scholarly activities, the UM library has changed their name to Digital Scholarship & Information Commons (DSIC). DSIC was established in 1959 and has a total collection of more than a million up to date titles. DSIC consists of a Central Library which provides library facilities for the whole campus. In addition to a network of branches and special libraries to meet the specific needs of some faculties. The library is headed by the Chief Librarian, with a complement of professional librarians, support and technical staff.

The Built Environment Library is one of the special subject libraries in the Universiti 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 senior librarian and full-time staff members which covers a floor space of about 835 sq. metres with seating capacity for 133 students.

The Library's core function is to support the learning, teaching and research needs of undergraduate and postgraduate students, and the academic staff and researchers of the Faculty of Built Environment (FBE). It is also open to other registered users of the Universiti Malaya Library network, subject to some limitations in borrowings.

The library collections give priority on the teaching and learning of FBE programmes comprising books, journals, reference books, dissertation and theses, conference proceedings and electronic resources. The library online catalogue, known as Pendeta Discovery is a union catalogue of the Universiti 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 14,500 items consisting of textbooks, reference books, handbooks, journal, CD-ROM and etc.
- **Dissertations, Theses and Academic Works**
  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 journals, 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.

Some available online databases related to the built environment are 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-computerised 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 Diskusi)**
  This Discussion Area is located beside the library office and accommodates 16 seats. This area is spacious and suitable for any discussion and meeting. It is open to the public whereby users need to make a reservation at the counter. Projectors are also provided for teaching and learning facilities.
- **Books Donation Corner (by Faculty Members)**
  This corner was initiated by faculty members to donate books as a library collection.
- **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 Universiti 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 Seeking, Writing and Academic Publications Course (GBX0009)**
  The library conducts a course under Student Holistic Empowerment (SHE) entitled Information Seeking, Writing and Academic Publications Course (GBX0009) to equip students with the skills on information retrieval, writing 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 on a regular basis to familiarise them with the use of library resources and library catalogue (Pendeta Discovery), 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 Encik Muhamad Faizal Abd Aziz at 03-79676802 or email at mfaizal@um.edu.my.
- **Opening Hours**

| | |
|---|---|
| Monday - Friday | 8.00 am – 5.00 pm |
| **Closed on Saturday, Sunday and Public Holidays.** | |

## 2. OTHER FACILITIES

- **Studios**
  Studios are located from Levels 4 to 7 and can be accessed from 8.00 am to 6.00 pm (weekdays). Students are reminded to keep the studios clean and observe proper code of conduct at all times.
- **Photocopying and Printing Services**
  Photocopying and printing services are provided in the Printing Room, Level 6 during normal working hours.
- **Student Lounge**
  The Student Lounge is located at Level 3, Mercu Alam Bina to give students space for study and relaxation between classes.
- **Surau/Musolla (Praying Room)**
  Male and female Musollas are located on the second floor of Mercu Alam Bina.
- **WIFI**
  Access is available within the building with a number of access points.
- **Computer and Virtual Reality Laboratories**
  The computer laboratory is a facility for all students of the Faculty. The 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. The Virtual Reality Lab is located within the Computer Lab and requires booking in advance. The labs are open during normal working hours.
- **Woodworking and Metalworking Workshop**
  Woodworking and Metalworking Workshop is available for students to make architecture models and construct small-scale products. The workshop, equipped with hand and power tools for model-making with wood, plastics and metal, is open by request during normal working hours for use by all students of the faculty. Some equipment is available for loan outside operating hours. One full-time technician supervises the workshop activities and provides hands-on training and assistance to students.
- **Specialised Laboratories**
  There are three specialised laboratories within the Faculty buildings that support the lecturers and students in teaching and research activities. These are Environmental Physics Lab, Building Lab and Digital Fabrication Lab. These three labs provide advanced training and practical applications with the use of state-of-the-art machines and equipment, under the supervision of experienced academic and technical staff. These labs are open by request during normal working hours. Faculty staff supervises the workshop activities and provides hands-on training and assistance to students.
- **Measuring and Surveying Equipments**
  Measuring and Surveying equipment such as theodolite, QLASSIC inspection tools and PPE equipment are available at Level 6. The equipment is available for borrowing upon request during normal working hours. **Café**
  The faculty's café is located at Level 3 and is open during office hours on weekdays.

- **Motorcycle Parking Space**
  The motorcycle parking space is located at the rear of Mercu Alam Bina (Parking B).
- **E-hailing and Food Delivery Service Pick-up and Drop-off Point**
  The e-hailing and food delivery service pick-up and drop-off point is located at the lobby of Mercu Alam Bina (front).

## 3. OTHER MATTERS

**Cashless Campus**

As part of the UM Smart Campus initiative, UM has launched UM cashless services across campus including cafés, shops, administrative offices, as well as other amenities.

**Disciplinary Matters**

Dress code for students:

These rules are made in accordance with Rule 26, the University of Malaya (Discipline of Students) Rules 1999. The rules aim to provide guidelines on the appropriate dress code and conduct to be observed by all students of the Universiti Malaya.

(1) Every student is required **TO DISPLAY THEIR MATRIC CARD** when attending or when they present in the vicinity of the University's Administration Offices including lecture halls, examination halls, seminar rooms, libraries and in any formal ceremony;
(2) Each student is required to abide by the rules indicated at specific venues such as the library, laboratory, sports arena, prayer room, dining hall, at formal university function and so forth;
(3) Wear neat and decent attire, for instance: shirt, T-shirts, long pants for male students and baju kurung, kebaya labuh or any ethnic costumes or decent clothing approved for Muslim students; and
(4) Shoes.

Enforcement:

All officers of the University including administrative, academic, security and library staff are empowered to issue warnings and to bar any student who does not follow the rules.

Excerpt

The following excerpt is taken from the Student Handbook, available from the Student Affairs & Alumni Department. Ensure that personal appearance is at its best when attending/being in the University Administration Office, including Lecture Halls, Seminar Rooms, the Library and attending official functions.

Students must follow the Dress Etiquettes as stated below:

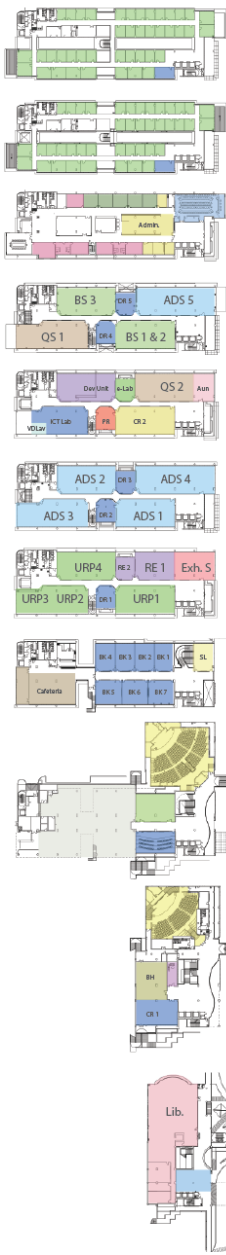
(1) Sleeveless T-Shirts
(2) T-Shirts with pictures or writings that are conflicting with the constitutional beliefs of Malaysia.
(3) Short pants
(4) Hair exceeding shoulder length (male students only)
(5) Provocative and indecent attire

Students who do not abide by these restrictions can be disciplined as stated under the UM Methods (Student Behaviour) 1999. All University officers, including administration, academic, safety and library staff are responsible for reporting any breach of these rules to the Student Affairs Department (HEP), Universiti Malaya. Report forms are available from the Student Affairs Department.

**PROHIBITED:**


Refer to: https://hep.um.edu.my/URUSAN%20TATATERTIB/POSTER%20ASAL%20%20PERATURAN%20PEMAKAIAN%20(Saiz%2020%20x%2028%20inci).pdf

## 4. FACULTY LAYOUT – Mercu Alam Bina




**Level 10**
- Lecturer Rooms
- Meeting Room 2

**Level 9**
- Lecturer Rooms
- Meeting Room 1

**Level 8**
- Faculty Meeting Hall
- Administrative Office
- Dean/Deputy Dean Offices
- Head of Department Offices

**Level 7**
- Discussion Room 4 & 5
- Architecture Design Studio 5
- Quantity Surveying Studio 1
- Building Surveying Studio 1 - 3

**Level 6**
- Printing Room
- Conference Room 2
- e-Learning Lab
- ICT Laboratory
- Quantity Surveying Studio 2
- Built Environment Development Unit
- Aun-DDPnet Lab
- Virtual Design and Construction Lab

**Level 5**
- Discussion Room 2 & 3
- Architecture Design Studio 1 - 4

**Level 4**
- Exhibition Space
- Real Estate Studio 1 & 2
- Discussion Room 1
- Urban and Regional Planning Studio 1- 4

**Level 3**
- Seminar Room, BK 1-7
- Student Lounge
- Cafeteria

**Level 2**
- Sidang Karyawan
- Musolla
- Staff Parking
- Auditorium (upper level)

**Level 1**
- Auditorium
- VIP Lounge
- Conference Room 1
- Built Environment Banquet Hall

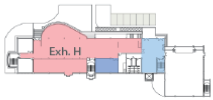
**Ground Level**
- Built Environment Library
- Main Lobby
- Outdoor Ampitheatre
- Guest Parking

## 5. FACULTY LAYOUT – Surveying Block


**Level 4**
- Studio
- Research Offices


**Level 3**
- Post Graduate Room, BKP 1 - 4
- Post Graduate Lounge
- Offices

**Level 2**
- Research Lounge
- Centre for Building, Construction and Tropical Architecture (BUCTA)
- Centre for Sustainable Urban Planning and Real Estate (SUPRE)
- CORE Room
- Meeting Room 1 & 2




**Level 1**
- Staff Parking
- Main Lobby
- Exhibition Hall
- Discussion Area

**Upper Ground Level**
- Office

**Ground Level**
- Woodworking Workshop
- Building Surveying Lab
- Environmental Physics Lab
- Digital Fabrication Lab
- Office

# CAMPUS MAP


UNIVERSITY OF MALAYA
CAMPUS MAP
JALAN ELMU GATE
Tadika UM
Economics & Administration
Education
Business & Accountancy
Arts & Social Sciences
Centre for Civilisational Dialogue
UM Specialist Centre
Museum of Asian Art
Main Library
Geology
Science
ICT Services (PTM)
Engineering
Kompleks Perdanasiswa CSC
Museum of Zoology
Malay Studies
Computer Science & Information Technology
Bulit Environment
2nd College
Dewan Tunku Canselor (DTC)
High Impact Research (HIR)
Dentistry
Medical
6th College
Examination Building
Security Office/ Cultural Centre
Chancellery
RIMBA ILMU (Botanical Garden)
1st College
UM Sports Ground
UM Press
Centre for Foundation Science (PASUM)
Islamic Studies
Rimba Ilmu
Law
UM Medical Centre
Ambang Asuhan Jepun
Kong-Zi
Graduate Studies
5th College
Sports Centre
UM Arena
Research Management & Innovation Complex
Swimming Pool
Asia-Europe
12th College
11th College
Reserve Office Training Unit (ROTU)
Department of Development and Asset Maintenance (JPPHB)
KL GATE
PANTAI BARU ROAD
DAMANSARA GATE
SPRINT HIGHWAY
9th College
SEC 16 GATE
3rd College
4th College
Languages & Linguistics
7th College
8th College
10th College
ROTU Training Site
CHANCELLERY ZONE
RIMBA ILMU ZONE
LIBRARY ZONE
FACULTY/ INSTITUTE/ CENTRE
RESIDENTIAL COLLEGES
FACILITIES/ ADMINISTRATION

# UNDERGRADUATE PROGRAMMES

# IMPORTANT INFORMATION

**1. APPLICATION FOR TRANSFER AND EXEMPTION OF CREDIT**

(a) An application for transfer or exemption of credit shall be made by using the prescribed form that can be obtained from the main office. Completed forms must be submitted to the Dean's Office **LATEST BY FRIDAY OF WEEK 4 IN THE NORMAL SEMESTER** together with:

(i) The payment of the processing fees at a prescribed rate. These fees are non-refundable;

(ii) The syllabus and marking system of the course for which transfer or exemption of credit is applied; and

(iii) A copy of the certificate/ diploma/ degree concerned.

(b) The maximum total of credit hours that may be transferred or exempted shall not exceed one-third (1/3) of the total credit hours of the programme of study concerned.

**2. DEAN'S LIST**

A student who obtains a GPA of 3.7 and above in any Normal Semester and fulfils the following conditions shall be recorded with a "Pass with Distinction" for the Semester concerned:

(i) Had taken and sat for the examinations of courses totalling a minimum of 15 credits hours in the Normal Semester concerned consisting of a minimum of four courses, not including courses with Grade S as a pass;

(ii) Had obtained no lower than a grade C for any course taken in the semester concerned; and

(iii) Did not repeat any course in the semester concerned.

**3. AWARD OF A DEGREE**

(a) The Degree will be awarded is an honours degree based on the final CGPA and must obtain a final CGPA of not less than 2.0.

(b) A student is qualified for the award of a degree of a Pass with Honours (With Distinction) if:

(i) Achieves a final CGPA of 3.7 and above;

(ii) Has never obtained Grade F for any course for the duration of his programme of study; and

(iii) Has successfully completed his programme of study within the prescribed duration.

**4. COURSE AND TEACHING EVALUATION SYSTEM (CTES)**

(a) It is compulsory for all first degree students to evaluate the courses registered in the current semester. The evaluation can be done by logging into http://myisis.um.edu.my using siswa mail account.

(b) Students who fail to complete the Course and Teaching Evaluation System (CTES) within specified time will be barred from getting the semester examination results and from registering for courses in the next semester.

**5. ASSESSMENT AND EXAMINATIONS**

Grades can be awarded based on continuous assessment, examination and a combination of both. Students should be aware that the components of assessment methods may differ based on the requirements of each subject.

**6. COURSE REGISTRATION**

(a) All students are required to register for the courses within the period prescribed every semester through http://maya.um.edu.my.

(b) Registration for any course must be completed before the start of a semester. Any student who does not complete registration within the duration prescribed will not be allowed to pursue the course concerned.

(c) The maximum number of credits which can be registered by a student is not exceeding 22 credits in the Normal Semester and 11 credits in the Special Semester. For students under the Academic Probationary Period, the maximum number of credits that can be registered by a student is not exceeding 15 credits in the Normal Semester and 9 credits in the Special Semester.

**7. ATTENDANCE IN PROGRAMME OF STUDY**

(a) It is compulsory for a student to attend all teaching and learning activities related to his programme of study.

(b) A student who does not attend any teaching and learning activities is required to inform the reason for absence to the lecturer/ instructor immediately together with the relevant supporting documents.

**8. APPEAL AGAINST EXAMINATION RESULTS**

(a) A student who is not satisfied with his examination results including the continuous assessment component and/or final examination of the course may appeal for a review of the examination results. The appeal shall be made within seven (7) days from the official date of announcement of the examination results.

(b) A payment based on the prescribed rate shall be made to process the application for examination results to be reviewed. The payment made is non-refundable regardless of whether the appeal is successful or otherwise.

(c) The appeal shall be made in a prescribed form by the University. The completed form shall be submitted to the Dean's Office together with a copy of the receipt of the payment for the appeal made.

## 9. GRADING SCHEME

The passing grade for all courses is grade C. The official University grades including the marks and their meaning are as follows:

| Grade | Marks | Grade Point | Meaning |
|---|---|---|---|
| A+ | 90.00 — 100.00 | 4.0 | High Distinction |
| A | 80.00 — 89.00 | 4.0 | Distinction |
| A– | 75.00 — 79.00 | 3.7 | D istinction |
| B+ | 70.00 — 74.00 | 3.3 | Good |
| B | 65.00 — 69.00 | 3.0 | Good |
| B– | 60.00 — 64.00 | 2.7 | Good |
| C+ | 55.00 — 59.00 | 2.3 | Pass |
| C | 50.00 — 54.00 | 2.0 | Pass |
| C– | 45.00 — 49.00 | 1.7 | Fail |
| D+ | 40.00 — 44.00 | 1.3 | Fail |
| D | 35.00 — 39.00 | 1.0 | Fail |
| F | 0.00 — 34.00 | 0.0 | Fail |

*As extracted from Universiti Malaya (Bachelor's Degree) Rules & Regulations 2019 in Student Portal (MYUM Portal).

# STUDENT AWARDS (UNIVERSITY LEVEL)

| Student Awards | Notes |
|---|---|
| Royal Education Award | • Has obtained in a final semester at least a Pass with Honours (with Distinction) with a final CGPA of 3.70 and above;<br>• Has never obtained grade F and/or grade U for any courses;<br>• Has never repeated any course for the purpose of improving a grade;<br>• Has successfully completed this programme of study within the minimum period prescribed for his programme unless has been approved withdrawal from any semester but not include in the period of study by the University;<br>• Active in co-curricular activities and obtained prizes based on the excellent academic achievement and co-curricular activities;<br>• Has never been convicted on any disciplinary offence under any disciplinary rules; and<br>• No outstanding debt to the University. |
| Universiti Malaya Book Prize | Awarded to graduates who have completed the undergraduate programmes with an honours degree (With Distinction) and a final CGPA of 3.70 and above. |
| Professor Ezrin Arbi's prize | Awarded to a graduates with the highest score in CGPA. Recipient may be selected from the various disciplines offered by the Faculty at the undergraduate level. |
| Tan Sri Abdul Rahim Excellence Award | Awarded to graduated who have completed the degree of Bachelor of Real Estate with an Honours degree (With Distinction) and a final CGPA must achieve 3.70 and above and also active in co-curriculum activities. |
| Puan Sri Datin Seri Nila Inangda Manyam Keumala Excellence Award | Awarded to graduated who have completed the degree of Bachelor of Science in Architecture with an Honours degree (With Distinction) and a final CGPA must achieve 3.70 and above and also active in co-curriculum activities. |

# UNIVERSITY COURSES

**STUDENT HOLISTICS EMPOWERMENT**

Student Holistic Empowerment (SHE) courses are offered to all Universiti Malaya students. These courses function as the building blocks for the formation of a special set of Graduate Student Attributes (GSA) or commonly known as the UM DNA. It consists of a set of humanistic values that enriches the heart and soul of every student, complemented by enriching essential skills, thinking skills, digital skills, and knowledge on global issues. Through careful selection of SHE courses, students will be able to develop 21st century skills, discover their potential and nurture their passion and talents. SHE courses will help them prepare for challenges and opportunities at the university and beyond.

Students will develop vital skills to succeed in their studies, career and most importantly in life, through four (4) subject clusters as follows:

1. Thinking Matters: Mind & Intellect
2. Emotional and Spiritual Intelligence: Heart, Body and Soul (students MUST enrol for Course KIAR GQX0056
3. Technology/Artificial Intelligence and Data Analytics: i-Techie; and
4. Global Issues and Community Sustainability: Making the World a Better Place

The sequence of SHE courses to be registered by students depends on the programme structure. Students are strongly advised to plan ahead the courses that they want to select except for Cluster 2 (Emotional and Spiritual Intelligence: Heart, Body and Soul) whereby students must enrol for course GQX0056 Kursus Integriti dan Antirasuah (KIAR). As much as possible, please try to select courses from other faculties to explore other perspectives that can contribute to personal and professional development.

**GIG1003 BASIC ENTREPRENEURSHIP ENCULTURATION**

2 credits

**Synopsis of Course Contents**

This course will attempt to inculcate the basic elements of entrepreneurship in the students. Initiatives are taken to open their minds and motivate the entrepreneurial spirit in this potential target group. The course encompasses theories and types of entrepreneurships, the importance of entrepreneurship and factors affecting entrepreneurship, entrepreneurship development in Malaysia, ethics of entrepreneurship, creativity and innovation in entrepreneurship, business opportunity, ability to start a business, developing business plans and skills to run and manage a business. The course also incorporates direct exposure to the real business environment.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify entrepreneurial opportunities;
2. Execute the business plan;
3. Demonstrate the ability to manage time and resources; and
4. Apply creativity and innovation in entrepreneurship.

**Assessment:**

Continuous Assessment 100%

**GIG1004 INFORMATION LITERACY**

2 credits

**Synopsis of Course Contents**

This course will develop student information management skills so that they can become effective and efficient users of information. These essential skills will contribute to academic success as well as create a foundation for lifelong learning. Therefore, this course focuses on the strategic use of information and references sources in various formats. Evaluation of information obtained and the preparation of reference list is also emphasised.

**Learning Outcome**s

At the end of the course, students are able to:

1. Identify various information sources and references;
2. Apply knowledge to choose relevant information from various sources; and
3. Prepare reference list according to selected citation style

**Assessment:**

Continuous Assessment 100%

**GIG1005 SOCIAL ENGAGEMENT**

2 credits

**Synopsis of Course Contents**

This course exposes students to community service and volunteerism. Students need to plan and implement community engagement program in groups. Students are also required to create a reflection journal to record self-transformation before, during and after the community engagement program as well as group reports and presentations based on experiences with the communities.

**Learning Outcome**s

At the end of the course, students are able to:

1. Demonstrate the importance of social engagement.
2. Work in teams/groups and with the community.
3. Demonstrate good communication skills with the Community.

**Assessment:**

Continuous Assessment 100%

**GIG1012 PHILOSOPHY AND CURRENT ISSUES**

2 credits

**Synopsis of Course Contents**

This course covers philosophical relations with the Philosophy of National Education and Rukunegara. The use of philosophy as a tool to purify the culture of thought in life through the arts and methods of thinking and human concepts.

The main topics in philosophy are epistemology, metaphysics and ethics discussed in the context of current issues. Emphasis is given to philosophy as a basis for fostering intercultural dialogue and fostering one's values. At the end of this course students will be able to see the disciplines of science as one comprehensive body of knowledge and related to each other.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain current issues based on philosophy, the Philosophy of National Education and the Rukunegara;
2. Explain current issues based on the main of thoughts from the various streams of philosophy; and
3. Explain current issues through a comparative perspective of philosophy as a basis for establishing inter-cultural dialogue.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 70% |
| Final Examination | 30% |

**GIG1013 APPRECIATION OF ETHICS AND CIVILISATIONS**

2 credits

**Synopsis of Course Contents**

This course prepares students to appreciate the ethics and civilization that exists in the multi-ethnic society in Malaysia to strengthen their critical and analytical thinking to deal with a more challenging life. The content of this course focuses on the appreciation of ethics and civilization in the Malaysian mold. Students will be exposed to the dynamics of the concept of ethics and civilization which is a strength to the formation of Malaysia based on the timeline of its historical evolution from the pre-colonial to the post-colonial era. An understanding of the formation of ethics and civilization in a diverse society is discussed to enhance the appreciation of ethics and civilization towards strengthening national unity and the Malaysian nation. Malaysian mold civilization needs to be peeled and debated in academic activities guided by the Federal Constitution as a site of integration and a vehicle of ethics and civilization. The construction of national unity is strongly influenced by globalization and the development of complex information and communication technologies. Therefore, the appreciation of ethics and civilization reveals the behavior of social responsibility and is mobilized at the individual, family, community, community, and national levels. Thus, the changes that have taken place in society and the direct development of the economy have brought new challenges in strengthening the sustainability of ethics and civilization in Malaysia. High Impact Education Practices (HIEPs) are practiced in teaching and learning to deepen this course (teaching & learning).

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the ethical and civilizations concepts in the context of its appreciation according to Malaysian context.
2. Compare systems, levels of development, social progress and culture across ethnic.

3. Discuss contemporary issues related to economic, political, social, cultural and environmental from the perspective of ethics and civilization.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 70% |
| Final Examination | 30% |

**GLT1049 BASIC MALAY LANGUAGE**

2 credits

**Synopsis of Course Contents**

This course trains international students to communicate in basic Malay, covering everyday life situations. Students will be introduced to simple spoken and written Malay. Teaching and learning will be conducted through tutorials, assignments, and students' learning experiences inside and outside the classroom. By the end of this course, students are expected to communicate and write effectively using simple sentences.

**Learning Outcome**s

At the end of the course, students are able to:
1. Read and explain the meaning of texts
2. Speak in various situations using simple sentences and compound sentences;
3. Organise essay content systematically and creatively.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**GLT1018 PROFICIENCY IN ENGLISH I**

2 credits

**Synopsis of Course Contents**

This course is designed for students with basic proficiency in English. Focus is on building speaking and reading competence with an emphasis on accuracy in grammar and on vocabulary building. Students will develop structural accuracy, reasonable oral fluency and language appropriateness by practising the language in a variety of contexts.

**Learning Outcome**s

At the end of the course, students are able to:
1. Identify information in short, simple reading texts;
2. Present ideas related to everyday topics; and
3. Use grammar correctly to express ideas.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 100% |

**GLT1019 LET'S SPEAK**

2 credits

**Synopsis of Course Contents**

This course focuses on preparing a speech in English accurately and coherently. It also develops students' speech planning skills in stages. Students will learn to speak accurately using the appropriate language strategies to a selected audience.

**Learning Outcome**s

At the end of the course, students are able to:

1. Organise a speech in stages;
2. Apply appropriate skills and strategies when delivering a short speech; and
3. Present a short speech.

**Assessment:**

Continuous Assessment: 100%

**GLT1020 FUNDAMENTAL WRITING**

2 credits

**Synopsis of Course Contents**

This course is designed for students with a pre-intermediate level of proficiency in English. It focuses on writing skills, with an emphasis on accuracy in grammar and vocabulary building. Students will be exposed to writing strategies that will enable them to write short texts effectively for different purposes.

**Learning Outcome**s

At the end of the course, students are able to:

1. Write short, connected texts on familiar subjects; and
2. Organise ideas effectively for different purposes.

**Assessment:**

Continuous Assessment: 100%

**GLT1021 PROFICIENCY IN ENGLISH II**

2 credits

**Synopsis of Course Contents**

This course is designed to improve students' English Language proficiency in terms of accuracy and language use at the intermediate level. Students will be exposed to a variety of reading texts in order to improve their reading skills. They will also be given ample speaking practice to develop their confidence in communicating and interacting with others in a multitude of situations. The course improves students' skills in writing texts coherently on various topics.

**Learning Outcomes**

At the end of the course, students are able to:

1. Write clear connected texts on a wide range of topics;
2. Present ideas and opinions clearly and coherently; and
3. Interpret information from texts on various topics.

**Assessment:**

Continuous Assessment: 100%

**GLT1022 SPEAK UP**

2 credits

**Synopsis of Course Contents**

This course focuses on speaking English accurately and coherently at the intermediate level. It develops students' communication strategies that enable them to interact appropriately in a variety of informal situations.

**Learning Outcomes**

At the end of the course, students are able to:

1. Present ideas clearly and accurately; and
2. Employ appropriate communication strategies to converse effectively.

**Assessment:**

Continuous Assessment: 100%

**GLT1023 EFFECTIVE WORKPLACE WRITING**

2 credits

**Synopsis of Course Contents**

This course introduces writing strategies at the intermediate level. Students will be exposed to a range of workplace communication. They will learn how to produce effective written communication and improve their overall skills in writing.

**Learning Outcomes**

At the end of the course, students are able to:

1. Use appropriate format and language structures in correspondence writing; and
2. Apply appropriate tone and style according to purposes of correspondence.

**Assessment:**

Continuous Assessment: 100%

**GLT1024 PROFICIENCY IN ENGLISH III**

2 credits

**Synopsis of Course Contents**

This course is designed to fortify students' English Language proficiency in terms of accuracy and effectiveness at a developing upper intermediate level. Students will be taught the four language skills with a focus on reading, writing and speaking. They will be exposed to a variety of texts to develop a higher level of proficiency that will allow them to apply the skills learnt.

**Learning Outcome**s

At the end of the course, students are able to:
1. Demonstrate an understanding of complex texts on concrete topics;
2. Write clear, detailed texts on a wide range of subjects; and
3. Share opinions fluently and spontaneously.

**Assessment:**

Continuous Assessment: 100%

**GLT1025 EFFECTIVE ORAL COMMUNICATION**

2 credits

**Synopsis of Course Contents**

The course encompasses different aspects of oral communication used in delivering speeches and presentations at the high intermediate level. Appropriate examples from a variety of situations are used as practice materials for students to analyse, discuss and apply the strategies taught.

**Learning Outcome**s

At the end of the course, students are able to:
1. Write relevant outlines for presentations;
2. Present an impromptu speech; and
3. Adhere to appropriate strategies in oral communication.

**Assessment:**

Continuous Assessment: 100%

**GLT1026 WRITING AT THE WORKPLACE**

2 credits

**Synopsis of Course Contents**

This course will introduce students to effective writing skills at the workplace. Using relevant materials, students will be taught in stages how to produce documents within a workplace context.

**Learning Outcome**s

At the end of the course, students are able to:
1. Write texts using appropriate tone and style;
2. Complete an informal report for workplace purposes; and
3. Prepare a formal report for workplace purposes.

**Assessment:**

Continuous Assessment: 100%

**GLT1027 ADVANCED ORAL COMMUNICATION**

2 credits

**Synopsis of Course Contents**

This course aims to develop advanced communication skills among students when delivering presentations and interacting in group discussions in diverse settings. Students will prepare and deliver organized, impactful presentations on a variety of topics using appropriate language, style and structure to engage the audience. Students will also be exposed to different communication strategies to enable them to interact effectively and communicate with clarity in collaborative discussions.

**Learning Outcome**s

At the end of the course, students are able to:
1. Integrate the effective use of language structures in communication;
2. Present a persuasive speech; and
3. Develop appropriate interpersonal communication skills.

**Assessment:**

Continuous Assessment: 100%

**GLT1028 ADVANCED BUSINESS WRITING**

2 credits

**Synopsis of Course Contents**

This course is designed to equip students with the necessary writing skills to meet the needs of the workplace. Students will also be taught how to produce clear, accurate and well organised professional business documents. Students will be required to analyse and respond to a variety of situations and to write for identified audiences. The course also explores the ways in which technology helps shape business writing and communication.

**Learning Outcome**s

At the end of the course, students are able to:
1. Apply appropriate features of effective business writing;
2. Prepare documents common in business writing; and
3. Produce a report for workplace purposes.

**Assessment:**

Continuous Assessment: 100%

## LIST OF REFERENCE:

| | | | |
|---|---|---|---|
| 1. | **MUET** | - | MALAYSIAN UNIVERSITY ENGLISH TEST |
| 2. | **IELTS** | - | INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM |
| 3. | **TOEFL** | - | TEST OF ENGLISH AS A FOREIGN LANGUAGE |
| 4. | **PTE (ACADEMIC)** | - | PEARSON TEST OF ENGLISH (ACADEMIC) |
| 5. | **FCE** | - | CAMBRIDGE ENGLISH: FIRST |
| 6. | **GCE (A LEVELS)** | - | GENERAL CERTIFICATE OF EDUCATION (A LEVEL), UNIVERSITY OF CAMBRIDGE |
| 7. | **IGCSE/GCSE (O LEVELS)** | - | INTERNATIONAL GENERAL CERTIFICATE OF SECONDARY EDUCATION / INTERNATIONAL GENERAL CERTIFICATE OF SECONDARY EDUCATION (O LEVEL), UNIVERSITY OF CAMBRIDGE |

**UNIVERSITY COURSE (ENGLISH COMMUNICATION PROGRAMME) FACULTY OF LANGUAGES AND LINGUISTICS LIST OF COURSES TO BE COMPLETED BY STUDENTS**

| PATH 1 | PATH 2 | PATH 3 | PATH 4 |
|---|---|---|---|
| • MUET BAND 2 (2008 – 2020)<br>• MUET Band 2 & 2.5 (2021)<br>• IELTS Band 4.0<br>• TOEFL Paper – Based Test (437 – 473)<br>• TOEFL Computer – Based Test (123 – 150)<br>• TOEFL Internet – Based Test (41 – 52)<br>• PTE (Academic) – (10 – 28) | • MUET BAND 3 (2008 – 2020)<br>• MUET Band 3 & 3.5 (2021)<br>• IELTS Band 4.5 – 5.0<br>• TOEFL Paper – Based Test (477 – 510)<br>• TOEFL Computer – Based Test (153 – 180)<br>• TOEFL Internet – Based Test (53 – 64)<br>• PTE (Academic) – (29 - 41) | • MUET Band 4 (2008 – 2020)<br>• MUET Band 4 & 4.5 (2021)<br>• IELTS Band 5.5 – 6.0<br>• TOEFL Paper – Based Test (513 – 547)<br>• TOEFL Computer – Based Test (183 – 210)<br>• TOEFL Internet – Based Test (65-78)<br>• PTE (Academic) – (42 – 57)<br>• FCE (B & C)<br>• GCE A Level (English) (Minimum C)<br>• IGCSE/GCSE (English) (A, B & C) | • MUET Band 5 (2008 – 2020)<br>• MUET Band 5 & 5+ (2021)<br>• IELTS Band 6.5 – 9.0<br>• TOEFL Paper – Based Test (550 – 677)<br>• TOEFL Computer – Based Test (213 – 300)<br>• TOEFL Internet – Based Test (79 – 120)<br>• PTE (Academic) (58 – 90)<br>• FCE (A)<br>• GCE A Level (English) (B & A) |

| Students need to complete two (2) courses (2 courses x 2 credits each) from chosen PATH | | | |
|---|---|---|---|
| **PATH 1** | **PATH 2** | **PATH 3** | **PATH 4** |
| **COMPULSORY**<br>• GLT1018 – Proficiency in English I | **COMPULSORY**<br>• GLT1021 – Proficiency in English II | **COMPULSORY**<br>• GLT1024 – Proficiency in English III | • GLT1027– Advanced Oral Communication*<br>• GLT1028 – Advanced Business Writing*<br>*(Students can only register for one course per semester) |
| ** **CHOOSE ONE :**<br>• GLT1019 – Let's Speak<br>• GLT1020 – Fundamental Writing | ** **CHOOSE ONE :**<br>• GLT1022 – Speak Up<br>• GLT1023 – Effective Workplace Writing | ** **CHOOSE ONE :**<br>• GLT1025 – Effective Oral Communication<br>• GLT1026 – Writing at the Workplace | |

***Students can only register for one course per semester.**
**** Pelajar hanya boleh daftar satu kursus bagi setiap semester.***

**** These courses have prerequisites and students can only register for them after obtaining a PASS in the compulsory course as stipulated in the respective PATH.**
***** Kursus ini mempunyai Pra Syarat dan hanya boleh didaftar selepas pelajar LULUS kursus WAJIB mengikut Path yang ditetapkan.***

**Note: MUET Band 5 and 6 (Path 4) students are given the option to either take the Language University Course (English Communication) or the Language University Course (Foreign Language).**
***Nota: Pelajar MUET Band 5 dan 6 (Path 4) diberi pilihan untuk mengikuti sama ada Kursus Universiti (Bahasa Inggeris Komunikasi) atau Kursus Universiti (Bahasa Asing).***

## DESCRIPTION OF UNIVERSITY ENGLISH LANGUAGE COURSES

| NO. | CODE & TITLE (NO. OF CREDITS) | SYNOPSIS | LEVEL OF REQUIRED PROFICIENCY |
|---|---|---|---|
| 1. | **GLT1018 : Proficiency in English I**<br>2 Credits<br>• Offered in Semesters 1 & 2 | This course is designed for students with basic proficiency in English. Focus is on building speaking and reading competence with an emphasis on accuracy in grammar and on vocabulary building. Students will develop structural accuracy, reasonable oral fluency and language appropriateness by practising the language in a variety of contexts. | CEFR A2+<br>• MUET Band 2 (2008 – 2020)<br>• MUET Band 2 & 2.5 (2021)<br>• IELTS Band 4.0<br>• TOEFL Paper – Based Test (437 – 473)<br>• TOEFL Computer – Based Test (123 – 150)<br>• TOEFL Internet – Based Test (41 – 52)<br>• PTE (Academic) – (10 – 28) |
| 2. | **GLT1019: Let's Speak**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1018 (Proficiency in English I) with grade C | This course focuses on preparing a speech in English accurately and coherently. It also develops students' speech planning skills in stages. Students will learn to speak accurately using the appropriate language strategies to a selected audience. | CEFR B1<br>• Pass GLT1018 with grade C |
| 3. | **GLT1020: Fundamental Writing**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1018 (Proficiency in English I) with grade C | This course is designed for students with a pre-intermediate level of proficiency in English. It focuses on writing skills, with an emphasis on accuracy in grammar and vocabulary building. Students will be exposed to writing strategies that will enable them to write short texts effectively for different purposes. | CEFR B1<br>• Pass GLT1018 with grade C |

| NO. | CODE & TITLE (NO. OF CREDITS) | SYNOPSIS | LEVEL OF REQUIRED PROFICIENCY |
|---|---|---|---|
| 4. | **GLT1021: Proficiency in English II**<br>2 Credits<br>• Offered in Semesters 1 & 2 | This course is designed to improve students' English Language proficiency in terms of accuracy and language use at the intermediate level. Students will be exposed to a variety of reading texts in order to improve their reading skills. They will also be given ample speaking practice to develop their confidence in communicating and interacting with others in a multitude of situations. The course improves students' skills in writing texts coherently on various topics. | CEFR B1<br>• MUET Band 3 (2008 – 2020)<br>• MUET Band 3 & 3.5 (2021)<br>• IELTS Band 4.5 – 5.0<br>• TOEFL Paper – Based Test (477 – 510)<br>• TOEFL Computer – Based Test (153 – 180)<br>• TOEFL Internet – Based Test (53 – 64)<br>• PTE (Academic) – (29 - 41) |
| 5. | **GLT1022: Speak Up**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1021 (Proficiency in English II) with grade C | This course focuses on speaking English accurately and coherently at the intermediate level. It develops students' communication strategies that enable them to interact appropriately in a variety of informal situations. | CEFR B1+/ Low B2<br>• Pass GLT1021 with grade C |
| 6. | **GLT1023: Effective Workplace Writing**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1021 (Proficiency in English II) with grade C | This course introduces writing strategies at the intermediate level. Students will be exposed to a range of workplace communication. They will learn how to produce effective written communication and improve their overall skills in writing. | CEFR B1+/ Low B2<br>• Pass GLT1021 with grade C |

| NO. | CODE & TITLE (NO. OF CREDITS) | SYNOPSIS | LEVEL OF REQUIRED PROFICIENCY |
|---|---|---|---|
| 7. | **GLT1024: Proficiency in English III**<br>2 Credits<br>• Offered in Semesters 1 & 2 | This course is designed to fortify students' English Language proficiency in terms of accuracy and effectiveness at a developing upper intermediate level. Students will be taught the four language skills with a focus on reading, writing and speaking. They will be exposed to a variety of texts to develop a higher level of proficiency that will allow them to apply the skills learnt. | CEFR B2<br>• MUET Band 4 (2008 – 2020)<br>• MUET Band 4 & 4.5 (2021)<br>• IELTS Band 5.5 – 6.0<br>• TOEFL Paper – Based Test (513 – 547)<br>• TOEFL Computer – Based Test (183 – 210)<br>• TOEFL Internet – Based Test (65-78)<br>• PTE (Academic) – (42 – 57)<br>• FCE (B & C)<br>• GCE A Level (English) (Minimum C)<br>• IGCSE/GCSE (English) (A, B & C) |
| 8. | **GLT1025: Effective Oral Communication**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1024 (Proficiency in English III) with grade C | The course encompasses different aspects of oral communication used in delivering speeches and presentations at the high intermediate level. Appropriate examples from a variety of situations are used as practice materials for students to analyse, discuss and apply the strategies taught. | CEFR B2+/ Low C1<br>• Pass GLT1024 with grade C |
| 9. | **GLT1026: Writing at the Workplace**<br>2 Credits<br>• Offered in Semesters 1 & 2<br>• Prerequisite: Students must pass GLT1024 (Proficiency in English III) with grade C | This course will introduce students to effective writing skills at the workplace. Using relevant materials, students will be taught in stages how to produce documents within a workplace context. | CEFR B2+/ Low C1<br>• Pass GLT1024 with grade C |

| NO. | CODE & TITLE (NO. OF CREDITS) | SYNOPSIS | LEVEL OF REQUIRED PROFICIENCY |
|---|---|---|---|
| 10. | **GLT1027: Advanced Oral Communication**<br>2 Credits<br>• Offered in Semesters 1 & 2 | The course encompasses different aspects of oral communication used in delivering speeches and presentations at the high intermediate level. Appropriate examples from a variety of situations are used as practice materials for students to analyse, discuss and apply the strategies taught. | CEFR C1<br>• MUET Band 5 & 6 (2008 – 2020)<br>• MUET Band 5 & 5+ (2021)<br>• IELTS Band 6.5 – 9.0<br>• TOEFL Paper – Based Test (550 – 677)<br>• TOEFL Computer – Based Test (213 – 300)<br>• TOEFL Internet – Based Test (79 – 120)<br>• PTE (Academic) (58 – 90)<br>• FCE (A)<br>• GCE A Level (English) (B & A) |
| 11. | **GLT1028 : Advanced Business Writing**<br>2 Credits<br>• Offered in Semesters 1 & 2 | This course is designed to equip students with the necessary writing skills to meet the needs of the workplace. Students will also be taught how to produce clear, accurate and well organised professional business documents. Students will be required to analyse and respond to a variety of situations and to write for identified audiences. The course also explores the ways in which technology helps shape business writing and communication. | |

**CEFR: Common European Framework of Reference for Languages**

# ARCHITECTURE

## Bachelor of Science in Architecture

# ARCHITECTURE

## Introduction

The Architecture Department was first initiated as a programme under the Faculty of Engineering with 26 students enrolled in the semi-professional Bachelor of Science in Architecture course in May 1995. The Bachelor of Architecture programme, a professional course which was introduced in 1998 and in 2013, the programme was upgraded into the Master of Architecture in line with the requirements of the Board of Architects, Malaysia (LAM).

Today both the Architecture programmes offered by the Department of Architecture are accredited by the Board of Architects Malaysia and the Royal Institute of British Architects (RIBA), UK.

The Department has three niche areas: Green and Sustainable Architecture, Architectural Heritage and Conservation, and Community and Urban Architecture. These three niches are emphasised in both the undergraduate and postgraduate programmes to produce graduates who fulfil professional and community needs.

The BSc in Architecture programme constitutes the first tier of a two-tier system. The programme provides a solid academic foundation for those who wish to pursue professional architecture qualifications. It is an intensive 3-year undergraduate course in architectural studies with the aim of getting an exemption from both LAM Part I (Malaysia) and RIBA Part I (UK).

Design is the core subject taught across several subjects as part of integrated learning and knowledge acquisition. It forms the basic framework for an appropriate architectural foundation. The programme is further enriched by practical knowledge gained from industrial attachment. The BSc in Architecture operates under the semester system for six full semesters and two special semesters, covering 120 credits.

The BSc in Architecture course is also structured as a stand-alone undergraduate course that can sufficiently function as an independent course, that is, instead of continuing with the Master of Architecture (M.Arch) programme, graduates may venture into other related fields. For example, the BSc in Architecture qualification will enable graduates to work as assistant architects, contractors, or developers in the private sector, as schoolteachers, lecturers at polytechnics or technical colleges, or technical administrators in government departments and agencies, designers, product makers and many more.

The BSc Architecture programme has received recognition from the Malaysian government, Part 1 qualification from both the Malaysian Board of Architects (LAM) since 2003 and the Royal Institute of British Architects (RIBA) since 2005. The programme may involve inbound and outbound mobility

programmes with regional and international universities that encourage cross-disciplinary learning and credit transfers between selected subjects taught in the programme. The universities in which the mobility programmes have been carried out in the past include Deakin University of Australia, National University of Singapore (NUS) of Singapore, Institut Teknologi Bandung (ITB) and Universitas Katolik Parahyangan (UNPAR) of Indonesia and Kyung Hee University (KHU) of Korea.

## Programme Aims

The aims are as follows:

- To promote interest, knowledge and skills in architectural design that is sensitive to the cultural and environmental contexts.
- To develop analytical and problem-solving capabilities.
- To nurture the ability to design comprehensively, creatively and with technical competence.
- To understand the scientific principles which form the foundation of building technology.
- To produce graduates with semi-professional and professional degrees who will practise architecture confidently and responsibly.

These objectives are in line with the University's aspiration to become the premier university in the region.

## Programme Learning Outcomes

At the end of the programme, graduates are able to:

| | |
|---|---|
| **PL01** | Command adequate knowledge in design, technology, culture, management, practice and law to help in the formation of qualitative 3-dimensional spatial configurations. |
| **PL02** | Use practical skills in creating qualitative 3-dimensional spatial configurations which are planned well and satisfy user needs and local regulations. |
| **PL03** | Demonstrate social skills and responsibility towards the society and the environment in consideration of the needs and wants related to the design process. |
| **PL04** | Practice ethical responsibility, professionalism and integrity in designing qualitative 3-dimensional configurations while considering architectural professional codes and standards. |

**PL05** Communicate clearly using suitable media (visual, verbal and written) and show leadership traits and teamwork in delivering ideas and design proposals effectively or in evaluating it critically.

**PL06** Utilise scientific skills to solve architectural design problems by incorporating knowledge of building technology principles, environmental design and construction methods for the entire human race and natural wellbeing.

**PL07** Utilise ICT management skills and practise lifelong learning concepts by referring to varied sources of materials to achieve in-depth knowledge as part of the design process.

**PL08** Apply management and entrepreneurial skills in the context of professional architectural practice within the framework of the construction industry and understand business operation methods.

## PROGRAMME STRUCTURE – BACHELOR OF SCIENCE IN ARCHITECTURE

| YEAR 1 (Bachelor of Science in Architecture) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| University Courses | GLTxxxx | English I | 2 | GLTxxxx | English II | 2 | 6 |
| | | | | GXXxxxx | Co-Curriculum | 2 | |
| Programme Core Courses | BIA1020 | Architectural Design Studio I | 10 | BIA1025 | Architectural Design Studio II | 10 | 30 |
| | BIA1021 | Materials and Construction I | 3 | BIA1026 | Environmental Physics | 3 | |
| | BIA1022 | History of Asian Architecture | 2 | BIA1027 | History of World Architecture | 2 | |
| University Elective Courses | | Student Holistic Empowerment (SHE) I | 2 | | | | 2 |
| Total credits | | | 19 | Total credits | | 19 | **38** |

| YEAR 2 (Bachelor of Science in Architecture) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | SPECIAL SEMESTER | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| University Courses | | | | GIG1012/ GLT1049** | ***Philosophy and Current Issue/ Basic Malay Language | 2 | | | | 4 |
| | | | | GIG1013 | Appreciation of Ethics and Civilization | 2 | | | | |
| Program Core Courses | BIA2020 | Architectural Design Studio III | 10 | BIA2025 | Architectural Design Studio IV | 10 | | | | 30 |
| | BIA2021 | Materials and Construction II | 3 | BIA2026 | Building Services | 2 | | | | |
| | BIA2022 | Building Structure | 2 | | | | | | | |
| | BIA2023 | Digital Architecture | 3 | | | | | | | |
| University Elective Courses | | | | BIA2029*/ BIA2030 | **Architectural Lighting and Acoustics / **Digital Fabrication | 3 | BIA2027 / BIA2028 | *Measured Drawing / *Landscape Architecture | 3 | 6 |
| Total credits | | | 18 | Total credits | | 19 | Total credits | | 3 | **40** |

* Elective subject (under cluster Culture and Context)
** Elective subject (under cluster Technology and Environment)
*** Courses offered to non-Malaysian students

| YEAR 3 (Bachelor of Science in Architecture) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | SPECIAL SEMESTER | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| University Courses | GIG1003 | Basic Entrepreneurship Enculturation | 2 | | | | | | | 2 |
| Program Core Courses | BIA3020 | Architectural Design Studio V | 10 | BIA3025 | Architectural Design Studio VI | 10 | BIA3028 | Industrial Training | 4 | 36 |
| | BIA3021 | Culture and Context | 3 | BIA3026 | Professional Studies | 3 | | | | |
| | BIA3022 | Architectural Academic Report | 3 | BIA3027 | Working Drawing | 3 | | | | |
| University Elective Courses | | Student Holistic Empowerment (SHE) II | 2 | | Student Holistic Empowerment (SHE) III | 2 | | | | 4 |
| Total credits | | | 20 | Total credits | | 18 | Total credits | | 4 | **42** |

**Notes:**
**i. Course KIAR GQX0056 is a compulsory SHE course Cluster 2**
**ii. SHE courses-students are required to take one course from each of the following clusters:**
**Cluster 1. Thinking Matters: Mind & Intellect**
**Cluster 2. Emotional and Spiritual Intelligence: Heart, Body and Soul**
**Cluster 4. Global Issues and Community Sustainability: Making the World a Better Place**

**TOTAL CREDITS: 120**
The programme structure maybe subjected to change

# PROGRAMME STRUCTURE – BACHELOR OF SCIENCE IN ARCHITECTURE

| Category | No | Code | Course Name | Level 1 | | | Level 2 | | | Level 3 | | | Total credit | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S1 | S2 | S3 | S1 | S2 | S3 | S1 | S2 | S3 | | |
| **Design** | 1 | BIA1020 | Architectural Design Studio I | 10 | | | | | | | | | **60** 50% | |
| | 2 | BIA1025 | Architectural Design Studio II | | 10 | | | | | | | | | *BIA1020* |
| | 3 | BIA2020 | Architectural Design Studio III | | | | 10 | | | | | | | *BIA1025* |
| | 4 | BIA2025 | Architectural Design Studio IV | | | | | 10 | | | | | | *BIA2020* |
| | 5 | BIA3020 | Architectural Design Studio V | | | | | | | 10 | | | | *BIA2025* |
| | 6 | BIA3025 | Architectural Design Studio VI | | | | | | | | 10 | | | *BIA3020* |
| **Culture and Context** | 7 | BIA1022 | History of Asian Architecture | 2 | | | | | | | | | **7** 5.38% | |
| | 8 | BIA1027 | History of World Architecture | | 2 | | | | | | | | | |
| | 9 | BIA3021 | Culture and Context | | | | | | | 3 | | | | |
| **Technology and Environment** | 10 | BIA1021 | Materials and Construction I | 3 | | | | | | | | | **16** 15.33% | |
| | 11 | BIA1026 | Environmental Physics | | 3 | | | | | | | | | |
| | 12 | BIA2021 | Materials and Construction II | | | | 3 | | | | | | | *BIA1021* |
| | 13 | BIA2022 | Building Structure | | | | 2 | | | | | | | |
| | 14 | BIA2023 | Digital Architecture | | | | 3 | | | | | | | |
| | 15 | BIA2026 | Building Services | | | | | 2 | | | | | | |
| **Research, Management and Practice** | 16 | BIA3022 | Architectural Academic Report | | | | | | | 3 | | | **13** 10.83% | |
| | 17 | BIA3026 | Professional Studies | | | | | | | | 3 | | | |
| | 18 | BIA3027 | Working Drawing | | | | | | | | 3 | | | |
| | 19 | BIA3028 | Industrial Training | | | | | | | | | 4 | | |
| **Program Electives Course** | 20 | BIA2027 / BIA2028 | * Measured Drawing / Landscape Architecture | | | | | | 3 | | | | **6** 5.00% | |
| | 21 | BIA2029 / BIA2030 | ** Architectural Lighting and Acoustics / Digital Fabrication | | | | | 3 | | | | | | |
| **University Courses** | 22 | GLT xxxx | English I | 2 | | | | | | | | | **18** 15% | |
| | 23 | GLT xxxx | English II | | 2 | | | | | | | | | |
| | 24 | GIG1012/ *** GLT1049 | Philosophy and Current Issues (FIS)/ *** Basic Malay Language | | | | | 2 | | | | | | |
| | 25 | GIG1013 | Appreciation of Ethics and Civilisations (PEP) | | | | | 2 | | | | | | |
| | 26 | GIG 1003 | Basic Entrepreneurship Culture | | | | | | | 2 | | | | |
| | 27 | | Co-curriculum | | 2 | | | | | | | | | |
| | 28 | | Student Holistic Empowerment (SHE) I | 2 | | | | | | | | | | |
| | 29 | | Student Holistic Empowerment (SHE) II | | | | | | | 2 | | | | |
| | 30 | | Student Holistic Empowerment (SHE) III | | | | | | | | 2 | | | |
| **Total Subject Breakdown** | | | **Credits** | 19 | 19 | 0 | 18 | 19 | 3 | 20 | 18 | 4 | 120 | |
| | | | **Programme Courses** | 5 | 5 | 0 | 4 | 5 | 1 | 5 | 4 | 1 | 30 | |
| | | | **University Courses** | 2 | 2 | 0 | 0 | 2 | 0 | 2 | 1 | 0 | 9 | |
| | | | **Core Subjects** | 3 | 3 | 0 | 4 | 2 | 0 | 3 | 3 | 1 | 19 | |
| | | | **Department Electives** | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 2 | |

* Elective subject (under cluster Culture and Context)
** Elective subject (under cluster Technology and Environment)
*** Courses offered to non-Malaysian students

**TOTAL CREDITS: 120**
The programme structure maybe subjected to change

## PROGRAMME CORE COURSES

**BIA1020 ARCHITECTURAL DESIGN STUDIO I**

10 credits

**Synopsis of Course Contents**

The course is an introduction to basic design, emphasising using various media to explore the concept of space and form. Through a series of design studies, students will learn, understand, analyze and apply basic design principles and elements within architectural design representations.

**Learning Outcomes**

After the course students shall be able to:

1. Identify the fundamentals and principles of design through architectural vocabulary;
2. Explain the ideas and concept of design composition;
3. Translate the knowledge of design fundamentals and principles into concept and idea through two-dimensional illustrations and three-dimensional physical models;
4. Justify architectural design elements ;
5. Identify the significance of human anthropometrics;
6. Apply ergonometry in architectural design;
7. Manipulate basic forms to create a composition of spaces; and
8. Propose a schematic design proposal of a small-scale design project of 'space for one or two users'.

**Assessment:**

Continuous Assessment 100%

**BIA1025 ARCHITECTURAL DESIGN STUDIO II**

10 credits

**Synopsis of Course Contents**

This course strengthens basic design knowledge and vocabulary introduced previously, where a series of design projects would highlight the importance of the design process. Projects would concentrate on form-making, and would revisit ideas of basic design elements (linear, planar, volume, addition / subtraction, interlocking space etc.) and enclosure and include architectonic aspects such as entrances, fenestrations, overhead enclosure / roof, furniture etc.

**Learning Outcomes**

At the end of the course, students can:

1. Identify basic structural systems and building design principles;
2. Identify basic skills in computer drafting and graphic presentation through basic exercises;
3. Study design principles and vocabularies through studio project;
4. Describe architectural elements and language through the study of selected architectural precedents;
5. Describe basic structural design of a small-scale architectural project;

6. Present preliminary site observation and analysis on a selected site;
7. Apply basic structural knowledge in the design of a small-scale building typology;
8. Construct a small structure with considerations of design idea, materials, joinery techniques and finishes;
9. Illustrate the proposed furniture/structure using digital design drawings; and
10. Apply knowledge learned in the design of a small-scale building typology on a selected site.

**Assessment:**

Continuous Assessment 100%

**BIA2020 ARCHITECTURAL DESIGN STUDIO III**

10 credits

**Synopsis of Course Contents**

This course allows students to further build and strengthen skills by using an experiential 'master-apprentice' studio-based learning approach. The student is given two assignments based on a brief and programme, to complete a final set of drawings and models, graphically and verbally presented. The design process requires the students to practice an approach of:

- combining architectural elements
- putting together a scheme
- conceptualising
- application of architectural theory

This course also provides learning on the architectural theories and themes for this semester, which is:

- architectural representation
- architectural language
- form
- space
- context

**Learning Outcomes**

At the end of the course, students can:

1. Define architectural theory principles and themes.
2. Review different architectural precedents through studies of plans, sections, as well as other relevant drawings and refer to prominent architects to explore alternative ideas and concepts in the design process.
3. Perform site survey and measure proposed building site
4. Illustrate knowledge from precedents studies into a small single and dual function building design through conceptual exploration on a hypothetical site.
5. Apply architectural theory principles, themes and good building design practice into architectural design.
6. Propose design according to building type and function through a series of design process.
7. Determine the elements, scheme, and concept of an architectural project.
8. Describe good building design practice with emphasis to space and form design.

9. Design a building not more than two storeys high which has mainly a public function and ancillary spaces, as stated in the given brief.

**Assessment:**

Continuous Assessment 100%

**BIA2025** **ARCHITECTURAL DESIGN STUDIO IV**

10 credits

**Synopsis of Course Contents**

This course allows students to further build and strengthen skills by using an experiential 'master-apprentice' studio-based learning approach. The student is given two assignments based on a brief and programme, to complete a final set of drawings and models, graphically and verbally presented. The design process requires the students to practice an approach of:

- combining architectural elements,
- putting together a scheme, and
- conceptualising.

The architectural design program provides learning on the sustainable design theory and principles for this semester, which is:

- elements – site elements, topography, vegetation, natural materials, building materials,
- scheme – climatic design ideas, passive energy design principles, building form and function, and
- concepts – vernacular architecture, tropical architectural design, bio-climatic design, ecological and sustainable design.

**Learning Outcomes**

At the end of the course, students can:

1. Define sustainable design theory and principles.
2. Review precedents and case studies through actual visits to local and international sites by studying plans, sections and other relevant drawings and documents to generate ideas and concepts in the design process.
3. Defend architectural ideas and feasibility of building design proposals.
4. Illustrate design proposal through appropriate architectural graphic and verbal communication.
5. Recognise immediate elements surrounding the site that may influence the design decisions.
6. Apply sustainable design theory and principles including good building design practice into architectural design schemes.
7. Design an infill project with focus on internal planning and contextual issues.
8. Design a building which has multiple functions, not more than two stories high located in an urban area.
9. Generate passive design solutions in a design scheme.

**Assessment:**

Continuous Assessment 100%

**BIA3020 ARCHITECTURAL DESIGN STUDIO V**

10 credits

**Synopsis of Course Contents**

This course allows students to individually design an institutional building of maximum four storey high which prioritised on the principles of sustainable architecture in a selected urban area through a thorough design process from macro and micro urban studies, site analysis, precedent studies and design requirement adhering to the local authorities' guidelines.

**Learning Outcomes**

At the end of the course, students can:

1. Recognize the urban fabric of selected town in the aspect of its history, environmental context, economy, social and culture in a group;
2. Analyse the project site of the said urban area encompassing the existing macro and micro context development, climate, infrastructure, traffic and pedestrian network and landscape including the local authority's development guidelines;
3. Appraise the architectural design through precedent study, information on building users, space function, sustainable architecture requirement, design concept and others;
4. Generate the schematic design concept of an institutional building of maximum four storey high through a thorough design process utilizing the information gained from the urban studies, site analysis, precedent studies, design brief and building buildability aspects that complies with the guidelines and regulations of the local authorities; and
5. Perform the final design through verbal and multimedia presentation in front of internal and external juries.

**Assessment:**

Continuous Assessment 100%

**BIA3025 ARCHITECTURAL DESIGN STUDIO VI**

10 credits

**Synopsis of Course Contents**

This course allows students to generate a comprehensive design of maximum five storey building including 1 storey basement car park which:

- integrate the urban design principles, sustainable architecture, multi spaces and functions, and precedent studies in design.
- incorporate building technical requirements such as long span structure, buildability, interior architecture, occupants' safety, landscape architecture, building services and local authority's requirements in Uniform Building By-Law (UBBL)

**Learning Outcomes**

At the end of the course, students can:

1. Analyse project site information, urban design principles and urban studies collected during the previous semester;
2. Appraise the architectural design through precedent study, information on building users, space-function, sustainable architecture requirement, design concept and others;
3. Generate the schematic design of a sustainable institutional building with maximum five storey high including 1 storey basement parking consist of multi spaces and functions through a comprehensive design process;
4. Integrate building technical requirements such as long span structure, buildability, building services and local authority's requirements in Uniform Building By-Law (UBBL);
5. Present final design proposal through verbal and multimedia presentation in front of internal and external juries; and
6. Prepare a comprehensive design report including technical building requirements.

**Assessment:**

Continuous Assessment 100%

**BIA1021 MATERIALS AND CONSTRUCTION I**

3 credits

**Synopsis of Course Contents**

This course is an introduction to:

- Basic construction materials such as timber, bamboo, masonry and reinforced concrete and construction techniques for 2 storey domestic structures.
- General knowledge on materials defects and preventive measures, basic concept of sustainability in the production, use of materials and construction techniques.

**Learning Outcomes**

At the end of the course, students can:

1. Identify architectural origins and identity of Asian architecture;
2. Describe the various characteristics of Asian architecture; and
3. Relate the development of Asian architecture with Malaysian architecture and their influence.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIA1022 HISTORY OF ASIAN ARCHITECTURE**

2 credits

**Synopsis of Course Contents**

This course exposes students to:

- The evolution of Asian Architecture based on historical timeline starting from ancient to modern era.
- Asian architectural characteristics covering:
  - East Asian Architecture
  - South Asian Architecture
  - Southeast Asian Architecture
  - Malaysian Architecture

The influences of Asian architecture towards Malaysian architecture.

**Learning Outcomes**

At the end of the course, students can:

1. Identify architectural origins and identity of Asian architecture;
2. Describe the various characteristics of Asian architecture; and
3. Relate the development of Asian architecture with Malaysian architecture and their influence.

**Assessment:**

Continuous Assessment: 100%

**BIA1026 ENVIRONMENTAL PHYSICS**

3 credits

**Synopsis of Course Contents**

This course introduces basic knowledge of the relationship between environmental physics and the built environment in determining human comfort, analysing the influence of natural elements and climate on design, the appropriateness of building sitting on site and the problem of heat and wind in the context of micro-climate. It will also review the effectiveness and efficiency of vernacular architectural design, bio-climatic design and passive solar architecture.

**Learning Outcomes**

At the end of the course, students can:

1. Identify the basic environmental technology in building design;
2. Answer the needs of the user, community, and environment to achieve thermal comfort; and
3. Describe the relationship between 'Man, Building and Climate'.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIA1027** **HISTORY OF WORLD ARCHITECTURE**

2 credits

**Synopsis of Course Contents**

This course introduces basic knowledge of the relationship between environmental physics and the built environment in determining human comfort, analysing the influence of natural elements and climate on design, the appropriateness of building sitting on site and the problem of heat and wind in the context of micro-climate. It will also review the effectiveness and efficiency of vernacular architectural design, bio-climatic design and passive solar architecture.

**Learning Outcomes**

At the end of the course, students can:

1. Identify the various architectural development in world architecture history according to historical timeline from prehistoric era to the postmodern era;
2. Summarize the architectural development in world architecture history throughout different eras;
3. Describe the various architectural historical developments focusing on various types of architectural styles; and
4. Compare the differences and similarities of architecture historical developments in world architecture and Malaysian architecture including their influences.

**Assessment:**

Continuous Assessment: 100%

**BIA2021** **MATERIALS AND CONSTRUCTION II**

3 credits

**Synopsis of Course Contents**

This course provides the learning of construction methods and processes including site clearance, piling, basement, waterproofing systems, metal and concrete composite structures, cladding systems, industrial building systems, infrastructure works and demolition works for medium-rise buildings.

**Learning Outcomes**

At the end of the course, students can:

1. Explain the process of construction of supporting infrastructures for medium rise building;
2. Describe building components and construction works of buildings with reinforced concrete and steel framed structures; and
3. Justify the theoretical and practical aspects of construction through exposure to construction works on site.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIA2022** **BUILDING STRUCTURE**

2 credits

**Synopsis of Course Contents**

The course expose students to the design of building structure, among the topics covered include:

- Distribution of loads on structural systems
- Structural systems
- Structural design
- Structural analysis

The final assignment is the integration of structure design in a design studio project.

**Learning Outcomes**

At the end of the course, students can:

1. Describe structural systems of buildings;
2. Present structural forces and loading in a building; and
3. Propose basic forces and loading of building structure.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIA2023** **DIGITAL ARCHITECTURE**

3 credits

**Synopsis of Course Contents**

This course provides discussion and information on emerging digital technologies – Building Information Modelling (BIM), Digital Fabrication, Virtual Reality (VR), etc. – used in contemporary and innovative design practice. Students will be exposed with information modelling techniques within digital, physical and/or virtual environments to present and interact with architectural design proposals.

**Learning Outcomes**

After the course students shall be able to:

1. Identify use of CAD application 2D/3D in architectural design and documentation practice;
2. Build and architectural digital model of an interior or exterior;
3. Manipulate an architectural digital model into systems of rendering and/or visualisation methods; and
4. Appraise digital and virtual design processes.

**Assessment:**

Continuous Assessment: 100%

**BIA2026** **BUILDING SERVICES**

2 credits

**Synopsis of Course Contents**

This course introduces the basic needs for building services in modern living such as the following systems:

- Firefighting including active and passive equipment.
- Domestic water supply and distribution
- Surface water and underground drainage and rainwater harvesting
- Electrical, telephone and data wiring
- Soil, wastewater and sewerage
- Refuse disposal systems.
- Mechanical ventilation and air-conditioning
- Vertical and horizontal transportation in buildings, based on relevant authority's building submissions, BIM regulation and procedures and Uniform Building By Laws (UBBL).

**Learning Outcomes**

After the course students shall be able to:

1. Understand the needs of various technical services components commonly used in building indoor and outdoor according to size, type and various building design;
2. Describe various basic technical aspects in buildings services such as for domestic cold water supply and distribution systems, sewerage systems, surface water drainage systems, mechanical ventilation system, electrical supply and distribution system, transportation system and passive and active fire protection systems; and
3. Determine the requirements of building services appropriate to building specifications, submission guidelines and by-law.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIA3021** **CULTURE AND CONTEXTS**

3 credits

**Synopsis of Course Contents**

The course emphasises the importance of collaboration between students with external university/ external industry and selected community. Students will be able to understand how the culture and context elements influence the design of settlements and urbanisations of the community. Students will practice their skills to empower the community through video recording, taking photos, freehand sketching, cultural mapping, and measured drawing of the tangible and intangible heritage of the said community. The products will be exhibited and presented through verbal and graphic presentation in an appropriate place where the community is invited to attend. Outcome will be recorded for archival and/or published in newspaper or magazine or book.

**Learning Outcomes**

After the course students shall be able to:

1. Collaborate with external university and selected community local or oversea;
2. Assemble the tangible and intangible heritage through collaboration of any of the following activities such as interviewing the community, video filming, taking photography, freehand sketching, cultural mapping and measured drawing;
3. Exhibit the recorded heritage in appropriate place with the community as invited guest; and
4. Produce report for archival and/or publication in newspaper or magazine or book.

**Assessment:**

Continuous Assessment: 100%

**BIA3022 ARCHITECTURAL ACADEMIC REPORTS**

3 credits

**Synopsis of Course Contents**

The course emphasises the importance of collaboration between students with external university/ external industry and selected community. Students will be able to understand how the culture and context elements influence the design of settlements and urbanisations of the community. Students will practice their skills to empower the community through video recording, taking photo, freehand sketching, cultural mapping, and measured drawing of the tangible and intangible heritage of the said community. The products will be exhibited and presented through verbal and graphic presentation in an appropriate place where the community is invited to attend. Outcome will be recorded for archival and/or published in newspaper or magazine or book.

**Learning Outcomes**

After the course students shall be able to:

1. Write a research proposal;
2. Produce literature review;
3. Identify appropriate research methods that incudes data collection and data analysis; and
4. Prepare a research report.

**Assessment:**

Continuous Assessment: 100%

**BIA3026 PROFESSIONAL STUDIES**

3 credits

**Synopsis of Course Contents**

The course intends to expose students on professional practice and building construction site administration. The course also introduces concept and basic project management, feasibility studies, project control, organization structure,

BIM practice and team management. Architects and other consultants' work and responsibility shall be introduced and explained.

**Learning Outcomes**

After the course students shall be able to:

1. Describe architect's roles and responsibilities in a real-life situation in an architect's office;
2. Understanding the process of getting planning and building plans approval;
3. Explain the fundamentals of planning, managing, and organizing building construction projects creatively, efficiently, and professionally; and
4. Appraise project management principles

**Assessment:**

Continuous Assessment: 100%

**BIA3027 WORKING DRAWING**

3 credits

**Synopsis of Course Contents**

This course introduces the technical definition of working drawings in architectural practice. The course discusses on aspects of drawing management using CAD and/or BIM system to establish appropriate drawing and architectural notation at different scales and functions. This course also identifies important aspects of working drawings in relation of design communication, coordinated drawings, and building construction.

**Learning Outcomes**

After the course students shall be able to:

1. Identify various working drawing features and format for building construction;
2. Apply specific working drawing technical requirements according to specification standards; and
3. Relate design drawings to the technical requirements of working drawings.

**Assessment:**

Continuous Assessment: 100%

**BIA3028 INDUSTRIAL TRAINING**

4 credits

**Synopsis of Course Contents**

This course introduces student to the actual architectural practice in an architectural company or in a company involving in related architectural practice, local or abroad. Each student is required to find the practical training placement for approval to ensure the placement company and the propose work tasks are appropriate with the course requirements. An academic staff will oversee student's progress with the assistance from the company supervisor.

**Learning Outcomes**

After the course students shall be able to:

1. Demonstrate the ability to practice knowledge gained in an actual situation in the architectural practice or related industry, local or abroad;
2. Adhere to the work order in an efficient, ethical and professional manner to obtain satisfactory results; and
3. Record the work experiences in a timely manner to produce an industrial training report.

**Assessment:**

Continuous Assessment: 100%

**BIA2027 MEASURED DRAWING**

3 credits

**Synopsis of Course Contents**

Students will have the opportunity to measure and report their findings from their study of heritage buildings. They will also be exposed to:

- The importance of building conservation
- Building construction methods
- Architectural drafting methods
- Heritage building site observation and analysis
- Historical aspects of studied heritage building

**Learning Outcomes**

After the course students shall be able to:

1. Identify architectural elements such as building plans, architectural concept, building layout, spatial organisation, construction method, building structure, and architectural details of heritage buildings;
2. Use appropriate measuring equipment and technique to measure selected buildings and their significant architectural elements; and
3. Apply skills to draw architectural measured drawings and write report to produce related documents.

**Assessment:**

Continuous Assessment: 100%

**BIA2028 LANDSCAPE ARCHITECTURE**

3 credits

**Synopsis of Course Contents**

Students will be exposed through series of lectures and study tours. This is to study how the nature of place and attitudes to nature inform landscape architectural design.

**Learning Outcomes**

After the course students shall be able to:

1. Define the landscape design related vocabulary and terminology;
2. Distinguish an awareness of the significance of the natural elements in the living environment; and
3. Illustrate relevant issues and recommendations of landscape elements.

**Assessment:**

Continuous Assessment: 100%

**BIA2029 ARCHITECTURAL LIGHTING AND ACOUSTIC**

3 credits

**Synopsis of Course Contents**

This course is a further discussion on the link between environmental physics and the built environment, focusing on:

- Architectural lighting and design
- Building acoustics and architectural acoustic design
- Related guidelines

**Learning Outcomes**

After the course students shall be able to:

1. Identify the needs, comfort, and requirements of building users in terms of lighting and architectural acoustics;
2. Demonstrate the design concept of special lighting and architectural acoustics in groups; and
3. Appraise architectural design in terms of lighting and architectural acoustics.

**Assessment:**

Continuous Assessment: 100%

**BIA2030 DIGITAL FABRICATION**

3 credits

**Synopsis of Course Contents**

This course provides students with relevant skill set and production techniques to explore design with industrial tools. The teaching and demonstration are done in special labs to gain practical knowledge on the application of digital fabrication tools and manufacturing methods. Throughout the course, new design knowledge is obtained through a series of design experiments and production methods.

**Learning Outcomes**

After the course students shall be able to:

1. Execute CAD/CAM applications in the digital production process;
2. Assemble 'design to production' workflow using fabrication techniques to produce 'an architectural prototype'; and
3. Organize an event (design commissioned, exhibition or competition entry and/or website, etc.) to showcase the product(s) studied.

**Assessment:**

Continuous Assessment: 100%

# BUILDING SURVEYING

**Bachelor of Building Surveying**

# BUILDING SURVEYING

## Introduction

Building Surveying is a rapidly growing profession in Malaysia and its services are highly needed in all economic and development situations. Its scope begins from the very early stage of planning a development project to construction management, property maintenance and management, as well as the conservation of historical and architecturally important buildings. To address the shortage of professional Building Surveyors in the country, the Building Surveying Programme at undergraduate level was introduced in the Universiti Malaya (UM) in 1996. This programme is recognised locally and internationally by professional bodies i.e. Royal Institution of Surveyors Malaysia (RISM) and the Royal Institution of Chartered Surveyors (RICS), UK. The degree can also be pursued at higher learning institutions abroad especially in the United Kingdom, Australia, Hong Kong and New Zealand or through a professional examination conducted by the RISM.

In the Malaysian context, a professional Building Surveyor is a qualified person, by examination and experience, and a member of the RISM. The main roles and responsibilities of a Building Surveyor in Malaysia, as prescribed by the RISM cover the following areas:

- Building Control and Space Planning;
- Building Performance & Risk Assessment; and
- Building Maintenance and Refurbishment.

The career as a professional Building Surveyor includes every aspect of a building life cycle from its planning stage to restoration, maintenance and management, as well as demolition and redevelopment. A competent Building Surveyor will be able to manage, organise, monitor, assess and coordinate construction works while acting as the main link to other professional services in the construction industry.

A qualified Building Surveyor can work at the Government/Semi-Government Department such as Local Authority, higher learning institutions (public and private) and also private sector such as developer, financial and banking institution, consultant firm, insurance company and research organisation.

The Bachelor of Building Surveying programme consists of 8 semesters (including 1 special semester) with a total of 125 credits. This programme comprises two major components namely, university (20 credits) and faculty courses (105 credits) which constitute 16% and 84% respectively from the total credits.

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

## Programme Aim

To produce ethical and professional Building Surveyors and Property Managers who are able to function effectively as members of the construction and property industry and able to face technological and managerial challenges in the national and international context.

## Programme Learning Outcomes

At the end of the programme, graduates are able to:

| | |
|---|---|
| **PL01** | Apply knowledge, skills and appropriate characters of the Building Surveying and Property Management procedures. |
| **PL02** | Coordinate support services in the area of Building Surveying and Property Management. |
| **PL03** | Demonstrate effective communication within the built environment community and teamwork. |
| **PL04** | Propose problem-solving solutions in Building Surveying and Property Management using the latest technological approach. |
| **PL05** | Plan and diagnose building problems. |
| **PL06** | Select and apply appropriate and relevant techniques, resources and equipment of Building Surveying and Property Management. |
| **PL07** | Demonstrate awareness and responsibility towards social, health, safety, ethics and legal issues. |
| **PL08** | Foster awareness towards entrepreneurship and sustainable development. |
| **PL09** | Encourage readiness for career development and lifelong learning. |

# PROGRAMME STRUCTURE: BACHELOR OF BUILDING SURVEYING

| YEAR 1 (Bachelor of Building Surveying) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **COMPONENTS** | **SEMESTER 1** | | | **SEMESTER 2** | | | **TOTAL CREDIT** |
| | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | |
| Compulsory University Courses | GIG1012/ GLT1049* | Philosophy and Current Issue/ Basic Malay Language* | 2 | GIG1013 | Appreciation of Ethics and Civilization | 2 | 10 |
| | GLTxxxx | English I | 2 | GIG1003 | Basic Entrepreneurship Enculturation | 2 | |
| | | | | GLTxxxx | English II | 2 | |
| Programme Core Courses | BIB1012 | Legal Studies and Built Environment Laws | 3 | BIB1016 | Construction Technology – High Rise Building | 3 | 20 |
| | BIB1013 | Construction Technology – Low Rise Building | 3 | BIB1017 | Integrated Project I – Design Communication | 4 | |
| | BIB1014 | Building Services | 3 | | | | |
| | BIB1015 | Building Services & Environment | 4 | | | | |
| Programme Elective Courses | | | | BIB1018** | Computer Aided Design | 3** | 6 |
| | | | | BIB1019** | Sustainable Built Environment | 3** | |
| | | | | BIB1020** | Land & Geomatics Surveying | 3** | |
| Total credits | | | 17 | Total credits | | 19 | **36** |

***Non-Malaysian**

****** Choose only two (2) Program Elective Courses.**

| YEAR 2 (Bachelor of Building Surveying) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **COMPONENTS** | **SEMESTER 1** | | | **SEMESTER 2** | | | **SPECIAL SEMESTER** | | | **TOTAL CREDIT** |
| | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | |
| Compulsory University Courses | | Student Holistic Empowerment (SHE) I | 2 | GXXxxxx | Co-Curriculum | 2 | | | | 8 |
| | | | | | Student Holistic Empowerment (SHE) II | 2 | | | | |
| | | | | | Student Holistic Empowerment (SHE) III | 2 | | | | |
| Programme Core Courses | BIB2013 | Construction Technology – Complex Construction | 3 | BIB2018 | Building Dilapidation Survey | 3 | BIB2022 | Integrated Project IV – Building Performance & Simulation | 4 | 37 |
| | BIB2014 | Building Pathology | 3 | BIB2019 | Integrated Project III – Building Services Audit | 4 | BIB2023 | Procurement, Contract and Specification | 3 | |
| | BIB2015 | Property Management and Maintenance | 4 | BIB2020 | Accounting & Financial Management | 3 | | | | |
| | BIB2016 | Integrated Project II – Building Control & Development | 4 | BIB2021 | Risk & Construction Safety | 3 | | | | |
| | BIB2017 | Structural Principle | 3 | | | | | | | |
| TOTAL CREDIT | | | 19 | TOTAL CREDIT | | 19 | TOTAL CREDIT | | 7 | 45 |

| YEAR 3 (Bachelor of Building Surveying) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | | Student Holistic Empowerment (SHE) IV | 2 | | | | 2 |
| Programme Core Courses | BIB3011 | Fundamental of Property Valuation & Taxation | 3 | BIB3016 | Property Economics & Investment | 3 | 32 |
| | BIB3012 | Facility Management Services | 3 | BIB3017 | Professional Practice | 3 | |
| | BIB3013 | Building Conservation | 3 | BIB3018 | Construction Law | 3 | |
| | BIB3014 | Research Methodology | 3 | BIB3019 | Building Certification | 3 | |
| | BIB3015 | Integrated Project V – Project Management | 4 | BIB3020 | Academic Research | 4 | |
| Total credits | | | 18 | Total credits | | 16 | **34** |

| YEAR 4 (Bachelor of Building Surveying) | | | | |
|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | |
| Programme Core Courses | BIB4002 | Industrial Training | 10 | 10 |
| TOTAL CREDIT | | | 10 | 10 |

**Note: Course KIAR GQX0056 is a compulsory SHE course**

**OVERALL TOTAL CREDIT: 125**

The programme structure maybe subjected to change

# PROGRAMME STRUCTURE – BACHELOR OF BUILDING SURVEYING

| Category | No | Code | Course Name | YEAR I | | YEAR II | | | YEAR III | | YEAR IV | | Total credit | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S1 | S2 | S1 | S2 | S3 | S1 | S2 | S1 | S2 | | |
| UNIVERSITY COURSES | 1 | | Co-Curiculum | | | | 2 | | | | | | 20 | |
| | 2 | | Student Holistic Empowerment (SHE) I | | | 2 | | | | | | | | |
| | 3 | | Student Holistic Empowerment (SHE) II | | | | 2 | | | | | | | |
| | 4 | | Student Holistic Empowerment (SHE) III | | | | 2 | | | | | | | |
| | 5 | | Student Holistic Empowerment (SHE) IV | | | | | | 2 | | | | | |
| | 6 | GIG1012/ *GLT1049 | Philosophy and Current Issue / *Basic Malay Language | 2 | | | | | | | | | | |
| | 7 | GLTxxxx | English I | 2 | | | | | | | | | | |
| | 8 | GIG1013 | Appreciation of Ethics and Civilization | | 2 | | | | | | | | | |
| | 9 | GIG1003 | Basic of Entrepreneurship Culture | | 2 | | | | | | | | | |
| | 10 | GLTxxxx | English II | | 2 | | | | | | | | | |
| PROGRAMME CORE COURSES | 11 | BIB1012 | Legal Studies and Built Environment Laws | 3 | | | | | | | | | 99 | |
| | 12 | BIB1013 | Construction Technology – Low Rise Building | 3 | | | | | | | | | | |
| | 13 | BIB1014 | Building Services | 3 | | | | | | | | | | |
| | 14 | BIB1015 | Building Services & Environment | 4 | | | | | | | | | | |
| | 15 | BIB1016 | Construction Technology – High Rise Building | | 3 | | | | | | | | | |
| | 16 | BIB1017 | Integrated Project I – Design Communication | | 4 | | | | | | | | | |
| | 17 | BIB2013 | Construction Technology – Complex Construction | | | 3 | | | | | | | | |
| | 18 | BIB2014 | Building Pathology | | | 3 | | | | | | | | |
| | 19 | BIB2015 | Property Management and Maintenance | | | 4 | | | | | | | | |
| | 20 | BIB2016 | Integrated Project II – Building Control & Development | | | 4 | | | | | | | | |
| | 21 | BIB2017 | Structural Principle | | | 3 | | | | | | | | |
| | 22 | BIB2018 | Building Dilapidation Survey | | | | 3 | | | | | | | BIB2014 |
| | 23 | BIB2019 | Integrated Project III – Building Services Audit | | | | 4 | | | | | | | |
| | 24 | BIB2020 | Accounting & Financial Management | | | | 3 | | | | | | | |
| | 25 | BIB2021 | Risk & Construction Safety | | | | 3 | | | | | | | |
| | 26 | BIB2022 | Integrated Project IV – Building Performance & Simulation | | | | | 4 | | | | | | |
| | 27 | BIB2023 | Procurement, Contract and Specification | | | | | 3 | | | | | | |
| | 28 | BIB3011 | Fundamental of Property Valuation & Taxation | | | | | | 3 | | | | | |
| | 29 | BIB3012 | Facility Management Services | | | | | | 3 | | | | | |
| | 30 | BIB3013 | Building Conservation | | | | | | 3 | | | | | |
| | 31 | BIB3014 | Research Methodology | | | | | | 3 | | | | | |
| | 32 | BIB3015 | Integrated Project V – Project Management | | | | | | 4 | | | | | |
| | 33 | BIB3016 | Property Economics & Investment | | | | | | | 3 | | | | |
| | 34 | BIB3017 | Professional Practice | | | | | | | 3 | | | | |
| | 35 | BIB3018 | Construction Law | | | | | | | 3 | | | | |
| | 36 | BIB3019 | Building Certification | | | | | | | 3 | | | | |
| | 37 | BIB3020 | Academic Research | | | | | | | 4 | | | | BIB3014 |
| | 38 | BIB4002 | Industrial Training | | | | | | | | 10 | | | |
| PROGRAMME ELECTIVE COURSES | 39 | BIB1018** | Computer Aided Design | | 3** | | | | | | | | 6** | |
| | 40 | BIB1019** | Sustainable Built Environment | | 3** | | | | | | | | | |
| | 41 | BIB1020** | Land & Geomatics Surveying | | 3** | | | | | | | | | |
| Total Subject Breakdown | | | Credits | 17 | 19 | 19 | 19 | 7 | 18 | 16 | 10 | 0 | 125 | |
| | | | Subjects | 6 | 7 | 6 | 7 | 2 | 6 | 5 | 1 | 0 | 40 | |

**Note :**

*** Exempted for non –Malaysian students and to be replaced with another Senate-approved university course.**

**** Choose only two (2) Programme Elective Courses.**

# PROGRAMME CORE COURSES

**IB1012** **LEGAL STUDIES & BUILT ENVIRONMENT LAWS**

3 credits

**Synopsis of Course Contents**

This course focuses on the Malaysian Legal System, Law of Tort, and Law of Contract. It also covers legislations for land development and building: National Land Code 1965; Local Government Act 1976; Town and Country Planning Act 1976; Housing Development (Control and Licensing) Act 1966; Environmental Quality Act 1974; Street, Drainage and Building Act 1974; and Strata Title Act 1985.

**Learning Outcomes**

At the end of the course, students are able to:

1. Read the Malaysian Legal System, law of tort and contract;
2. Execute the principles and working of specific legislative provisions in built environment context; and
3. Apply the knowledge of law of tort, law of contract and built environment laws.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIB1013** **CONSTRUCTION TECHNOLOGY - LOW RISE BUILDING**

3 credits

**Synopsis of Course Contents**

Introduction to construction industry, building construction principles, materials, methods and processes for erecting low rise buildings based on relevant regulation and standard; construction activities and parties involved; civil and building works; building structures and elements; building materials and finishes.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine building materials and connection methods for erecting a two-storey building;
2. Reconstruct a building at appropriate model scale; and
3. Write a report on construction for timber, masonry and reinforced concrete buildings.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB1014 BUILDING SERVICES**

3 credits

**Synopsis of Course Contents**

This course introduces the need for building services in modern living, relevant regulations and guidelines; Uniform Building By-Laws (UBBL) requirements; design of rainwater collection and drainage systems, plumbing and integrated plumbing systems; water supply and distribution; underground drainage and disposal system, above ground drainage, sewerage systems and septic tanks; refuse disposal systems; electrical distribution, electrical wiring, telephone and data; vertical and horizontal transportation in buildings.

**Learning Outcomes**

At the end of the course, students are able to:

1. Show various types of building service systems;
2. Discuss the design of installation and location of equipment in the service systems; and
3. Conform the requirements and limitations of the building services system.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIB1015 BUILDING SERVICES & ENVIRONMENT**

4 credits

**Synopsis of Course Contents**

Introducing the concept of environmental physics in a sustainable development and human lifestyle influenced by lighting, ventilation and acoustic systems and how the concept is integrated in various types of mechanical and electrical systems in buildings such as air conditioning and mechanical ventilation systems, lighting and electrical systems and fire safety systems.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify concepts of environmental physics in the design and performance of mechanical and electrical (M&E) services;
2. Elaborate various natural and mechanical and electrical (M&E) services within the built environment; and
3. Examine parameters of comfort being measured in buildings in terms of climate, ventilation, lighting and sound.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB1016 CONSTRUCTION TECHNOLOGY – HIGH RISE BUILDING**

3 credits

**Synopsis of Course Contents**

Introduction to construction industry, building construction principles, methods and processes for multi-storey building base on relevant regulation and

standard; site preparation and machineries; piling, basement, waterproofing systems, building frames, metal and concrete composite building structures, cladding systems, roof system, elements, materials and finishes; fundamental of building alteration, demolition works and infrastructural work.

**Learning Outcomes**

At the end of the course, students are able to:

1. Interpret the principles, design, materials and methods in multi-storey (medium rise) building construction;
2. Show preliminary construction activities and machineries through exposure to construction works on site; and
3. Show the suitability of construction methods for multi-storey building.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB1017 INTEGRATED PROJECT I – DESIGN COMMUNICATION**

4 credits

**Synopsis of Course Contents**

The course aims at developing students' capabilities of executing a broad range of architectural communication tasks and introduces fundamental graphic communication techniques. It involves studies on various drawing techniques like orthographic and free-hand drawings besides computer aided drawing to enable students to develop and present their design ideas in different mediums.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine basic design principles of graphic communication;
2. Demonstrate existing building into technical drawings; and
3. Draw two and three-dimensional architectural drawings.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 100% |

**BIB1018 COMPUTER AIDED DESIGN**

3 credits

**Synopsis of Course Contents**

This course aims to introduce the types and components of Computer-Aided Design (CAD), the usage in designing and measuring buildings, the operating system and relevant image processing. It involves designing technical drawing using 2-D and 3-Dimension lectures and hands on sessions using appropriate CAD software and plotting design and drawings.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply visual presentation and communication with Computer-Aided Design (CAD) software;
2. Complete technical construction drawing using CAD software; and
3. Draw two and three-dimensional architectural drawings using CAD software.

**Assessment:**

Continuous Assessment: 100%

**BIB1019 SUSTAINABLE BUILT ENVIRONMENT**

3 credits

**Synopsis of Course Contents**

This course discusses key principles of sustainable development (environmental, social and economical) and analyses the complex relationship of the building industry and national economic growth. It also explores the holistic approach of sustainable development in the built environment for climate change mitigation and economic development.

**Learning Outcomes**

At the end of the course, students are able to:

1. Interpret the principles of sustainable development;
2. Propose sustainable development principles in built environment to mitigate environmental risks; and
3. Formulate the holistic implementation of sustainable development principles in the built environment context.

**Assessment:**

Continuous Assessment: 60%

Final Examination: 40%

**BIB1020 LAND & GEOMATICS SURVEYING**

3 credits

**Synopsis of Course Contents**

Introduction to basic theory and the principles of land and building surveying. Introduction with hands-on fieldwork and equipment used in land surveying. Introduction to the concepts of handling and introduction to Geographic Information System (GIS) and its related software application.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the basic principles of method and procedure of land survey;
2. Adapt various survey equipment, referencing information, record and calculation to produce site dat; and
3. Execute the Geographic Information System (GIS) software in calculation and spatial analysis.

**Assessment:**

Continuous Assessment: 100%

**BIB2013** **CONSTRUCTION TECHNOLOGY – COMPLEX CONSTRUCTION**

3 credits

**Synopsis of Course Contents**

Introduction to heavy substructure works and high-rise building construction system based on relevant regulation and standard: prefabricated building systems; pre-cast concrete; pre-stressed and post tension concrete; formworks, false works and scaffoldings; advanced contemporary materials and external works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine heavy substructure works and building construction system;
2. Show alternative construction materials and methods for highrise buildings; and
3. Adapt methods for complex constructions.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB2014** **BUILDING PATHOLOGY**

3 credits

**Synopsis of Course Contents**

Introduction to various types of building defects occurred on building fabrics and structures; understanding material behaviour due to mechanical, biological, chemical and environmental agents; deterioration on modern and traditional materials. Introduction to building inspection, measurement techniques using appropriate apparatus, and various remediation techniques. Preparation of building condition reporting based on RICS and RISM standards.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine various types of building materials, defects, materials behaviour and agents of deterioration;
2. Report building defects based on building inspection outcomes; and
3. Show building inspection outcomes and diagnose building defects.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIB2015** **PROPERTY MANAGEMENT & MAINTENANCE**

4 credits

**Synopsis of Course Contents**

This course covers the property management practices; various types of building maintenance strategies; maintenance planning and budgeting; life cycle cost application; execution of maintenance activities; recording and monitoring; and contracts management.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine principle and practise of property management;
2. Show various types of maintenance and procedures for buildings; and
3. Arrange maintenance planning and economical maintenance budgeting, considering the life cycle costs.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 50% |
| Final Examination: | 50% |

**BIB2016** **INTEGRATED PROJECT II – BUILDING CONTROL & DEVELOPMENT**

4 credits

**Synopsis of Course Contents**

Exposure to urban planning, planning theories, and site analysis. Application of knowledge in Uniform Building By-law 1984 and Road, Drainage & Building Acts 1995, Certificate of Fitness (CF) and Certificate of Completion and Compliance (CCC) approvals procedures; plans checking practice and inspection methods; Building design theories and concepts for building refurbishment, legal requirements, site and existing building analysis.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify aspects of planning theories and site analysis;
2. Apply process and procedures for building plan approval and issuance of Certificate of Fitness for Occupation (CF) and Certificate of Completion and Compliance (CCC);
3. Show refurbishment according to relevant regulation and legislation; and
4. Conform design and legislative requirements for building plan approval.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIB2017** **STRUCTURAL PRINCIPLE**

3 credits

**Synopsis of Course Contents**

Introduction to building structures layout, loading on building, forces and reaction in structures. Concurrent coplanar forces and moment of forces. Axial forces, shear force and bending moment. Framed structures, properties of section, material strength and safety factors.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine the type of structures and loadings react on a low rise building;
2. Show calculation on forces react on members of building structures; and
3. Show safe sections for building structures.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB2018** **BUILDING DILAPIDATION SURVEY**

3 credits

**Synopsis of Course Contents**

Dilapidations are breaches of contract / leases due to the condition of the property being purchased, leased, either during or at the end of the lease period. Property owners and tenants will normally be advised by a specialist surveyor or property consultant by carrying out a dilapidations survey that provides detailed survey recording the condition of building components and systems down to minor wear and tear. The outcomes of the dilapidation report will recommend appropriate method of statements with relevant standards code of practice. This course also aims to expose students to the survey project that is involving the related community/authority.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine various types of building defects occurred at different building components;
2. Implement inspection and diagnosis of building defects with scientific principles;
3. Prepare the inspection outcomes with specification of repairs; and
4. Synthesise the outcome of inspection with meaningful community engagement.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 100% |

**BIB2019** **INTEGRATED PROJECT III – BUILDING SERVICES AUDIT**

4 credits

**Synopsis of Course Contents**

Application on plan checking of the building services systems, the layout, sizes and numbers; with the combination of required legislation and guidelines in conducting building audits on the performance of mechanical, electrical, plumbing and other building services systems; the adaptation of sustainable in building services refurbishment work.

**Learning Outcomes**

At the end of the course, students are able to:

1. Report building services problems which include the installation, operation and function based on legislation requirement and other related guideline;
2. Show building services requirement through calculation, plan checking and building audit; and
3. Present a proposed sustainable refurbishment plan for building services to achieve optimum and effective performance.

**Assessment:**

Continuous Assessment: 100%

**BIB2020** **ACCOUNTING & FINANCIAL MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This course deals with the concept and basic principles of accounting which include balance sheet, ledger, trading account, and profit-and-loss account. The course also introduces financial management which provides an understanding on accounting ratio and the application of financial statements.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the basic principles in accounting and financial management in accordance to accounting standards;
2. Describe the theories, concepts and practice in accounting and financial management; and
3. Show the application of a financial statement.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIB2021** **RISK & CONSTRUCTION SAFETY**

3 credits

**Synopsis of Course Contents**

Introduction to the scope of risk, safety and health in the construction industry. Risks and hazards, law and legislation pertaining occupational health (OSHA 1994). Guidelines of construction work controls. Roles, importance and management of safety and health. Characteristics, policies, inspection, manuals and procedures. Worksite accidents: reporting, control and prevention. Explanation on current case studies involving health and safety issues in the construction industry.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain health and safety scenarios in the construction industry in Malaysia;
2. Study the needs of health and safety management in the construction industry on related legislation;
3. Describe the procedure of risk management in the construction industry, and
4. Complete technical report based on health and safety management in the construction industry.

**Assessment:**

Continuous Assessment: 60%

Final Examination: 40%

**BIB 2022** **INTEGRATED PROJECT IV – Building Performance & Simulation**

4 credits

**Synopsis of Course Contents**

Application of practice, processes and procedures of inspections after occupancy; building quality inspections and reports; focus on Building Assessment after occupancy by promoting best practices and understanding the requirements of BPE; knowledge of architectural design principles, building construction, property building materials and technical building systems to better understand their needs with each other in terms of the building performance; able to evaluate different design concepts in terms of integration of technical systems, energy efficiency and sustainability; knowledge of simulation techniques and the introduction of theoretical and operational principles of technology to achieve a quality internal environment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Conclude the benefits, concepts, assumptions and limitations of building performance simulation methods;
2. Integrate a systematic and in-depth approach in identifying building failures in phase after construction period; and
3. Justify Building Performance Assessment (BPE) in meeting design goals for resource use and building-building satisfaction.

**Assessment:**

Continuous Assessment: 100%

**BIB2023** **PROCUREMENT, CONTRACT & SPECIFICATION**

3 credits

**Synopsis of Course Contents**

Introduction to the standard methods of measurement and specification (SMM 2). Application of measurement forms and collection of measurement methods and writing description. Quantification for renovation works, refurbishment, internal and external buildings and estimation preparation. Types of contract: Built, Operate and Transfer (BOT), direct negotiation, design and built, turnkey, lump sum, joint venture, privatisation. Contract process and procedures, Contract liability, Document for appointment of contractor, payment to contractors (performance bond, insurance, etc.)

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the standard of measurement methods in construction work;
2. Identify the type, process, procedure and liability of contract and process and procedure to engage employment of contractors and consultants;
3. Arrange job specification and quotations (PWD/PAM) and construction price estimation for internal and external building measurement works; and
4. Show method of payment for work progress and variation order.

**Assessment:**

Continuous Assessment: 60%

Final Examination: 40%

**BIB 3011** **FUNDAMENTAL OF PROPERTY VALUATION & TAXATION**

4 credits

**Synopsis of Course Contents**

This course provides principles that determine the value of real estate, by introducing mathematical evaluation, calculations in property valuation. This also contains legislation relating to valuation statute namely the Local Government Act 1976, Town and Country Planning Act 1976, Stamp Duty Act 1949, Real Property Gains Tax Act 1967, Customs Act 1967 and Income Tax Act 1967.

**Learning Outcomes**

At the end of the course, students are able to:

1. Show the fundamentals of real estate and market value;
2. Appraise valuation based on valuation principles; and
3. Adapt appropriate valuation methods to evaluate various types of property and taxation purposes.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB 3012** **FACILITY MANAGEMENT SERVICES**

3 credits

**Synopsis of Course Contents**

Introduction to facility management functions, business organisation relationships to ensure a productive and sustainable work environment; operational management operations skills for an organisation in strategic, tactical and operational contexts; discusses the concepts and techniques of writing business plans. In addition, well designed business plans provide an operational framework that allows the business to enjoy distinct competitive advantages. Furthermore, the right facilities must be on- line at the right time. In this context, it follows that strategic facilities planning (SFP) are a business planning activity. The process integrates a company's business plan with its plan for the short- and long-term acquisition and disposition of facilities. This, in turn, should result in increased profits for the organisation.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply professional facility management function in public or private sector in delivering optimal services with due consideration for cost and efficiency;
2. Show knowledge and understanding of business planning activities contributing to the achievement of corporate objective; and
3. Present an effective strategic facility plan to reach financial performance and productivity goals by integrating short- and long- term facility planning in aligned with the organization's business plan.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB 3013 BUILDING CONSERVATION**

3 credits

**Synopsis of Course Contents**

Introduction to the significant values of existing buildings, principles and practice, techniques and methods of building conservation. It includes approaches and practices in conserving buildings according to existing legislation.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine the principles and practice, techniques and methods of building conservation;
2. Show various conservation approaches and practices; and
3. Perform building evaluation for conservation purposes.

**Assessment:**

Continuous Assessment: 100%

**BIB 3014 RESEARCH METHODOLOGY**

3 credits

**Synopsis of Course Contents**

Students will be exposed to the principles and fundamental research components. This includes defining research questions; critically assessing literature, exploring suitable quantitative and qualitative research methods, analytical thinking and ethics in research. Through this process, students will construct an effective research proposal that will serve as the continuing point for the study to be conducted in the coming semester.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the research process and the principle activities, skills and ethics associated with the research work;
2. Show methodological research approach in conducting research work; and
3. Prepare a coherent research proposal to its produce a report.

**Assessment:**

Continuous Assessment: 100%

**BIB 3015 INTEGRATED PROJECT V – Project Management**

4 credits

**Synopsis of Course Contents**

This course emphasises the major theories and applications of two major aspects of the project namely the project management in building construction projects. It combines the project management theory in the built environment sector, especially for the building construction and its application in a comprehensive project management approach.

**Learning Outcomes**

At the end of the course, students are able to:

1. Interpret the theory aspect of project management;
2. Integrate the project management theory in building construction projects; and
3. Propose suitable building construction projects based on the concept of comprehensive project management.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB 3016 PROPERTY ECONOMICS & INVESTMENT**

3 credits

**Synopsis of Course Contents**

This course introduces theory and understanding of economic principles in the economic environment, in particular referring to supply and demand in the built environment as well as macro and micro economic principles. This also includes related learning on urban land economy, land prices and real estate market structure. This course will also provide an understanding of urban contexts, economic approaches to various urban problems and related policies that can be used to address urban problems.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify economic principles within economic environment;
2. Relate real estate with urban economics; and
3. Compare urban economic theories with regard to urban land use and urban problems.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIB 3017 PROFESSIONAL PRACTICE**

3 credits

**Synopsis of Course Contents**

This course focuses on introduction to Building Surveying and Property Management Profession, scope of work in the construction and building management sector, professional qualification, qualities, skills, codes and ethics. Contractual Relationship, Duties and Fees. Organization Management and Office Establishment, appointment and job interview, professionalism and recognition in local and global level.

**Learning Outcomes**

At the end of the course, students are able to:

1. Interpret the importance and roles of building surveying and property management;
2. Show working approach of building surveying and property management; and
3. Study building surveyors' and property managers' roles and responsibilities.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB 3018 CONSTRUCTION LAW**

3 credits

**Synopsis of Course Contents**

Introduction to the principles of construction law, the roles and objectives of constrcution law, constructions contracts and related problems. This includes construction organisation structure, problems and responsibilities of the parties involved in the contract, risk allocation and claims. It will also cover the types of repudiation, litigation and alternative dispute resolution.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the objectives and roles of construction law;
2. Explain the principles of construction law; and
3. Apply construction law in construction contracts and related problems.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 50% |
| Final Examination: | 50% |

**BIB 3019 BUILDING CERTIFICATION**

3 credits

**Synopsis of Course Contents**

Introduction to the latest assessment and certification of buildings that include aspects of fire safety and risk, construction quality and green rating/certification. Fire safety certification focuses on understanding and application of fire risk assessment principles based on legislation requirements. Construction quality certification focuses on understanding construction quality assessment principles adopted by local and international assessment tools. Green rating/ certification focuses on understanding triple bottom line principles adopted by local and international assessment tools.

**Learning Outcomes**

At the end of the course, students are able to:

1. Interpret the aspects of fire risk, construction quality and green rating relating to buildings based on applicable legal requirements and standards;
2. Report building performance in terms of risk and probability of fire incidents; and
3. Determine fire safety strategy based on fire risk assessment and triple bottom line sustainable development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 60% |
| Final Examination: | 40% |

**BIB 3020** **ACADEMIC RESEARCH**

4 credits

**Synopsis of Course Contents**

Preparation of research report related to building surveying and property management field by applying suitable research methodology, processes and techniques

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine appropriate research methods and processes;
2. Analyse problems of an academic or practical significance in building surveying field;
3. Describe the application of theoretical concepts in practical context; and
4. Execute writing of academic report.

**Assessment:**

Continuous Assessment: 100%

**BIB 4002** **INDUSTRIAL TRAINING**

10 credits

**Synopsis of Course Contents**

Introduction to professional working environment; applying comprehensive building surveying and property management skills as well as building construction knowledge; exposure to actual working environment by practice interpersonal skills and effective teamwork.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply classroom learning in the actual building industry working environment;
2. Integrate interpersonal, technical and managerial skills related with building surveying and property management; and
3. Practise work ethics and professionalism in an actual working environment.

**Assessment:**

Continuous Assessment: 100%

# QUANTITY SURVEYING

## Bachelor of Quantity Surveying

# QUANTITY SURVEYING

## Introduction

The Bachelor of Quantity Surveying programme was initiated in 1995. In July 1996, the first batch of students enrolled for their studies under a new programme called Built Environment Programme, which was subsequently upgraded to the Built Environment Division under the umbrella of the Faculty of Engineering. Later, the Division was upgraded into a full-fledged faculty known as the Faculty of Built Environment in May 2000.

The Universiti Malaya's Bachelor of Quantity Surveying programme has been formulated in accordance with the general guidelines provided by the Board of Quantity Surveyors Malaysia (BQSM) and the Royal Institution of Chartered Surveyors (RICS), United Kingdom and has received accreditations from BQSM and RICS respectively.

The course structure consists of three and a half (3.5) years of full-time studies and consists of 7 semesters and 1 special semester, with a total of 126 credits. Upon completing their studies, graduates will be registered as Provisional Quantity Surveyors (PVQS) through the Bulk Registration Programme, a collaboration between Universiti Malaya and the Board of Quantity Surveyors Malaysia (BQSM). Once registered as PVQS and meeting the necessary requirements, graduates may apply for the Assessment of Professional Competence (APC) Tier 1. Upon fulfilling the APC Tier 1 requirements, they will be upgraded to Professional Quantity Surveyor (PQS).

## Programme Aim

To produce graduates with a professional degree in Quantity Surveying to practice within but not limited to the construction industry both locally and internationally who can understand and apply knowledge effectively with high awareness of culture and ethics.

## Programme Learning Outcomes

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

**PL01** Discover the relevant knowledge of quantity surveying in the construction industry.

**PL02** Identify strategic choices with supporting evidence for good judgement in the quantity surveying field.

**PL03** Apply the necessary technical and practical skills in the QS field.

**PL04** Develop digital knowledge to enhance self-development.

**PL05** Communicate in a clear, reasonable and professional manner.

**PL06** Show effective and efficient managerial and entrepreneurial skills in the construction industry.

**PL07** Demonstrate the leadership qualities towards relevant stakeholders in the industry.

**PL08** Ability to work in a professional manner and commitment to ethical practice.

## PROGRAMME STRUCTURE: BACHELOR OF QUANTITY SURVEYING

| YEAR 1 (Bachelor of Quantity Surveying) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GIG1012/ GLT1049* | Philosophy and Current Issue/ Basic Malay Language* | 2 | GIG1013 | Appreciation of Ethics and Civilization | 2 | 8 |
| | GLTxxxx | English I | 2 | GXXxxxx | Co-Curriculum | 2 | |
| Programme Core Courses | BIC1011 | Introduction to Construction Technology | 3 | BIC1016 | Principles of Measurement for Construction Works I | 4 | 22 |
| | BIC1012 | Principles of Economics | 3 | BIC1017 | Materials and Structure in Construction | 3 | |
| | BIC1013 | Malaysian Legal Studies | 2 | BIC1018 | Construction Economics | 3 | |
| | BIC1014 | Principles of Management | 2 | | | | |
| | BIC1015 | Building Services | 2 | | | | |
| University Elective Courses | | SHE I | 2 | | SHE II | 2 | 4 |
| | | | | | Program Course Elective# | 3 | 3 |
| **TOTAL CREDIT** | | | **18** | **TOTAL CREDIT** | | **19** | **37** |

| YEAR 2 (Bachelor of Quantity Surveying) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GIG1003 | Basic Entrepreneurship Enculturation | 2 | GLTxxxx | English II | 2 | 4 |
| Programme Core Courses | BIC2013 | Principles of Measurement for Construction Works II | 4 | BIC2019 | Measurement of Advanced Construction Works I | 4 | 35 |
| | BIC2014 | Sustainable Construction Technology | 3 | BIC2020 | Civil Engineering Construction Technology | 3 | |
| | BIC2015 | Building Economics | 3 | BIC2022 | Pre-Construction Legal Studies | 3 | |
| | BIC2016 | Project Management Principles | 3 | BIC2021 | Pre-Construction QS Practices | 3 | |
| | BIC2017 | Mechanical and Electrical Services in Buildings | 2 | BIC2023 | Integrated Project I | 4 | |
| | BIC2018 | Analysis of Prices | 3 | | | | |
| University Elective Courses | | | | | SHE III | 2 | 2 |
| **TOTAL CREDIT** | | | **20** | **TOTAL CREDIT** | | **21** | **41** |

| YEAR 3 (Bachelor of Quantity Surveying) | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | SPECIAL SEMESTER | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Programme Core Courses | BIC3011 | Measurement of Advanced Construction Works II | 4 | BIC3017 | Professional Internship I | 4 | BIC3018 | Professional Internship II | 3 | 26 |
| | BIC3013 | QS Practices in Construction | 3 | | | | | | | |
| | BIC3012 | Construction Project Management | 3 | | | | | | | |
| | BIC3014 | Digital Construction | 3 | | | | | | | |
| | BIC3015 | Data Analytics | 3 | | | | | | | |
| | BIC3016 | Research Methodology for Quantity Surveying | 3 | | | | | | | |
| University Elective Courses | | SHE IV | 2 | | | | | | | 2 |
| **TOTAL CREDIT** | | | **21** | **TOTAL CREDIT** | | **4** | **TOTAL CREDIT** | | **3** | **28** |

| YEAR 4 (Bachelor of Quantity Surveying) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Programme Core Courses | BIC4002 | Measurement of Civil Engineering Works | 4 | | | | 17 |
| | BIC4003 | Construction Business & Development | 3 | | | | |
| | BIC4004 | Construction Legal Studies | 3 | | | | |
| | BIC4005 | Integrated Project II | 4 | | | | |
| | BIC4006 | Research Project | 3 | | | | |
| University Elective Courses | | Programme Elective Course# | 3 | | | | 3 |
| **TOTAL CREDIT** | | | **20** | **TOTAL CREDIT** | | | **20** |

**Note: Course KIAR GQX0056 is a compulsory SHE course**

**OVERALL TOTAL CREDIT: 126**
The programme structure maybe subjected to change

*Non-Malaysian

# List of Programme Elective Course
BIC4007 - Risk and Value Management (3 credit)
BIC4008 - QS Practices in Building Conservation (3 credit)
BIC4009 - Facilities Management (3 credit)

# PROGRAMME STRUCTURE – BACHELOR OF QUANTITY SURVEYING

| Category | No | Code | Course Name | YEAR I | | YEAR II | | YEAR III | | | YEAR IV | Total credit | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S1 | S2 | S1 | S2 | S1 | S2 | S3 | S1 | | |
| MEASUREMENT | 1 | BIC 1016 | Principles of Measurement for Construction Works I | | 4 | | | | | | | **20** 16 % | |
| | 2 | BIC 2013 | Principles of Measurement for Construction Works II | | | 4 | | | | | | | BIC 1016 |
| | 3 | BIC 2019 | Measurement of Advanced Construction Works I | | | | 4 | | | | | | BIC 2013 |
| | 4 | BIC 3011 | Measurement of Advanced Construction Works II | | | | | 4 | | | | | BIC 2019 |
| | 5 | BIC 4002 | Measurement of Civil Engineering Works | | | | | | | | 4 | | BIC 3011 |
| PROFESSIONAL PRACTICE | 6 | BIC 2021 | Pre-Construction QS Practices | | | | 3 | | | | | **6** 5 % | |
| | 7 | BIC 3013 | QS Practices in Construction | | | | | 3 | | | | | |
| TECHNOLOGY IN CONSTRUCTION | 8 | BIC 1011 | Introduction to Construction Technology | 3 | | | | | | | | **19** 15 % | |
| | 9 | BIC 1017 | Materials and Structure in Construction | | 3 | | | | | | | | BIC 1011 |
| | 10 | BIC 2014 | Sustainable Construction Technology | | | 3 | | | | | | | |
| | 11 | BIC 2020 | Civil Engineering Construction Technology | | | | 3 | | | | | | |
| | 12 | BIC 3014 | Digital Construction | | | | | 3 | | | | | |
| | 13 | BIC 1015 | Building Services | 2 | | | | | | | | | |
| | 14 | BIC 2017 | Mechanical and Electrical Services in Buildings | | | 2 | | | | | | | |
| MANAGEMENT IN CONSTRUCTION | 15 | BIC 1014 | Principles of Management | 2 | | | | | | | | **8** 6 % | |
| | 16 | BIC 2016 | Project Management Principles | | | 3 | | | | | | | |
| | 17 | BIC 3012 | Construction Project Management | | | | | 3 | | | | | |
| ECONOMICS | 18 | BIC 1012 | Principles of Economics | 3 | | | | | | | | **18** 14 % | |
| | 19 | BIC 1018 | Construction Economics | | 3 | | | | | | | | |
| | 20 | BIC 2015 | Building Economics | | | 3 | | | | | | | |
| | 21 | BIC 3015 | Data Analytics | | | | | 3 | | | | | |
| | 22 | BIC 2018 | Analysis of Prices | | | 3 | | | | | | | |
| | 23 | BIC 4003 | Construction Business and Development | | | | | | | | 3 | | |
| LAW | 24 | BIC1013 | Malaysian Legal Studies | 2 | | | | | | | | **8** 6 % | |
| | 25 | BIC2022 | Pre-Construction Legal Studies | | | | 3 | | | | | | |
| | 26 | BIC4004 | Construction Legal Studies | | | | | | | | 3 | | |
| INTEGRATED PROJECT | 27 | BIC2023 | Integrated Project I | | | | 4 | | | | | **8** 6 % | |
| | 28 | BIC4005 | Integrated Project II | | | | | | | | 4 | | |
| RESEARCH & TRAINING | 29 | BIC3016 | Research Methodology for Quantity Surveying | | | | | 3 | | | | **13** 11 % | |
| | 30 | BIC4006 | Research Project | | | | | | | | 3 | | BIC3016 |
| | 31 | BIC3017 | Professional Internship I | | | | | | 4 | | | | |
| | 32 | BIC3018 | Professional Internship II | | | | | | | 3 | | | BIC3017 |
| PROGRAMME ELECTIVE COURSE | 33 | | Programme Elective 1 | | 3 | | | | | | | **6** 5 % | |
| | 34 | | Programme Elective 2 | | | | | | | | 3 | | |
| PROGRAMME ELECTIVE COURSES | 35 | GIG1012/ ** GLT1049 | Philosophy and Current Issue/ **Basic Malay Language | 2 | | | | | | | | **20** 16 % | |
| | 36 | GIG1013 | Appreciation of Ethics and Civilization | | 2 | | | | | | | | |
| | 37 | GIG1003 | Basic Entrepreneurship Enculturation | | | 2 | | | | | | | |
| | 38 | GXXxxxx | Co-Curriculum | | 2 | | | | | | | | |
| | 39 | GLTxxxx | English 1 | 2 | | | | | | | | | |
| | 40 | GLTxxxx | English 2 | | | | 2 | | | | | | |
| | 41 | | Student Holistic Empowerment (SHE) I | 2 | | | | | | | | | |
| | 42 | | Student Holistic Empowerment (SHE) II | | 2 | | | | | | | | |
| | 43 | | Student Holistic Empowerment (SHE) III | | | | 2 | | | | | | |
| | 44 | | Student Holistic Empowerment (SHE) IV | | | | | 2 | | | | | |
| **Total Subject Breakdown** | | | **Credits** | 18 | 19 | 20 | 21 | 21 | 4 | 3 | 20 | 126 | |
| | | | **Subjects** | 8 | 7 | 7 | 7 | 7 | 1 | 1 | 6 | 44 | |
| | | | **University Courses** | 3 | 3 | 1 | 2 | 1 | 0 | 0 | 0 | 10 | |
| | | | **Programme Courses** | 5 | 4 | 6 | 5 | 6 | 1 | 1 | 6 | 34 | 44 |

**Note:**
***Exemption for non-Malaysian students and to be replaced with another Senate-approved university course**
****Course offered to non-Malaysian students**

## PROGRAMME CORE COURSES

**BIC1011 INTRODUCTION TO CONSTRUCTION TECHNOLOGY**

3 credits

**Synopsis of Course Contents**

This course covers knowledge about current building technologies. This includes the construction of WBLFF, frame, floors, stairs, wall, roof, doors, windows, and finishes.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the basics of building elements.
2. Explain the construction process involved for the low-rise building; and
3. Apply knowledge of building technology in the quantity surveying field.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC1012 PRINCIPLES OF ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course introduces the principles of economics and current issues in construction organisation and industry. It includes industry revolutions, economies of scales, theories of supply and demand, market equilibrium, fiscal and monetary policy, inflation and unemployment, income and output of the nation, international trade, theories of firm and GDP.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the relevant economic principles in the context of the construction industry.
2. Explain the basic principles of economics that impact national and international development in the context of the construction industry; and
3. Apply principles of economics in construction industry related decision making.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 50% |
| Final Examination: | 50% |

**BIC1013 MALAYSIAN LEGAL STUDIES**

2 credits

**Synopsis of Course Contents**

This course focuses on the Malaysian Legal System. It includes the concept of Malaysian law, sources, and the judicial system. This course also covers the law of contract (Contracts Act 1950) emphasising on elements of contract, privity of contract, discharging of contracts and remedies. The knowledge on law of torts includes negligence, duty of care, breach of duty, remoteness, professional negligence, nuisance and trespass to land.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the sources, principles, processes and procedures of the Malaysian legal system;
2. Explain the legal issues related to law of contract and tort; and
3. Apply the knowledge of law of contract and tort.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC1014 PRINCIPLES OF MANAGEMENT**

2 credits

**Synopsis of Course Contents**

This course introduces the history, principles and current issues in management studies and organisation. It includes concepts of management, organisation and teamwork.

**Learning Outcomes**

At the end of the course, students will be able to:

1. Identify basic principles of management;
2. Explain the concepts and principles of management; and
3. Apply principles of management in the organisational decision-making process.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC1015 BUILDING SERVICES**

2 credits

**Synopsis of Course Contents**

Introduction to various types of building services systems in low rise and multi-storey buildings that include water supply and sanitation systems, sewage and sewerage systems, garbage disposal systems, fire protection systems and installation of gas supply.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify various essential buildings services;
2. Describe the systems or operations of essential building services; and
3. Describe the basic requirements for the installation of essential building services.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC1016 PRINCIPLES OF MEASUREMENT FOR CONSTRUCTION WORKS I**

4 credits

**Synopsis of Course Contents**

This course covers the principles and standard methods of measurement in accordance with the Malaysian Standard Method of Measurement of Building Works Second Edition (SMM2). This course will help the students to interpret and understand construction drawings for the development of the quantity surveying profession. This includes the exposure to the use of Building Information Modelling (BIM) in the measurement of quantities for construction works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define the objectives, principles and functions of the Malaysian Standard Method of Measurement of Building Works Second Edition (SMM2);
2. Apply the principles of SMM2 for Works Below Lowest Floor Finish (W.B.L.F.F) element; and
3. Taking-off the quantities of Works Below Lowest Floor Finish (W.B.L.F.F.) element from drawings

**Assessment:**

Continuous Assessment: 100%

**BIC1017 MATERIALS AND STRUCTURE IN CONSTRUCTION**

3 credits

**Synopsis of Course Contents**

This course will broaden student knowledge about current building technologies. This includes the site works, deep foundation, framework, renovation and demolition works and also pre and post tension concrete and pre- fabrication work.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify advanced technology in construction;
2. Explain the construction process involved in advanced technology in construction; and
3. Apply knowledge in the field of advanced technology in construction in the quantity surveying field.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC1018 CONSTRUCTION ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course introduces the importance of cost management, concept of price, value and profits, feasibility and profitability, return on investment (ROI), Net Present Value (NPV), International Construction Measurement Standard (ICMS), procurements including Public Private Partnerships (PPP) in construction lifecycle.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the fundamentals of cost management from the perspective of firms and construction projects;
2. Comprehend the methods and techniques related to cost management; and
3. Apply appropriate cost management techniques for construction projects.

**Assessment:**

Continuous Assessment: 50%

Final Examination: 50%

**BIC2013 PRINCIPLES OF MEASUREMENT FOR CONSTRUCTION WORKS II**

4 credits

**Synopsis of Course Contents**

This course covers the principles and functions of the standard methods of measurement in accordance with the Malaysian Standard Method of Measurement of Building Works Second Edition (SMM2). This course includes the principles and functions of the Standard Method of Measurement 2 (SMM2) for frame, upper floor slab, staircase, door, window and finishes. This will also include the Building Information Modelling (BIM) for measurement of construction works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define the objectives, principles and functions of the Standard Method of Measurement 2 (SMM2) for frame, upper floor slab, staircase, door, window and finishes;
2. Apply principles of specification writing for frame, upper floor slab, staircase, door, window and finishes; and
3. Measure the quantities of the element of frame, upper floor slab, staircase, door, window and finishes from drawings.

**Assessment:**

Continuous Assessment: 100%

**BIC2014 SUSTAINABLE CONSTRUCTION TECHNOLOGY**

3 credits

**Synopsis of Course Contents**

This course introduces to sustainability and sustainable construction; sustainable indicators, tools and benchmarks; materials for sustainable constructions; economics of sustainability (Environmental impacts of construction: A life cycle approach & management), sustainable assessment - Green Building Rating System, energy resources – energy efficient buildings; sustainable construction techniques, sustainable design in practice and site visit.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the various types of sustainable construction technology and their uses according to the specific requirements of a project;

2. Examine the process of execution, monitoring, controlling of sustainable construction projects; and
3. Apply the knowledge of sustainable construction technology in areas related to quantity surveying.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC2015 BUILDING ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course emphasises the development process, economics of building morphology, life cycle costing (LCC), buildability, building cost information standard (BCIS), elementary cost analysis (ECA), cost estimation, financial impact, cost planning & control, cost data, indices and profitability for building lifecycle.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the development process through the principles of building economics theories;
2. Comprehend the project buildability with appropriate methods and techniques; and
3. Apply the building economics theories for decision making in the whole building life cycle.

**Assessment:**

Continuous Assessment: 50%

Final Examination: 50%

**BIC2016 PROJECT MANAGEMENT PRINCIPLES**

3 credits

**Synopsis of Course Contents**

This course introduces the principles of project management, project organisations, project information and communication, project management processes which include initial and planning phases, motivation and team working in project management. This course explores the usage of project management related software such as MS Project.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the principles and processes of project management in construction;
2. Identify tools and techniques for time and cost management of projects in a construction environment; and
3. Apply project management software in the initial and planning phase of project management.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC2017** **MECHANICAL AND ELECTRICAL SERVICES IN BUILDINGS**

2 credits

**Synopsis of Course Contents**

Introduction to various types of mechanical and electrical systems in buildings such as electrical supply and lighting system, building security system, telecommunication system, mechanical transportation system, ventilation and air-conditioning system and building automation system.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify various essential mechanical and electrical (M & E) building services;
2. Describe the systems or operations of M & E building services; and
3. Explain the functions and suitability of specific equipment for essential M & E building services.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC2018** **ANALYSIS OF PRICES**

3 credits

**Synopsis of Course Contents**

This course exposes students to the components of price rates and the theories and principles of price analysis for preliminaries, preambles and construction works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify components of prices that comprise the analysis of price rates;
2. Apply analysis of price rates for preliminary works and preambles; and
3. Describe and apply analysis of price rates for construction works.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC2019** **MEASUREMENT OF ADVANCED CONSTRUCTION WORKS I**

4 credits

**Synopsis of Course Contents**

This course includes the principles and function of Standard Method of Measurement 2 (SMM2) for roof, steel structure, Mechanical & Electrical works and external works. The course also covers the 'Building Information Modelling' (BIM) for measurement of construction works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define the purpose, principles and functions of Standard Method of Measurement 2 (SMM2) for roof, steel structure, piping works and external works;
2. Apply the principle of specification writing for roof, steel structure, Mechanical & Electrical works, piping works and external works; and
3. Apply skills of taking off quantities for construction works and estimating based on drawing for roof, steel structure, piping works and external works.

**Assessment:**

Continuous Assessment: 100%

**BIC2020 CIVIL ENGINEERING CONSTRUCTION TECHNOLOGY**

3 credits

**Synopsis of Course Contents**

This course extends the students knowledge on current application of construction technology. It includes special structure and specific building, type and functions of specific building and civil engineering works, and infrastructure works construction.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define and describe the principles and methods of various types of civil engineering construction works,
2. Apply the knowledge in identifying problems in civil engineering construction works, and
3. Demonstrate the ability to produce the alternative solutions in specific building construction and more complex civil engineering works.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC2022 PRE-CONSTRUCTION LEGAL STUDIES**

3 credits

**Synopsis of Course Contents**

This course covers the principles of construction law, roles and objectives of construction law, construction contracts and the related legal issues at the pre- construction stage. It includes issues arising from the use of Building Information Modelling (BIM), and Arbitration procedures that are governed by the standard forms of contract and the Arbitration Act. It will also cover alternative dispute resolution, types of claims and legal aspects of claims, repudiation and breach of contract.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the legal principles and alternative dispute resolution in construction law;
2. Explain the legal issues arises in the implementation of projects at the pre- construction stage;

3. Apply the knowledge in giving views that are proficient, logical and professionally sound on the legal issues in the implementation of projects at the pre-construction stage.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC2021** **PRE–CONSTRUCTION QS PRACTICES**

3 credits

**Synopsis of Course Contents**

This course delivers an overview of the quantity surveying profession in respect of its responsibilities and roles in the public and private sectors. Potential roles of quantity surveyors in any other industries will be explored. This course will cover the appointment, fees and professional ethics, administration of quantity surveying firms and procurement of contracts. It also covers various aspects of professional practice during the pre-contract stage from the inception to the preparation of contract documents. Reference will be made to the relevant provisions in the standard forms of construction contract and related government circulars. The legal impacts of Building Information Modelling (BIM) will also be covered in this course.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the responsibilities and role of quantity surveyors in the construction industry and other related industries;
2. Explain the professional practices and contractual procedures at the pre-construction stage;
3. Solve problems related to the practices and procedures in the construction contract administration at the pre-construction stage.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC2023** **INTEGRATED PROJECT I**

4 credits

**Synopsis of Course Contents**

This course is tailored to encourage students to explore the construction technology of a building or infrastructure project. The subject of a project focuses on current issues and will be reflective of a real-life project. Such exercise may include (and not limited to) proposing a development, identifying issues, proposing and evaluating the impacts of recommendations. Students need to work in a group and they are required to integrate their knowledge into their overall project work.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the importance of knowledge integration focusing on building technology in construction industry;

2. Determine the concepts, principles, techniques and appropriate knowledges related to building technology in construction industry; and
3. Apply knowledge and skills for real life problem solving related to the construction industry.

**Assessment:**

Continuous Assessment: 100%

**BIC3011 MEASUREMENT OF ADVANCED CONSTRUCTION WORKS II**

4 credits

**Synopsis of Course Contents**

This course includes the principles and function of Standard Method of Measurement (SMM2) for piling works, basement works, and demolitions works. The course also covers the 'Building Information Modelling' (BIM) for measurement of construction works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define the purpose, principles and functions of Standard Method of Measurement 2 (SMM2) for piling works, excavation works, basement and demolitions works;
2. Apply the principle of specification writing for piling works, excavation works, basement and demolitions works; and
3. Apply skills of taking off quantities for construction works and estimating based on drawing for piling works, excavation works, basement and demolitions works.

**Assessment:**

Continuous Assessment: 100%

**BIC3012 CONSTRUCTION PROJECT MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This course introduces project management processes which include execution, monitoring, controlling and closure phases, project management in the digital era of construction, green project management, success factors, project health & safety in construction and international project management.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe project management processes which include execution, monitoring, controlling and closure phases;
2. Examine project management success factors in construction; and
3. Explain project management in the digital era of construction, green project management and international project management.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC3013** **QS PRACTICES IN CONSTRUCTION**

3 credits

**Synopsis of Course Contents**

This course delivers an overview of quantity surveying practices during the construction contract administration of construction projects. It covers construction stage and contract management starting from the issuance of a letter of acceptance to the completion of the project. It covers various aspects of professional practice and contractual procedures regarding progress payments, variation order, extension of time and final account claims. References are made to relevant provisions in the standard forms of contracts and government circulars.The legal impacts of Building Information Modelling (BIM) will also be covered in this course.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify professional practices and contractual procedures at the construction stage;
2. Explain the contract administration at construction stage; and
3. Solve problems related to the practices and procedures in the construction contract administration at the construction contract stage.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 40% |
| Final Examination: | 60% |

**BIC3014** **DIGITAL CONSTRUCTION**

3 credits

**Synopsis of Course Contents**

This course discovers how digital technologies and data mediate and support the construction process. It covers the digital technology theories and practices in integrated construction project delivery, such as Building Information Modelling (BIM), visualisation such as virtual reality (VR) and augmented reality (AR), Internet-of-Things (IoT), artificial intelligence (AI), and digital security. This course also exposes students to software as a tool to effectively manage construction information related to Quantity Surveying at a design stage to benefit the whole construction and building life cycle, namely Revit Architectural, Revit Structural, and Navisworks.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify relevant digital applications in managing construction information;
2. Explain the impacts of digital technologies on a construction project in delivering better whole-life value; and
3. Apply the appropriate digital applications in an aspect of construction practice.

**Assessment:**

| | |
|---|---|
| Continuous Assessment: | 100% |

**BIC3015 DATA ANALYTICS**

3 credits

**Synopsis of Course Contents**

This course focuses on interpreting the results of data analysis and taking decisions ethically for weaving a data-centric mindset into the construction business strategies.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe theories, principles and concepts of the statistical methods, covering the use of quantitative and qualitative data analysis;
2. Analyse data based on theoretical and statistical methods for the purpose of addressing issues in the context of construction industry; and
3. Interpret data for decision making in a logical and professional way through effective communication.

**Assessment:**

Continuous Assessment: 100%

**BIC3016 RESEARCH METHODOLOGY FOR QUANTITY SURVEYING**

3 credits

**Synopsis of Course Contents**

This course provides basic groundings on how to conduct research in the quantity surveying field. It provides an introduction to the research methodology and research design.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify research problems through systematic literature review;
2. Determine research methods for various types of research in Quantity Surveying; and
3. Develop research instruments for data collection.

**Assessment:**

Continuous Assessment: 100%

**BIC3017 PROFESSIONAL INTERNSHIP I**

4 credits

**Synopsis of Course Contents**

This course extends the students knowledge on the professional quantity surveying practices. It exposes the students on the work procedure, the role of Quantity Surveyors in pre and post contract stages and communications with the construction project team.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply technical and management skills from the classroom to actual construction work environment;
2. Practise essential skills in the Quantity Surveying field; and
3. Apply good work ethics and professional values in a real work environment.

**Assessment:**

Continuous Assessment: 100%

**BIC3018 PROFESSIONAL INTERNSHIP II**

3 credits

**Synopsis of Course Contents**

This course extends the students knowledge on the professional quantity surveying practices. It exposes the students on the work procedure, the role of Quantity Surveyors in pre and post contract stages and communications with the construction project team.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply technical and management skills from the classroom to actual construction work environment;
2. Practise essential skills in the Quantity Surveying field; and
3. Apply good work ethics and professional values in a real work environment.

**Assessment:**

Continuous Assessment: 100%

**BIC4002 MEASUREMENT OF CIVIL ENGINEERING WORKS**

4 credits

**Synopsis of Course Contents**

This course includes the Method Related Charges, methods of measurement based on Malaysian Civil Engineering Standard Method of Measurement (MyCESMM). This course also covers Building Information Modelling (BIM) for the measurement of quantities for civil engineering works.

**Learning Outcomes**

At the end of the course, students are able to:

1. Define the purpose, principles, functions and measurement method of Malaysian Civil Engineering Standard Method of Measurement (MyCESMM);
2. Describe Method Related Charges and the preparation of Bills of Quantity for civil engineering works; and
3. Apply skills of taking off quantities based on drawings for civil engineering works.

**Assessment:**

Continuous Assessment: 100%

**BIC4003 CONSTRUCTION BUSINESS AND DEVELOPMENT**

3 credits

**Synopsis of Course Contents**

This course emphasises the industry revolutions, sustainable development economics (which include Sustainable Development Goals, SDG), entrepreneurship in construction industry (including branding and marketing),

construction business financial management, business ethics and social responsibility, international construction ventures and global strategies for construction firms.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the entrepreneurship opportunities in the construction industry;
2. Apply the business and development principles for construction business sustainability; and
3. Analyse the business and development strategies for entrepreneurship competitive edge.

**Assessment:**

Continuous Assessment: 100%

**BIC4004 CONSTRUCTION LEGAL STUDIES**

3 credits

**Synopsis of Course Contents**

This course covers the legal principles of construction law at the construction stage. It includes legal issues related to site possession, progress payments, variation, extension of time, completion of works, final account claims, defects liability period, determination, disputes avoidance procedures and other contractual matters. It also covers legal issues arising from the use of Building Information Modelling (BIM). References are made to the relevant Acts and provisions of the local and international standard forms of construction contracts such FIDIC.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the legal principles of construction law at the construction stage;
2. Explain the legal issues that arise in the implementation of projects at the construction stage; and
3. Apply the knowledge in giving views that are proficient, logical and professionally sound on the legal issues in the implementation of projects at the construction stage.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

**BIC4005 INTEGRATED PROJECT II**

4 credits

**Synopsis of Course Contents**

This course is tailored to encourage students to explore the quantity surveying field at the pre- contract stage. The subject of a project focuses on current issues and will be reflective of a real-life project. Such exercise may include identifying issues, proposing and evaluating the impacts of recommendations. Students need to work in a group and they are required to integrate their knowledge into their overall project work.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the importance of knowledge integration in quantity surveying field at the pre-contract stage;
2. Define the concept, principles, techniques and appropriate knowledge in quantity surveying field at the pre-contract stage; and
3. Apply knowledge and skills for the real life problem solving in quantity surveying field at the pre-contract stage.

**Assessment:**

Continuous Assessment: 100%

**BIC4006 RESEARCH PROJECT**

3 credits

**Synopsis of Course Contents**

This course will enable students to prepare a research report related to Quantity Surveying through application of research methods under the supervision of a lecturer.

**Learning Outcomes**

At the end of the course, students are able to:

1. Demonstrate data representation using systematic data analysis;
2. Interpret data against research aim and objectives; and
3. Conclude the impacts, contributions and future recommendations of the research.

**Assessment:**

Continuous Assessment: 100%

**BIC4007 RISK AND VALUE MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This course introduces the general theories of risk and value management as part of the development process involved in the construction industry. Each element will be emphasised in terms of theory, methodology and practical applications for the project.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the basics knowledge of risks and value management required in the construction industry;
2. Explain the concepts and principles of risk and value management in the building industry; and
3. Practice the techniques and methods of risk and value management in the context of the industry.

**Assessment:**

Continuous Assessment: 50%

Final Examination: 50%

**BIC4008 QS PRACTICES IN BUILDING CONSERVATION**

3 credits

**Synopsis of Course Contents**

This course provides an introduction to the significant value of existing buildings, principles and practices, building conservation techniques and methods. It also includes methods and practices in building conservation based on existing laws. The practice of measuring materials in building conservation is also discussed.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the principles and practice, techniques and methods of building conservation;
2. Discuss various building conservation approaches and practices; and
3. Apply the knowledge of building conservation in quantity surveying practices.

**Assessment:**

Continuous Assessment: 100%

**BIC4009 FACILITIES MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This module will provide students with knowledge and understanding of the job scope of a Facilities Manager and key functions of Facilities Management and its importance in an organisation. The subject aims to equip students with an overview of the scope and practices of facilities management in the construction industry. Students will be exposed to how a facility is being managed effectively, and how to leverage on technology to improve productivity for facilities management.

**Learning Outcomes**

At the end of the course, students are able to:

1. Discuss the scope, practices, processes and procedures of facilities management;
2. Demonstrate the understanding of the roles and responsibilities of a facilities manager; and
3. Apply the appropriate facilities management concept to meet the core objectives of the business.

**Assessment:**

Continuous Assessment: 40%

Final Examination: 60%

# REAL ESTATE

## Bachelor of Real Estate

# REAL ESTATE

**Introduction**

The Bachelor of Real Estate (formerly the Bachelor of Estate Management) was first offered in July 1996 as a programme under the Built Environment Division, Faculty of Engineering. This programme was later elevated to the status of a department, in February 1998, in order to strengthen its management. The Built Environment Division itself was upgraded to a full-fledged faculty, in May 2000, to become known as the Faculty of Built Environment. In July 2016, the nomenclature of the original programme was changed to keep abreast with developments in the real estate field.

The Bachelor of Real Estate programme, Universiti Malaya is run by the Department of Real Estate. The department comprises 13 academic staff to oversee the Bachelor of Real Estate programme as well as Master of Real Estate, a master by coursework programme. The Bachelor of Real Estate has received accreditation from local and international bodies namely the Malaysian Public Service Department, Board of Valuers, Appraisers, Estate Agents and Property Managers Malaysia (BOVAEP) and the Royal Institution of Chartered Surveyors (RICS) United Kingdom, with input from the Royal Institution of Surveyors Malaysia (RISM). As the syllabus for the Bachelor of Real Estate received recognition by these professional bodies, this programme is professionally recognised locally and internationally.

Students will gain real life property development and consultancy experience during the Integrated Project course which in the past has involved sites in countries such as Brunei, Hong Kong, China, Philippines, Vietnam, Indonesia, and Taiwan.

The programme is accredited by the Board of Valuers, Appraisers, Estate Agents and Property Managers Malaysia (BOVAEP) and by the world-renowned professional body in the United Kingdom, the Royal Institution of Chartered Surveyors (RICS). This programme has been designed to incorporate ideas and contributions from the Royal Institution of Surveyors Malaysia (RISM).

The programme structure comprises a full-time study term of 3½ years, the successful completion of which confers upon the candidate a Bachelor's Degree in Real Estate. The Bachelor of Real Estate is a full-time programme with a total credit requirement of 124 credit hours, within a minimum period of 7+1 semesters and a maximum period of 11 semesters. Out of the 124 credit hours, 12 credit hours comprise University courses, 98 credit hours of programme core courses, 8 credits Elective Courses (SHE) and 6 credits Programme Elective courses (KEP).

Upon graduation and in order to be registered as a Valuer, the candidate is required to accumulate a further 2 years of practical professional experience under the supervision of a Registered Valuer before sitting for the Test of Professional Competence (TPC) conducted by BOVAEP. Prior to this, the candidate is required to be provisionally registered with the Board during this entire period of training. Being an accredited programme by the BOVAEP, the graduate of the Bachelor of Real Estate is eligible for direct registration with the Board as Probationary Valuer (PV) or Probationary Estate Agent (PEA).

**Programme Aim**

To produce graduates in the estate management field who are professional, holistic, balanced and ethical, able to perform real estate consultancy effectively and able to face technical and management challenges in the national and global context.

**Programme Learning Outcomes**

At the end of the programme, graduates are able to:

**PL01** Explain fundamental concepts and knowledge related to real estate.

**PL02** Apply principles related to real estate to resolve various real estate issues.

**PL03** Demonstrate practical skills in real estate related fields.

**PL04** Display communication ability with the real estate community and the public.

**PL05** Use analytical and technology applications to solve real estate problems.

**PL06** Organise relevant information in real estate services.

**PL07** Integrate real estate managerial skills into entrepreneurship.

**PL08** Integrate professional ethics when performing services to cater for the needs of clients, profession and society.

# PROGRAMME STRUCTURE: BACHELOR OF REAL ESTATE

| YEAR 1 (Bachelor of Real Estate) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| University Courses | GIG1012/ **GLT1049 | Philosophy and Current Issues / ** Basic Malay Language | 2 | GIG1013 | Appreciation of Ethics and Civilizations | 2 | 8 |
| | GLTxxxx | English 1 | 2 | GLTxxxx | English 2 | 2 | |
| Programme Core Courses | BIE1007 | Introduction to Real Estate Valuations | 4 | BIE1011 | Market Approach and Cost Approach in Real Estate Valuation | 4 | 26 |
| | BIE1008 | Introduction to Law | 3 | BIE1012 | Land Law | 3 | |
| | BIE1009 | Fundamentals of Economics | 3 | BIE1013 | Principle and Practice of Urban Planning | 3 | |
| | BIE1010 | Accounting | 3 | BIE1014 | Basic Building Technology | 2 | |
| University Elective Courses | | Student Holistic Empowerment (SHE) I | 2 | | Student Holistic Empowerment (SHE) II | 2 | 4 |
| **TOTAL CREDIT** | | | **19** | **TOTAL CREDIT** | | **19** | **38** |

* Exempted for non –malaysian students and to be replaced with another senate-approved university course.
** course offered to non-malaysian students

| YEAR 2 (Bachelor of Real Estate) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GIG1003 | Basic Entrepreneurship Enculturation | 2 | GXXxxxx | Co-Curriculum | 2 | 4 |
| Programme Core Courses | BIE2013 | Income Approach of Real Estate Valuation I | 4 | BIE2017 | Income Approach of Real Estate Valuation II | 4 | 27 |
| | BIE2014 | Real Estate Law | 3 | BIE2018 | Strata Law | 3 | |
| | BIE2015 | Land Economics | 3 | BIE2019 | Real Estate Investment Analysis | 3 | |
| | BIE2016 | Building Maintenance and Services | 3 | BIE2020 | Property Management | 4 | |
| Programme Elective Courses | | Programme Elective Course I | 3 | | | | 3 |
| University Elective Courses | | | | | Student Holistic Empowerment (SHE) III | 2 | 2 |
| **TOTAL CREDIT** | | | **18** | **TOTAL CREDIT** | | **18** | **36** |

| YEAR 3 (Bachelor of Real Estate) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Programme Core Courses | BIE3009 | Property Taxation dan Land Acquisition | 3 | BIE3014 | Real Estate Finance Analysis | 3 | 31 |
| | BIE3010 | Real Estate Marketing and Agency | 4 | BIE3015 | Corporate Real Estate Asset Management | 3 | |
| | BIE3011 | Real Estate Market Analysis | 3 | BIE3016 | Real Estate Development Appraisal | 3 | |
| | BIE3012 | Research Methodology | 2 | BIE3017 | Ethics and Professional Practice | 4 | |
| | BIE3013 | Real Estate and Community | 2 | BIE3018 | Real Estate Academic Project | 4 | |
| Programme Elective Courses | BIExxxx | Programme Elective Course II | 3 | | | | 3 |
| University Elective Courses | | | | | Student Holistic Empowerment (SHE) IV | 2 | 2 |
| **TOTAL CREDIT** | | | **17** | **TOTAL CREDIT** | | **19** | **36** |

| YEAR 3 (Bachelor of Real Estate) | | | | |
|---|---|---|---|---|
| **COMPONENTS** | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | **TOTAL CREDIT** |
| Programme Core Courses | BIE3019 | Integrated Real Estate Project | 4 | 4 |
| **TOTAL CREDIT** | | | **4** | **4** |

| YEAR 4 (Bachelor of Real Estate) | | | | |
|---|---|---|---|---|
| **COMPONENTS** | **COURSE CODE** | **COURSE TITLE** | **CREDIT** | **TOTAL CREDIT** |
| Programme Core Courses | BIE4002 | Industrial Training | 10 | 10 |
| **TOTAL CREDIT** | | | **10** | **10** |

Notes: Course KIAR GQX0056 is a compulsory SHE course

**OVERALL TOTAL CREDIT: 124**
The programme structure maybe subjected to change

# PROGRAMME STRUCTURE – BACHELOR OF REAL ESTATE

| Category | No | Code | Course Name | YEAR I | | YEAR II | | YEAR III | | | YEAR IV | Total credit | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S1 | S2 | S1 | S2 | S1 | S2 | SPECIAL SEM | S1 | | |
| COMPULSORY UNIVERSITY COURSES | 1 | GIG1012/ **GLT1049 | Philosophy and Current Issues / ** Basic Malay Language | 2 | | | | | | | | 12 | |
| | 2 | GLTxxxx | English 1 | 2 | | | | | | | | | |
| | 3 | GLTxxxx | English 2 | | 2 | | | | | | | | |
| | 4 | GIG1013 | Appreciation of Ethics and Civilizations | | 2 | | | | | | | | |
| | 5 | GIG1003 | Basic Entrepreneurship Enculturation | | | 2 | | | | | | | |
| | 6 | GXXxxxx | Co-Curriculum | | | | 2 | | | | | | |
| PROGRAMME CORE COURSES | 7 | BIE1007 | Introduction to Real Estate Valuations | 4 | | | | | | | | 98 | |
| | 8 | BIE1008 | Introduction to Law | 3 | | | | | | | | | |
| | 9 | BIE1009 | Fundamentals of Economics | 3 | | | | | | | | | |
| | 10 | BIE1010 | Accounting | 3 | | | | | | | | | |
| | 11 | BIE1011 | Market Approach and Cost Approach in Real Estate Valuation | | 4 | | | | | | | | |
| | 12 | BIE1012 | Land Law | | 3 | | | | | | | | |
| | 13 | BIE1013 | Principle and Practice of Urban Planning | | 3 | | | | | | | | |
| | 14 | BIE1014 | Basic Building Technology | | 3 | | | | | | | | |
| | 15 | BIE2013 | Income Approach of Real Estate Valuation I | | | 4 | | | | | | | |
| | 16 | BIE2014 | Real Estate Law | | | 3 | | | | | | | |
| | 17 | BIE2015 | Land Economics | | | 3 | | | | | | | |
| | 18 | BIE2016 | Building Maintenance and Services | | | 3 | | | | | | | |
| | 19 | BIE2017 | Income Approach of Real Estate Valuation II | | | | 4 | | | | | | |
| | 20 | BIE2018 | Strata Law | | | | 3 | | | | | | |
| | 21 | BIE2019 | Real Estate Investment Analysis | | | | 3 | | | | | | |
| | 22 | BIE2020 | Property Management | | | | 4 | | | | | | |
| | 23 | BIE3009 | Property Taxation dan Land Acquisition | | | | | 3 | | | | | |
| | 24 | BIE3010 | Real Estate Marketing and Agency | | | | | 4 | | | | | |
| | 25 | BIE3011 | Real Estate Market Analysis | | | | | 3 | | | | | |
| | 26 | BIE3012 | Research Methodology | | | | | 2 | | | | | |
| | 27 | BIE3013 | Real Estate and Community | | | | | 2 | | | | | |
| | 28 | BIE3014 | Real Estate Finance Analysis | | | | | | 3 | | | | |
| | 29 | BIE3015 | Corporate Real Estate Asset Management | | | | | | 3 | | | | |
| | 30 | BIE3016 | Real Estate Development Appraisal | | | | | | 3 | | | | |
| | 31 | BIE3017 | Ethics and Professional Practice | | | | | | 4 | | | | |
| | 32 | BIE3018 | Real Estate Academic Project | | | | | | 4 | | | | BIE3012 |
| | 33 | BIE3019 | Integrated Real Estate Project | | | | | | | 4 | | | BIE3011 & BIE3016 |
| | 34 | BIE4002 | Industrial Training | | | | | | | | 10 | | BIE3019 |
| UNIVERSITY ELECTIVE COURSES | 35 | | Student Holistic Empowerment (SHE) I | 2 | | | | | | | | 14 | |
| | 36 | | Student Holistic Empowerment (SHE) II | | 2 | | | | | | | | |
| | 37 | | Student Holistic Empowerment (SHE) III | | | | 2 | | | | | | |
| | 38 | | Student Holistic Empowerment (SHE) IV | | | | | | 2 | | | | |
| PROGRAMME ELECTIVE COURSES | 39 | | Programme Elective Course I | | | 3 | | | | | | | |
| | 40 | | Programme Elective Course II | | | | | 3 | | | | | |
| **Total Subject Breakdown** | | | **Credits** | 19 | 19 | 18 | 18 | 17 | 19 | 4 | 10 | 124 | |
| | | | **Subjects** | 7 | 7 | 6 | 6 | 6 | 6 | 1 | 1 | 40 | |

**Notes**:
** Program Elective Course (KEP) Choose 2 from 3 of the following
BIE2021 Facilities Management – 3 credits
BIE2022 Statistics for Real Estate – 3 credits
BIE2023 Business Valuation – 3 credits

## PROGRAMME CORE COURSES

**BIE1007** **INTRODUCTION TO REAL ESTATE VALUATION**

4 credits

**Synopsis of Course Contents**

This course provides students with understanding of fundamental concepts and core principles of real estate valuation. It exposes students to the characteristics of land, property and the property market, principles of valuation, role and functions of the valuer and valuation process. It introduces students to the professions' acts and standards. Students will also learn valuation mathematics and basic measurement computation.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify the fundamentals of real estate;
2. Describe the process of real estate valuation; and
3. Perform calculations using valuation mathematics.

**Assessment:**

| | |
|---|---|
| Continuous assessment | 50% |
| Final examination | 50% |

**BIE1008** **INTRODUCTION TO LAW**

3 credits

**Synopsis of Course Contents**

This course focuses on the Malaysian Legal System, tort and contract. It includes the principles and sources of Malaysian law, processes, systems and procedures, common law, statute and equity. This course covers the law of contract (Contracts Act 1950) emphasising on capacity, consideration, intention to create legal relations and methods of discharging of contracts. It will also include the types of remedies. The law of torts including negligence, nuisance and trespass to land.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify the components of the Malaysian Legal System;
2. Illustrate the framework of the Malaysian legal system; and
3. Describe the principles of law of tort and contract.

**Assessment**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE1009** **FUNDAMENTALS OF ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course introduces the students with the knowledge in micro and macroeconomics. Microeconomic focuses on parts of the economy which are individuals, firms, and industries. Macroeconomic looks at the economy as a whole, such as growth in the standard of living, unemployment, inflation and two types of Macroeconomics policies: monetary policy and fiscal policy.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify the fundamentals of microeconomics and macroeconomics
2. Determine the influence of government intervention on the economy
3. Describe economic situation by using economic theory.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE1010** **ACCOUNTING**

3 credits

**Synopsis of Course Contents**

This course provides the students an introduction to financial accounting; accounting concepts; double-entry bookkeeping; preparation of balance sheets and profit and loss accounts; sources of finance for companies; accounting ratios and the application of financial statements.

**Learning Outcomes**

At the end of the course, students are able to:
1. Explain accounting concepts, principles and conventions;
2. Record accounting transactions; and
3. Describe financial accounting information.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE1011** **MARKET APPROACH AND COST APPROACH IN REAL ESTATE VALUATION**

4 credits

**Synopsis of Course Contents**

This course provides the foundation in understanding and application of two important valuation approaches i.e: Market/Comparison Approach and Cost Approach. Students will be able to apply the approaches in determining the market value for various purposes.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the fundamentals of the Market Approach and Cost Approach;
2. Determine the market value of real estate using the Market Approach and Cost Approach; and
3. Describe the contents of a valuation report.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE1012 LAND LAW**

3 credits

**Synopsis of Course Contents**

The course offers an insight into the primary land legislation in Malaysia i.e: the National Land Code 1965 together with related state land rules. The course emphasises on the land administration system, land disposal, title particulars, dealings and restrictions to dealings, and land development matters.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the land law provisions related to land development;
2. Apply land law to other aspects of real estate; and
3. Relate land law provisions to land development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE1013 PRINCIPLE AND PRACTICE OF URBAN PLANNING**

3 credits

**Synopsis of Course Contents**

This course provides a theoretical and practical understanding of urban planning. It is divided into three major aspects: the planning theories and models, development plans and development control. The students will gain the knowledge in planning matters related to real estate development.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the theory of urban planning related to real estate development;
2. Use planning standards and technical requirements in assessing layout plan; and
3. Relate the planning standards and application procedures in complying with planning permission requirements.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 50% |
| Final Examination | 50% |

**BIE1014 BASIC BUILDING TECHNOLOGY**

3 credits

**Synopsis of Course Contents**

This course provides students with knowledge in building structure, materials and construction methods. It includes building components and stages of building construction. It also introduces the students to the calculation of the building component cost.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain terminologies and components in building construction;
2. Determine different types of building material with reference to building structure; and
3. Show methods of building construction.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 50% |
| Final Examination | 50% |

**BIE2013 INCOME APPROACH OF REAL ESTATE VALUATION I**

4 credits

**Synopsis of Course Contents**

The course covers the Investment Method of valuation for different types of property. It includes the conventional Term and Reversion and Hardcore/ Layer methods, together with the Discounted Cash Flow (DCF) Technique. It also provides students knowledge in Premium, Surrender and Leaseback and Marriage Valuation.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify various interests for valuation of real estate;
2. Apply the concept of investment method in Real Estate Valuation; and
3. Explain the principles of investment method in valuing a range of interests in real estate.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2014 REAL ESTATE LAW**

3 credits

**Synopsis of Course Contents**

The course provides students the knowledge in real estate law including Environmental Quality Act 1974 (together with Environmental Quality Order 1987), Street, Drainage and Building Act 1974 and Uniform Building By-Laws 1984, Local Government Act 1976, National Heritage Act 2005 and Housing Development (Control and Licensing) Act 1966. The course emphasises on the period before and after completion of development.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the legal framework in real estate law;
2. Determine the different law provisions during the real estate construction period; and
3. Describe the importance of various law provisions after the real estate construction period.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE2015 LAND ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course provides an understanding of economics and the structure of the real estate market. It constitutes a range of economics theories and concepts related to both urban and rural settings. This course employs economic approaches to explain urbanisation and its related problems and solutions.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain economic principles and institutional concepts which guide the use of land and real estate;
2. Apply theories of land economics to understand the changing spatial dimensions of real estate markets; and
3. Relate economic theories to land use and problems concerning real estate markets.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 50% |
| Final Examination | 50% |

**BIE2016** **BUILDING MAINTENANCE AND SERVICES**

3 credits

**Synopsis of Course Contents**

This course provides a foundation in building maintenance and services. It covers key maintenance aspects such as maintenance planning, strategies and operation including building defects. It also exposes students to the various components of building services such as plumbing and sanitary systems, mechanical transportation, fire-fighting system, communication systems, air conditioning system and security system and automation system. The course will guide the students on the preparation of Building Maintenance Report.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify types of defect, their causes and remedies for buildings;
2. Describe the building maintenance and building services system; and
3. Prepare a Building Maintenance Report.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2017** **INCOME APPROACH OF REAL ESTATE VALUATION II**

4 credits

**Synopsis of Course Contents**

This course covers the valuation of special properties using the Profits Method. It also covers valuation of land with development potential using Residual Method. Students will be able to apply the approaches in determining the market value for various purposes.

**Learning Outcomes**

At the end of the course, students are able to:
1. Identify the types of real estate suitable for Profits Method and Residual Method;
2. Apply the concept of Profits Method and Residual Method in real estate valuation; and
3. Explain the principles of Profits Method and Residual Method in valuing a range of interests in real estate.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2018** **STRATA LAW**

3 credits

**Synopsis of Course Contents**

The course provides students the knowledge in strata development legislations which comprise the Strata Titles Act 1985 (Act 318) and Strata Management Act 2013 (Act 757). The course emphasises on the strata title issuance procedure, components of strata development, management body (types, formation, functions and power) and strata tribunal. This course also exposes students to strata management practices.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the strata law provisions related to strata title and management;
2. Relate strata law to other aspects of real estate; and
3. Apply the above knowledge in considering requirements and restrictions to be complied with in strata development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 50% |
| Final Examination | 50% |

**BIE2019** **REAL ESTATE INVESTMENT ANALYSIS**

3 credits

**Synopsis of Course Contents**

This course provides an understanding of various types of real estate investment, real estate investment analysis techniques and risk elements in investment. The course also exposes the students to Portfolio Theory, Capital Budgeting and Capital Structure Policy.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the principles of real estate investment;
2. Apply relevant techniques to analyse investment; and
3. Justify the real estate investment decision.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE2020** **PROPERTY MANAGEMENT**

4 credits

**Synopsis of Course Contents**

This course provides knowledge on theories and concepts of actual management and maintenance of different types of properties such as residential, commercial, retail and industrial properties. It also refers to the act, rules and standards outlined by the Board of Valuers, Appraisers, Estate Agents and Property Managers.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the management functions and their relation to property management;
2. Describe various roles of property manager and the scope of work for property management; and
3. Prepare Property Management Case Study Report.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2021** **FACILITIES MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This course provides students the knowledge in facilities management (FM), its concepts, scope, important functions and classification of tasks. It also exposes students to the knowledge on the knowledge on different types of FM services and its supporting roles in the business of the organisation through strategic FM and performance management.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the concept and the scope of facilities management;
2. Differentiate the facilities management roles and functions at the strategic, tactical and operational levels and facility; and
3. Prepare the facilities management report for the different types of building.

**Assessment**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2022** **STATISTICS FOR REAL ESTATE**

3 credits

**Synopsis Of Course Contents**

This course provides students with the fundamentals of statistics. It includes an introduction to basic theory and statistical concepts for application in real estate. The topics include describing data types and variables, descriptive statistics and inferential statistical technique.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain descriptive and inferential statistics by reasoning and visualising data;
2. Apply the basics of inferential statistics by making valid generalisations from sample data; and
3. Analyse data using descriptive and inference statistics in the context of real estate.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE2023** **BUSINESS VALUATION**

3 credits

**Synopsis of Course Contents**

This course provides a core understanding of the business valuation. The students will be exposed to financial statement analysis, risk, goodwill and intangible assets for valuation purposes. Students will apply appropriate valuation techniques for valuation of various types of businesses. Appropriate valuation techniques for valuation of various types of businesses.

**Learning Outcomes**

At the end of the course students will be able to:

1. Explain the approaches to value business entities; and
2. Relate the importance of goodwill and intangible assets in valuing the business.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE3009** **PROPERTY TAXATION DAN LAND ACQUISITION**

3 credits

**Synopsis of Course Contents**

This course provides basic understanding of legislation related to property taxation and land acquisition. This course consists of related legal statutes: Local Government Act 1976, Town and Country Planning Act 1976, Stamp Duty Act 1949, Real Property Gains Tax Act 1967 and Land Acquisition Act 1960. This course also introduces valuation practice related to taxation and acquisition.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the legislative provisions related to property taxation & land acquisition;
2. Relate the provisions of taxation and land acquisition laws with property valuation practice; and
3. Use appropriate valuation methods to evaluate various types of property for taxation and land acquisition purposes.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE3010 REAL ESTATE MARKETING AND AGENCY**

3 credits

**Synopsis of Course Contents**

This course provides a theoretical foundation to the knowledge of marketing in real estate. The course also exposes the students to the principles of marketing and their application to real estate profession in accordance to relevant regulations such as Malaysian Estate Agency Standards and guidelines and circulars by the governing body.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the scope and the principles of marketing;
2. Apply the estate agency practice in accordance to legislation and standards; and
3. Integrate principles of marketing into estate agency practice.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE3011 REAL ESTATE MARKET ANALYSIS**

3 credits

**Synopsis of Course Contents**

The course exposes the students to the requirements of real estate market research. It provides an understanding of market potential and marketability analysis. It focuses on market research for various types of development. The course also includes the financial assessment of the product mix formulated from the research outcomes.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the principles of real estate market research;
2. Apply the techniques used in real estate market research; and
3. Propose the product mix and financial assessment based on the research outcomes.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE3012 RESEARCH METHODOLOGY**

2 credits

**Synopsis of Course Contents**

This course provides an understanding and guidance on research and research methodology. Students are provided with the knowledge on literature review and the design of research framework. At the end of this course, the students will be able to prepare a research proposal.

**Learning Outcomes**

At the end of the course, students are able to:

1. Review relevant literature for the proposed study;
2. Propose a significant research problem with research questions, aim, objectives and significance of study; and
3. Adopt suitable methodology for the proposed study.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BIE3013 REAL ESTATE AND COMMUNITY**

2 credits

**Synopsis of Course Contents**

This course exposes students to community service and volunteerism. Students need to plan and implement community engagement programmes in groups. Students are also required to propose real estate-based solutions to community problems.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify community issues in relation to real estate;
2. Apply real estate knowledge to the community; and
3. Propose real estate-based solutions to community problems.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BI3014 REAL ESTATE FINANCE ANALYSIS**

3 credits

**Synopsis of Course Contents**

This course provides an understanding of the types of real estate finance system available at global and Malaysian contexts. It also exposes the students to different types of conventional and Islamic mortgages and the process used

by financial institutions in Malaysia in determining the financial position of the bridging and end financing of a development project.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the types of real estate finance system available at global and Malaysian contexts;
2. Compare the mortgage instruments used in conventional loans and Islamic finance; and
3. Apply the resources evaluated by financial institutions in determining the bridging and end finances.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE3015 CORPORATE REAL ESTATE ASSET MANAGEMENT**

3 credits

**Synopsis of Course Contents**

This course provides an understanding on the management and strategic planning of corporate real estate assets. This course introduces the tools and techniques to develop corporate real estate asset management (CREAM) strategies. The course also covers procurement analysis, corporate relocation, space strategy and corporate real estate asset performance measurement.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the roles of corporate real estate asset in an organisation;
2. Describe the strategic decision-making process in corporate real estate asset management; and
3. Integrate techniques and analysis required to manage corporate real estate assets.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE3016 REAL ESTATE DEVELOPMENT APPRAISAL**

4 credits

**Synopsis of Course Contents**

The course introduces the students to the real estate development process. It also exposes the students to the development cycle, structure and agencies in the development and redevelopment of urban areas. The course also requires the students to apply the skills and knowledge of property market study in assessing the feasibility of the project.

**Learning Outcomes**

At the end of the course, students are able to:
1. Explain the concepts of development and redevelopment;
2. Describe the stages involved in development process; and
3. Propose a feasible development for a subject site.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 60% |
| Final Examination | 40% |

**BIE3017 ETHICS AND PROFESSIONAL PRACTICE**

4 credits

**Synopsis of Course Contents**

The course introduces ethics and professional practices stipulated by the Valuers, Appraisers, Estate Agents and Property Managers Act 1981 and Rules, Malaysian Valuation Standards, Property Management Standards and Malaysia Estate Agency Standards.

**Learning Outcomes**

At the end of the course, students are able to:
1. Describe the acts, rules, standards, guidelines and body that regulate the real estate practice;
2. Apply the processes and procedures in compliance with the professional legislation related to real estate; and
3. Integrate professional ethics in real estate practice.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BIE3018 REAL ESTATE ACADEMIC PROJECT**

4 credits

**Synopsis of Course Contents**

This is the second stage of the research project, which requires the students to produce the academic project report under lecturer supervision.

**Learning Outcomes**

At the end of the course, students are able to:
1. Write a literature review of the study;
2. Apply the appropriate research design to the study; and
3. Report the research findings related to real estate.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BIE3019 INTEGRATED REAL ESTATE PROJECT**

4 credits

**Synopsis of Course Contents**

This course requires students to conduct a project that integrates various aspects of real estate knowledge including planning, law, economics, finance and valuation. This project will lead to the preparation of a project report.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply the advanced knowledge within the realm of real estate;
2. Integrate the concepts, principles, techniques, and academic knowledge gained to resolve given problems; and
3. Prepare an integrated project report.

**Assessment:**

Continuous Assessment 100%

**BIE4002 INDUSTRIAL TRAINING**

10 credits

**Synopsis of Course Contents**

Students are required to undergo a structured training programme at corporate organisations or public agencies. In this module, the industry plays a role in providing practical training to students. The industry supervisor will give feedback/comments to the department on the students' performance.

**Learning Outcomes**

At the end of the course students are able to:

4. Apply real estate knowledge into working practice;
5. Demonstrate the skillset acquired from the programme in the assigned job function; and
6. Display interpersonal and communication skills during the.

**Assessment:**

Continuous Assessment 100%

# URBAN & REGIONAL PLANNING

**Bachelor of Urban & Regional Planning**

# URBAN AND REGIONAL PLANNING

## INTRODUCTION

The Bachelor of Urban and Regional Planning is accredited by the Board of Town Planners Malaysia. It was introduced in 2011 as a professional programme in line with the requirements of the Board of Town Planners Malaysia and Malaysian Institute of Planners. The programme obtained approval from the Ministry of Higher Education in March 2011, with student intake session 2011/2012 as its pioneer batch.

The Bachelor of Urban and Regional Planning programme in Universiti Malaya gives more emphasis on the roles of urban planning in promoting sustainable urban development for sustainable communities. The curriculum covers a wide range of contemporary topics and issues including community development, development appraisal, environmental planning, and management. Apart from lectures and tutorials, there are plenty of opportunities for students to gain hands-on experiences through research projects and field trips. This enables the students to develop their creativity and critical thinking skills that can be utilised in their studies and their future careers.

In line with the University's vision to be a world-class university, students are provided with opportunities to have lectures from international visiting professors which enable students to be updated with not only global, but also contemporary issues and debates in urban planning. The department's vision is to be an internationally renowned school of urban planning in research, innovation, publication and teaching.

The department aspires to be a centre of excellence in urban and regional planning studies and research in the Asia-Pacific region. The region provides a living laboratory where urban and regional issues can be identified, analysed and examined, and strategies formulated. As for future employment opportunities, the detailed scope of works and services of urban/town planners include:

1. Prepare development plans such as national physical plan, structure plans, local plans and special area plans for the purposes outlined in the Town and Country Planning Act 1976;
2. Prepare and submit planning permission application which include layout submission, erection of building and change of use of building or land in respect of a development, drawings and planning reports to any person or public authority to develop any land;
3. Carry out urban, rural and regional development planning studies, feasibility and viability studies, environmental impact assessment studies, visual impact assessment and social impact assessment relating to land use;
4. Urban design and advocacy planning; and

5. Project management and other planning related services.

The Bachelor of Urban and Regional Planning programme is a four-year programme (8 semesters) with a total of 139 credits. The programme consists of three components, namely, General Courses, Core Courses and Elective Courses which accounts for 8.6%, 81.3% and 10.1% respectively from the programme's total 139 credits. The adoption of elective courses and the university's compulsory courses (which includes co-curriculum) is designed to expose students to knowledge aside from their chosen discipline.

As practised universally, the teaching-learning methods of the programme comprise of the following components: lectures, tutorials/group discussions, studios, site investigations and site surveys, laboratories, assignments, industrial training, projects and final-year academic project. Many of these components are continually assessed via written or laboratory tests, quizzes, discussion groups and assignments.

For most courses, the formative component (continuous assessment) is made up of at least 40% of each course. Continuous assessment currently practised includes test, tutorial, quiz, portfolio, assignment, oral presentation, direct observation, practical training, and studio projects. There are also courses that are based solely on formative assessment, for example, studios, Research Project (report and/or seminar presentation), and Industrial Training (report and assessment by supervisor). With the implementation of the Malaysian Qualification Framework (MQF), student learning time such as preparation for tutorials, laboratory reports, final-year projects, industrial training, courses using studios with practical emphasis are factored in all courses.

**Programme Aim**

To produce professional town planning graduates who are creative, innovative, and critical in the development and implementation of sustainable spatial planning and competitive in managerial and technological aspects within the national and global contexts.

**Programme Learning Outcomes**

At the end of the programme, graduates are able to:

| | |
|---|---|
| **PO1** | Acquire knowledge and good technical understanding as well as good management practices in urban and regional planning fields. |
| **PO2** | Understanding and resolving urban and regional issues with critical, innovative and strategic thinking. |

**PO3** Conduct study related to planning and development by using appropriate techniques.

**PO4** Apply relevant knowledge, social skills and work collaboratively in various contexts.

**PO5** Communicate ideas effectively to generate comprehensive and impactful outcomes.

**PO6** Master the information management skills and numeral literacy skills in urban and regional planning.

**PO7** Demonstrate quality leadership and accountability.

**PO8** Acquire consultancy, entrepreneurial and life-long learning skills that can be applied in various fields.

**PO9** Cultivate ethics and professionalism in strategic planning practices.

## PROGRAMME STRUCTURE: BACHELOR OF URBAN AND REGIONAL PLANNING

| YEAR 1 (Bachelor of Urban and Regional Planning) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GLTXXXX | English I | 2 | GIG1012/ GLT1049 | Philosophy and Current Issues / Basic Malay Language* | 2 | 6 |
| | | | | GLTXXXX | English II | 2 | |
| Programme Core Courses | BID1008 | Planning Studio I- Fundamental Planning Skills | 6 | BID1012 | Planning Studio II - Site Planning and Design | 6 | 30 |
| | BID1009 | Computer Aided Graphic Design in Planning | 3 | BID1013 | Land Use Planning | 3 | |
| | BID1010 | History and Evolution of Urban Planning | 3 | BID1014 | Transportation Planning and Traffic | 3 | |
| | BID1011 | Site Planning and Analysis | 3 | BID1015 | Urban Design and Conservation | 3 | |
| **TOTAL CREDIT** | | | **17** | **TOTAL CREDIT** | | **19** | **36** |

*Non Citizen

| YEAR 2 (Bachelor of Urban and Regional Planning) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GIG1003 | Basic Entrepreneurship Enculturation | 2 | | | | 2 |
| University Elective Courses | | | | | SHE I | 2 | 2 |
| Programme Core Courses | BID2009 | Planning Studio III - City Centre Studies | 6 | BID2014 | Planning Studio IV – Local Development Planning | 6 | 33 |
| | BID2010 | Planning Laws | 3 | BID2015 | GIS and Urban Analytics | 3 | |
| | BID2011 | Planning Techniques | 3 | BID2016 | Planning Legislations and Governance | 3 | |
| | BID2013 | Urban Economics | 3 | BID2017 | Quantitative Analysis in Planning | 3 | |
| | | | | BID2018 | Sustainable Community Development | 3 | |
| Programme Elective Courses | *BID2012 | Sustainable Tourism Planning | 3 | | | | 3 |
| | *BID2019 | Technologies in Urban Planning | | | | | |
| **TOTAL CREDIT** | | | **20** | **TOTAL CREDIT** | | **20** | **40** |

*Student need to choose one of the offered program elective subjects for the semester

| YEAR 3 (Bachelor of Urban and Regional Planning) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GIG1013 | Appreciation of Ethics and Civilisations | 2 | | | | 2 |
| University Elective Courses | | SHE II | 2 | | SHE III | 2 | 6 |
| | | | | | SHE IV | 2 | |
| Programme Core Courses | BID3010 | Planning Studio V – Regional Development Planning | 6 | BID3014 | Planning Studio VI - Township Appraisal | 6 | 28 |
| | BID3011 | Development and Property Appraisal | 3 | BID3015 | Housing, Planning and Sustainability | 3 | |
| | BID3013 | Rural and Regional Planning | 3 | BID3016 | Planning Theory and Philosophy | 3 | |
| | | | | BID3017 | Research Methodology | 4 | |
| Programme Elective Courses | *BID3012 | *Environmental Studies | 3 | | | | 3 |
| | *BID3018 | Communication in Planning | | | | | |
| **TOTAL CREDIT** | | | **19** | **TOTAL CREDIT** | | **20** | **39** |

* Student need to choose one of the offered program elective subjects for the semester

| YEAR 4 (Bachelor of Urban and Regional Planning) | | | | | | | |
|---|---|---|---|---|---|---|---|
| COMPONENTS | SEMESTER 1 | | | SEMESTER 2 | | | TOTAL CREDIT |
| | COURSE CODE | COURSE TITLE | CREDIT | COURSE CODE | COURSE TITLE | CREDIT | |
| Compulsory University Courses | GXXxxxx | Co-Curriculum | 2 | | | | 2 |
| Programme Core Courses | BID4006 | International Planning Practice | 3 | BID4010 | Industrial Training | 8 | 22 |
| | BID4007 | Academic Project | 5 | | | | |
| | BID4008 | Professionalism, Ethics and Politics | 3 | | | | |
| | BID4009 | Urban Management | 3 | | | | |
| **TOTAL CREDIT** | | | **16** | **TOTAL CREDIT** | | **8** | **24** |

**Notes: Course KIAR GQX0056 is a compulsory SHE course**

**OVERALL TOTAL CREDIT: 139**
The programme structure maybe subjected to change

*Non-Malaysian

# PROGRAMME STRUCTURE – BACHELOR OF URBAN AND REGIONAL PLANNING

| Category | No | Code | Course Name | YEAR I | | YEAR II | | YEAR III | | YEAR IV | | Total credit | Pre-requisite |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | S1 | S2 | S1 | S2 | S1 | S2 | S1 | S2 | | |
| COMPULSORY UNIVERSITY COURSES | 1 | GLT XXXX | English I | 2 | | | | | | | | **20** 14% | |
| | 2 | GLT XXXX | English II | | 2 | | | | | | | | |
| | 3 | GIG1012/ **GLT1049 | Philosophy and Current Issues /** Basic Malay Language | | 2 | | | | | | | | |
| | 4 | GIG1003 | Basic Entrepreneurship Enculturation | | | 2 | | | | | | | |
| | 5 | | SHE I | | | | 2 | | | | | | |
| | 6 | GIG1013 | Appreciation of Ethics and Civilisations | | | | | 2 | | | | | |
| | 7 | | SHE II | | | | | 2 | | | | | |
| | 8 | | SHE III | | | | | | 2 | | | | |
| | 9 | | SHE IV | | | | | | 2 | | | | |
| | 10 | GXXxxxx | Co-Curriculum | | | | | | | 2 | | | |
| PROGRAMME CORE COURSES | 11 | BID 1008 | Planning Studio I-Fundamental Planning Skills | 6 | | | | | | | | **113** 81% | |
| | 12 | BID 1009 | Computer Aided Graphic Design in Planning | 3 | | | | | | | | | |
| | 13 | BID 1010 | History and Evolution of Urban Planning | 3 | | | | | | | | | |
| | 14 | BID 1011 | Site Planning and Analysis | 3 | | | | | | | | | |
| | 15 | BID 1012 | Planning Studio II - Site Planning and Design | | 6 | | | | | | | | BID 1008 |
| | 16 | BID 1013 | Land Use Planning | | 3 | | | | | | | | |
| | 17 | BID 1014 | Transportation Planning and Traffic | | 3 | | | | | | | | |
| | 18 | BID 1015 | Urban Design and Conservation | | 3 | | | | | | | | |
| | 19 | BID 2009 | Planning Studio III - City Centre Studies | | | 6 | | | | | | | BID 1012 |
| | 20 | BID 2010 | Planning Laws | | | 3 | | | | | | | |
| | 21 | BID 2011 | Planning Techniques | | | 3 | | | | | | | |
| | 22 | BID 2013 | Urban Economics | | | 3 | | | | | | | |
| | 23 | BID 2014 | Planning Studio IV – Local Development Planning | | | | 6 | | | | | | BID 2009 |
| | 24 | BID 2015 | GIS and Urban Analytics | | | | 3 | | | | | | |
| | 25 | BID 2016 | Planning Legislations and Governance | | | | 3 | | | | | | |
| | 26 | BID 2017 | Quantitative Analysis in Planning | | | | 3 | | | | | | |
| | 27 | BID 2018 | Sustainable Community Development | | | | 3 | | | | | | |
| | 28 | BID 3010 | Planning Studio V – Regional Development Planning | | | | | 6 | | | | | BID 2014 |
| | 29 | BID 3011 | Development and Property Appraisal | | | | | 3 | | | | | |
| | 30 | BID 3013 | Rural and Regional Planning | | | | | 3 | | | | | |
| | 31 | BID 3014 | Planning Studio VI - Township Appraisal | | | | | | 6 | | | | BID 3010 |
| | 32 | BID 3015 | Housing, Planning and Sustainability | | | | | | 3 | | | | |
| | 33 | BID 3016 | Planning Theory and Philosophy | | | | | | 3 | | | | |
| | 34 | BID 3017 | Research Methodology | | | | | | 4 | | | | |
| | 35 | BID 4006 | International Planning Practice | | | | | | | 3 | | | |
| | 36 | BID 4007 | Academic Project | | | | | | | 5 | | | BID 3017 |
| | 37 | BID 4008 | Professionalism, Ethics and Politics | | | | | | | 3 | | | |
| | 38 | BID 4009 | Urban Management | | | | | | | 3 | | | |
| | 39 | BID 4010 | Industrial Training | | | | | | | | 8 | | BID 3014 |
| PROGRAMME ELECTIVE COURSES | 40 | BID 2012 | Sustainable Tourism Planning | | | 3 | | | | | | **6** 5% | |
| | 41 | BID 2019 | Technologies in Urban Planning | | | | | | | | | | |
| | 42 | BID 3012 | Environmental Studies | | | | | 3 | | | | | |
| | 43 | BID 3018 | Communication in Planning | | | | | | | | | | |
| **Total Subject Breakdown** | | | **Credits** | 17 | 19 | 20 | 20 | 19 | 20 | 16 | 8 | 139 | 41 |
| | | | **Subjects** | 5 | 6 | 6 | 6 | 6 | 6 | 5 | 1 | 41 | |
| | | | **University Courses** | 1 | 2 | 1 | 1 | 2 | 2 | 1 | 0 | 10 | |
| | | | **Programme Courses** | 4 | 4 | 5 | 5 | 4 | 4 | 4 | 1 | 31 | |

**Note:**
***Exemption for non-Malaysian students and to be replaced with another Senate-approved university course**
****Course offered to non-Malaysian students**

## PROGRAMME CORE COURSES

**BID 1008 PLANNING STUDIO I: FUNDAMENTAL PLANNING SKILLS**

6 credits

**Synopsis of Course Contents**

This course introduces design principles and basic design skills which are needed by an urban planner. The design skills include: Line drawing; Poster Lettering; Plan Colouring; Draughtsmanship; Sketches; Perspective Drawing; Texture's identification; Graphic Illustration. This course also allows skill acquisition which can be developed through the use of various drafting scales equipment, plan's enlargement & reduction techniques and Map Reading exercises. Students are required to work individually.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the design fundamentals in the layout plan;
2. Describe the basic design principles in the layout plan;
3. Produce basic planning drawings to translate ideas in the layout plan; and
4. Present ideas through graphic illustrations using suitable techniques.

**Assessment:**

Continuous Assessment: 100%

**BID 1009 COMPUTER AIDED GRAPHIC DESIGN IN PLANNING**

3 credits

**Synopsis of Course Contents**

This course introduces the concepts of computer aided graphic design and its application using various design software. This course is intended to familiarise students with basic aspects of AutoCAD dan other design software, with an emphasis on graphic design applications to be used in urban and regional planning field.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the basic concepts and techniques of computer aided graphic design in planning;
2. Describe the application of computer aided design within the context of urban planning; and
3. Using AutoCAD, Sketchup and Adobe Illustrator software in urban planning projects.

**Assessment:**

Continuous Assessment: 100%

**BID 1010 HISTORY AND EVOLUTION OF URBAN PLANNING**

3 credits

**Synopsis of Course Contents**

This course focuses on the history and evolution of urban planning and practice in the world and Malaysia. It exposes the students to the form and planning of the world's first cities, innovation in terms of city and neighbourhood planning concepts until the early establishment of planning legislations during the Industrial Revolution era. The students will be exposed to the history of the establishment of urban planning practice and legislations in Malaysia until the formation of the existing urban planning system. Emphasis is also given to issues and trends in the urbanisation process which contribute to the evolution of urban planning in Malaysia.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the evolution of urban forms and planning at global level;
2. Elaborate the history of planning in Malaysia; and
3. Explain the system and components of the modern urban planning in Malaysia.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 1011 SITE PLANNING AND ANALYSIS**

3 credits

**Synopsis of Course Contents**

This course covers the aspect of site planning from the perspectives of urban and regional planning. The knowledge of site planning is very important to the professionals before any implementation of development projects could take place. The course introduces elements of site planning that begin with the recognising of site characteristics, conditions, problems and limitations. The identification of site potential for development requires examinations of surrounding development including elements of infrastructure, existing economic activities and local development policies that regulate urban land uses. The site planning knowledge was disseminated in consideration of urban and regional growth, environment from human perspectives, global sustainable development goal and planning ethics.

**Learning Outcomes**

At the end of the course, students are able to:

1. Determine and discuss site development problem & potential;
2. Apply the appropriate methodology for site planning; and
3. Incorporate human and environmental considerations in site selection for development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 1012 PLANNING STUDIO II – SITE PLANNING AND DESIGN**

6 credits

**Synopsis of Course Contents**

The course major activities include the search for site and collection of relevant information from appropriate data sources; the site survey using appropriate techniques (check list, matrices) in the planning for site development; the site analysis encompassing topography, traffic circulation, surrounding development, tree preservation; the analysis of Development Potential and the proposals of Mitigating Measures of possible impacts. The course also requires good Report preparation and Layout Plan proposals. Students are required to work in groups and to do Project Presentation.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the site planning design requirements through relevant technical process such as site measurement and analysis;
2. Determine the site issues based on urban planning perspective;
3. Select suitable design measures in the study site area; and
4. Prepare lay-out plan for selected study site area.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 1013 LAND USE PLANNING**

3 credits

**Synopsis of Course Contents**

This course introduces the theory and practice of land use planning in urban environments. The term "land use" was determined as a part of social relations that define the way urban or region development. Land use planning is understood in a holistic sense that integrates all built environment elements such as nature, human activity and the environment. The identification of potential development requires examinations of surrounding development including elements of infrastructure, existing economic activities and local development policies that regulate urban land uses. The introduction to land use planning will cover urban land use theory, urban land use components, land use planning models, land use zoning categories and codes (use class order). Discussion on site development issues will include topics of how land use planning was incorporating site development potentials and planning controls.

**Learning Outcomes**

At the end of the course, students are able to:

1. Elaborate the societal and political contexts that affect the land use planning;
2. Apply technique and method of land use analysis to support planning; and
3. Explains the issues and potentials of land use zoning and classification in planning.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 1014 TRANSPORTATION PLANNING AND TRAFFIC**

3 credits

**Synopsis of Course Contents**

This course will introduce students to transportation systems including public transportation and its impact on the urban planning system. The impact of transportation planning will be highlighted as the failure of proper planning will result in the failure of urban planning. Among aspects that will be discussed are transportation system requirements, travel demand, travel behaviour and sustainable transportation planning. Students are taught how to conduct traffic surveys as well as traffic impact assessment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the main aspects of transportation planning in the urban transportation system;
2. Explain the potential, issues and problems of transportation in urban planning; and
3. Appraise travel demand and travel behaviour through traffic surveys.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 1015 URBAN DESIGN AND CONSERVATION**

3 credits

**Synopsis of Course Contents**

This course involves a wide-ranging types and scope of tasks. It begins with the definition of urban design and followed by the discussion of urban design theories; principles involving inter-disciplinary nature that are shaped by economic, social and political forces. This course also includes the conservation aspects, the survey techniques and analysis.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain urban design principles in organising urban functions;
2. Identify influencing factors that affect urban design and conservation processes; and
3. Determine the importance of urban design and conservation in planning.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2001 PLANNING STUDIO III: CITY CENTRE STUDY**

6 credits

**Synopsis of Course Contents**

This course provides the students the knowledge and skills to prepare for planning permission applications by focusing on a city centre as case study. The course introduces concepts and alternatives to city centre development and exposes the students to the issues and problems faced in a city centre. Eventually, the students will provide solutions to the issues and problems. The outputs of the course and assessment are made on the checklist for site visit, technical report, layout plan, Development Proposal Report and other requirements for planning permission application.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain city centre development concepts and alternatives;
2. Describe issues and problems of city centre;
3. Elaborate ideas to solve urban problems; and
4. Demonstrate the knowledge of preparing for planning permission.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 2010 PLANNING LAWS**

3 credits

**Synopsis of Course Contents**

This course emphasises on Malaysian town and country planning legislations. In general, the students will be exposed to the land development and planning process based on the main acts such as National Land Code 1965 (Act 56), Town and Country Planning Act 1976 (Act 172) and Local Government Act 1976 (Act 171). Students will also be exposed to other planning acts such as Federal Territory Planning Act 1982 (Act 267) and planning ordinances used in Sabah and Sarawak. Case studies related to development and planning will be elaborated based on the legislation clauses and development context.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the legislation system and source of power for land development and planning in Malaysia;
2. Describe planning procedures in Malaysia based on the planning legislations; and
3. Elaborate the applications of planning legislations in land use developments through case studies.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2011 PLANNING TECHNIQUES**

3 credits

**Synopsis of Course Contents**

This course covers the topics related to analysis and techniques required in making decisions in the planning process. Students will be able to apply certain techniques that will be introduced including the basic planning requirement, forecasting, plan evaluation using cost-benefit analysis, balance sheets and goal achievement matrix. Students will also be able to apply the techniques through selected case studies. Furthermore, students will be introduced to special requirements in the planning process i.e: the environmental and social impact assessment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe various planning techniques in the planning process;
2. Use the techniques in the planning process; and
3. Differentiate the technique, implementation and resultant impact of planning process.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2012 SUSTAINABLE TOURISM PLANNING**

3 credits

**Synopsis of Course Contents**

This course focuses on sustainable tourism development. Students are exposed to policy and agencies involved in tourism development. Students will learn about the considerations that need to be taken in the environmental, socioeconomic and social aspects and techniques used to ensure sustainable tourism planning and management by referring to local and foreign case studies.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe concepts and national tourism planning policy;
2. Apply models and techniques in tourism development; and
3. Analyse the environmental, socio-economic and sociocultural impacts of tourism development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2013 URBAN ECONOMICS**

3 credits

**Synopsis of Course Contents**

This course will introduce students to the basic understanding of the urban economic structure and its changes; emphasising relevant issues as they relate to urban planning. The topics that will be covered include the significance of economic thinking in planning, an economic explanation for urban growth, the economics of urban land use, urban location decision and the economics of urban public intervention. Students will also learn the economic approach to selected urban problems such as congestion, crime, pollution etc.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the location decision of economic activities in urban development;
2. Describe the economics of urban land use market in urban economy; and
3. Elaborate on public intervention in the urban economy.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2014 PLANNING STUDIO IV: LOCAL DEVELOPMENT PLANNING**

6 credits BID 2009

**Synopsis of Course Contents**

This course covers the preparation of development plans based on the provisions under planning legislation for Act 172, Sabah Cap 141 and Sarawak Cap.87. It introduces students to the process of preparing public sector plans and the practices of making them, concentrating on either two main kinds of development plans: comprehensive local plan or strategic plan. The course will cover the investigation of many aspects such as housing, land use, transportation, environment and others. Modelling and forecasting techniques will be used to analyse the existing condition and predict the future requirements.

**Learning Outcomes**

At the end of the course, students are able to:

1. Understand the local government context in which development plans are made and used by assessment of planning issues, potentials and problems of the study area;
2. Discuss the broad type of development that should be provided in meeting local needs through various planning techniques and projections:
3. Identify project/program reflecting community/place uniqueness through community collaborative effort; and
4. Recommend development strategies for the proposed area` for future sustainable development.

**Assessment:**

Continuous Assessment 100%

**BID 2015 GIS AND URBAN ANALYTICS**

3 credits

**Synopsis of Course Contents**

This course introduces the concepts of Geographic Information System (GIS) and its application in urban planning. Students will be exposed to data spatial concepts and methods of spatial data analysis in urban planning.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the basic concepts and techniques of Geographic Information System (GIS) in urban planning;
2. Describe the application of GIS Analysis within the context of urban planning; and
3. Use GIS software in urban planning projects.

**Assessment:**

Continuous Assessment 100%

**BID 2016 PLANNING LEGISLATIONS AND GOVERNANCE**

3 credits

**Synopsis of Course Contents**

This course covers the contemporary legal framework within which urban planning and development practice take place. The aspect of discussion revolves around the legislation and governance that relates to planning and development practice in Malaysia. Students will be exposed to provisions and clauses related to urban planning in the selected acts. The course accentuated on matters involving development as well as current issues concerning urban planning. Detailed analysis and discussion on various case studies is conducted to link urban planning and development practice with existing real-world situations.

**Learning Outcomes**

At the end of the course, students are able to:

1. Identify the law and regulation that affect the planning and development practice;
2. Examine related legislation and governance that can improve the planning practice and development process; and
3. Demonstrate the ability to interpret legislation and governance practically through case studies analysis.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2017 QUANTATIVE ANALYSIS IN PLANNING**

3 credits

**Synopsis of Course Contents**

This course is designed to introduce students to commonly used statistical quantitative analysis in urban planning and research. Students will be exposed to the basic skills in statistical techniques as a means to communicate research findings effectively. Topics covered include types and sources of quantitative data, designing and administering questionnaire surveys, basic descriptive and inferential statistics and the use of statistical software for quantitative analysis.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the use of information and quantitative analysis in urban planning and research;
2. Analyse primary and secondary data through questionnaire survey in urban planning and research; and
3. Use suitable statistical techniques to analyse survey-based data using statistical software in urban planning and research.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2018 SUSTAINABLE COMMUNITY DEVELOPMENT**

3 credits

**Synopsis of Course Contents**

The course introduces the concept, process and method of sustainable community development through planning and physical development. It also provides an exposure to the students on the importance of identification of community needs in order to ensure that the sustainability of a community is not impacted by development. Students will also learn on the community development strategies through physical planning from the macro level which is at the policy making level right to the implementation level through the adoption of planning conditions and guidelines.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the concept and importance of sustainable community development;
2. Apply the methods and techniques in community needs assessment and public consultation; and
3. Elaborate the strategies of sustainable community development through a physical planning framework.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 2019 TECHNOLOGIES IN URBAN PLANNING (Elective Course)**

3 credits

**Synopsis of Course Contents**

This course introduces technological diversity in urban planning. Students will be exposed to the technology used in urban planning. Among the technologies to be introduced in this course are technology in resource determination, collection, processing, management, and conversion of data into information. Methods of information dissemination to urbanites will be explored.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the diverse technologies in urban planning;
2. Describe the latest technological applications in urban planning; and
3. Use technological applications in urban planning projects.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 3010 PLANNING STUDIO V: REGIONAL DEVELOPMENT PLANNING**

6 credits

**Synopsis of Course Contents**

This course covers the preparation of development planning report at regional level which include state structure plan, master plans at city, state and transboundary scales as prescribed in the Town and Country Planning Act 1976 (Act 172), Federal Territory (Planning) Act 1982 (Act 267), State of Sabah Town and Country Planning Ordinance 2010 (Sabah Cap 141), Town and Country Planning Ordinance 1952 and other relevant statutory provisions.

Examination of content of the plan, the existing condition of case study and the future development prospect will be carried out through fieldwork (e.g. site survey, interviews with stakeholders, focus group discussion, briefing from planning agencies) and secondary data collection (e.g. relevant policy documents, published reports, unpublished documents). The course covers the sectoral investigation such as land use, housing, transportation, environment,

tourism, commercial and industry. Models and forecasting techniques are employed to analyse the existing condition and predict the future requirements. Students will be working in groups to produce a draft development plan or master plan.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the development planning at macro level;
2. Examine land development through resource planning;
3. Apply planning techniques to make future projections at macro level; and
4. Recommend strategic planning for regional development.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 3011 DEVELOPMENT AND PROPERTY APPRAISAL**

3 credits

**Synopsis of Course Contents**

This course will cover all the factors that impact on the decision-making process in urban development, including site appraisal, development appraisal and development finance. This course also examines the economic context for the creation of value, introduces the principles of property valuation, forms a clear understanding of the valuation process and applies appropriate basic valuation methods to appraise various types of property.

**Learning Outcomes**

At the end of the course, students are able to:

1. Discuss the real estate market conditions on the development process of a project;
2. Examine the social and economic dimensions of a property development project; and
3. Prepare the financial feasibility report for a property development project.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 3012 ENVIRONMENTAL STUDIES (Elective Course)**

3 credits

**Synopsis of Course Contents**

This course discusses important topics in environmental studies and exposes the students to environmental issues related to urbanisation and climate change by referring to case studies locally and abroad. Discussions also emphasise on the importance of integrating environmental aspects in decision-making to achieve sustainable development through environmental impact assessment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe the key concepts of environmental studies;
2. Discuss global environmental challenges including climate change, population growth, energy issues and food systems; and
3. Explain the environmental legislation in Malaysia and the processes of the environmental impact assessments.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 3013 RURAL AND REGIONAL PLANNING**

3 credits

**Synopsis of Course Contents**

This course focuses on regional and rural planning as part of the town and country planning modules. It focuses on concepts and models of regional growth theories and models. It also explains the evolution and history of regional growth in post independent Malaysia. Related growth techniques and analytical approaches are also explained. The course clarifies the administrative framework of regional development in Malaysia.

**Learning Outcomes**

At the end of the course, students are able to:

1. Comprehend and explain rural and regional planning concept.
2. Relate growth theories in rural and regional planning; and
3. Apply analytical techniques in Malaysian rural and regional planning.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 3014 PLANNING STUDIO VI: TOWNSHIP APPRAISAL**

6 credits

**Synopsis of Course Contents**

The main emphasis of the studio is to expose the students to the methods and exercises involved in evaluating an existing development scheme of township scale. The students will be required to evaluate how the township development has taken place and the issues associated with it. Based on present global and local agenda and trend, the students will need to develop an indicator-based sustainability assessment framework and recommend proposals that will reposition the township to ensure its economic vitality, without compromising the quality of the physical and social environment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Appraise the development of a township based on the original and existing objectives, policies, strategies and development control;
2. Synthesise physical, social, and economic issues of a development scheme of township scale;
3. Develop sustainability assessment framework of a development scheme; and
4. Propose solutions and strategies to enhance a development scheme through sustainable and comprehensive concept and design.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 3015 HOUSING, PLANNING AND SUSTAINABILITY**

3 credits

**Synopsis of Course Contents**

This course aims to provide a comprehensive understanding of Malaysia's housing system and its relationships with urban planning and the concepts of sustainable development. It discusses the theoretical and practical aspects of housing, making special reference to their relationships with urban planning and sustainable development. Major topics include the housing system concepts, the political economy of housing policies, land use planning and housing affordability, housing policy analyses, housing market analyses, and the application of the sustainable development perspective to housing analyses.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain the concept and issues of housing, both nationally and globally;
2. Examine the social, political, economic, policies and institutional structure within the context of housing management; and
3. Relate housing delivery system with sustainable housing concept in Malaysia.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 3016 PLANNING THEORY AND PHILOSOPHY**

3 credits

**Synopsis of Course Contents**

The course focuses on selected classic and current debates and theories in planning, such as synoptic planning, disjointed incrementalism, mixed scanning, advocacy planning, communicative planning, collaborative planning, radical planning, and others. This course offers students a thought of classic and contemporary theories of planning.

The logic behind the ideas, concepts and actions of planning is continuously challenged as planners try to balance the relationship between democracy, markets and government within the planning environment.

**Learning Outcomes**

At the end of the course, students are able to:

1. Describe various types of planning and theoretical development of scientific knowledge in urban and regional planning;
2. Apply the theories and models of planning in the urban and regional planning contexts; and
3. Comprehend past and present debates of planning as a basis for further reflections on future planning theory.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 3017 RESEARCH METHODOLOGY**

4 credits

**Synopsis of Course Contents**

This course encompasses two parallel parts. The first part provides a theoretical background on the subject. It involves the exploration of suitable quantitative and qualitative research methods, analytical thinking, and literature review. The other part ends with successfully initiating an academic research project. This part requires students to work individually on the topic selected for the academic project in terms of conceptualising problems from complex, real-world situations, identifying appropriate research questions, setting up appropriate research objectives, reviewing relevant literature and properly designing an ethical research project.

**Learning Outcomes**

At the end of the course, students are able to:

1. Perform literature review in planning research project;
2. Determine appropriate method and design that are suitable with the objectives and purpose of study; and
3. Plan a research project based on the literature review and in relevance to the selected methods and design.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 3018 COMMUNICATION IN PLANNING (Elective Course)**

3 credits

**Synopsis of Course Contents**

The course provides exposure on the importance of effective communication in planning. It also provides an exposure to the students on the methods and techniques in communication to ensure that the plans that have been prepared can be conveyed effectively to the stakeholders and accepted well by the public.

Students will also learn on the public consultation strategies to ensure effective public participation.

**Learning Outcomes**

At the end of the course, students are able to:
1. Explain the importance of effective communication in planning;
2. Apply the methods and techniques of communication in planning; and
3. Demonstrate ability to execute an effective communication plan

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 4006 INTERNATIONAL PLANNING PRACTICE**

3 credits

**Synopsis of Course Contents**

This course introduces to the students to challenges and issues in cities around the world. Students will focus on case studies in Asia and beyond Asia in understanding international planning practice context through its physical planning and land uses, social and economic planning, environmental planning and transportation planning and others. Students will evaluate the planning practice in different perspectives with Malaysia urban planning practice systems.

**Learning Outcomes**

At the end of the course, students are able to:
1. To elaborate the planning practice system at international level;
2. To discuss issues and challenges of planning and development at international level; and
3. To evaluate different planning practices at international level.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 4007 ACADEMIC PROJECT**

5 credits BID 3017

**Synopsis of Course Contents**

In this course the students are guided by lecturers to produce an academic project report based on the proposals drafted in the Research Methods course. The research work in this involves adequate data collection and analysis, discussion and conclusion through effective writing and visual communication.

**Learning Outcomes**

At the end of the course, students are able to:

1. Critically analyse issues and problems in the urban planning field;
2. Apply appropriate research methods and processes in urban planning;
3. Apply theoretical concepts in research; and
4. Produce academic project report related to urban planning.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

**BID 4008 PROFESSIONALISM, ETHICS AND POLITICS**

3 credits

**Synopsis of Course Contents**

This course will discuss urban and regional planning in practice and the functions of town planners as professionals. It focuses on the detailed understanding of the Town Planners Act 1995 and Code of Professional Conduct of Malaysian Institute of Planners with some references on planning practice in the United Kingdom. The discussions continue with the scope of works for town planners in the public sector and their roles in developing the community and their relations with other professionals in the built environment. Discussions on the town planners' roles in the private sector will include the professional services, procedures in plan-making process and relations with stakeholders.

**Learning Outcomes**

At the end of the course, students are able to:

1. Explain professional codes and ethics in town planning profession;
2. Evaluate the methods and regulations in town planning profession; and
3. Compare the roles and functions of different professionals in development projects.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 4009 URBAN MANAGEMENT**

3 credits

**Synopsis of Course Contents**

The course will impart knowledge on good urban management through discussion of concepts, theories and principles of good urban governance. Other aspects that will be discussed are the roles and functions of key players in urban management; the relationship between urban planning and urban management; urban services and service deliveries (urban asset management); urban management issues and problems; capacity building and public participation; and target, urban indicator and performance management.

**Learning Outcomes**

At the end of the course, students are able to:

1. Elaborate the scope and resources of urban management;
2. Analyse the issues, problems and needs related to urban management; and
3. Assess the current practice and innovations in urban management.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 40% |
| Final Examination | 60% |

**BID 4010 INDUSTRIAL TRAINING**

8 credits

**Synopsis of Course Contents**

Industrial training will introduce students to a professional working environment with applying comprehensive urban planning skills. Students will be exposed to the actual working environment by practising interpersonal skills and effective teamwork.

**Learning Outcomes**

At the end of the course, students are able to:

1. Apply classroom learning in the actual working environment of urban planning;
2. Train interpersonal and technical skills related to urban planning;
3. Practice work ethics and professionalism in a real working environment; and
4. Appreciate urban planning profession in the context of built environment.

**Assessment:**

| | |
|---|---|
| Continuous Assessment | 100% |

# POSTGRADUATE COURSES

# GENERAL INFORMATION

## PROGRAMMES

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

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

### Non-Universiti Malaya (UM) 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.

**Universiti Malaya (UM) 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.
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.

## GENERAL ENTRY REQUIREMENTS FOR MASTER'S PROGRAMMES

**Non-Universiti Malaya (UM) 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.

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

5. APEL qualification (only for the programme by Mixed Mode and by Coursework).

## Universiti Malaya (UM) 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**
3. 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.

4. 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) year** 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.

5. APEL qualification (only for the programme by Mixed Mode and by Coursework).

## ADDITIONAL REQUIREMENTS

Beside the general entry requirement that is stated by the University, below are the additional requirements for candidates spesific requirements for the Master of Architecture (by Coursework) and the Master of Project Management (by Coursework) programme:

### Master of Architecture

A. **UM graduates with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation.
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of six (6) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 2.70 – 2.99**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 2.70 – 2.99**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and 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:

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation.
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twelve (12) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

C. 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

1. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with **CGPA of 3.00 and above; OR**
2. **Professional qualification from a recognized professional body; OR** other qualifications as written by the Senate from time to time; **AND**
3. Have at least **one (1) year of project-related working experience** in related field upon completion of Bachelor Degree; **OR**
4. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with **CGPA of 2.70 to 2.99 with a minimum of two (2) years of project-related working experience in related field upon completion of Bachelor Degree; OR**
5. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with **CGPA of 2.50 to 2.69 with a minimum of three (3) years of project-related working experience in related field upon completion of Bachelor Degree and fulfils one (1) of the following criteria:**
   - Universiti Malaya graduate; **OR**
   - Produce at least one (1) publication in related fields; **OR**
   - Scholarship recipient; **OR**

6. Bachelor's Degree with **CGPA of 2.00 to 2.49 with a minimum of five (5) years of project-related working experience in related field and fulfils upon completion of Bachelor Degree two (2) of the following criteria:**
   - Universiti Malaya graduate; **OR**
   - Produce at least one (1) publication in related fields; **OR**
   - Scholarship recipient; **OR**

## 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 (PBT), a score of 213 for Computer-Based Total (CBT) or a score of 46 for Internet-Based Total (iBT Centre Based) for Test of English as a Foreign Language (TOEFL).; or
- Band 4.0 and above in the Malaysian University English Test (MUET); or
- A score of 51 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.

## ASSESSMENT FOR PROGRAMME OF STUDY BY COURSEWORK (GRADING SCHEME)

The assessment of examinations for the programme of study by coursework is based on the following grading scheme:

| Marks | Grade | Grade Point | Meaning |
|---|---|---|---|
| 90.00 – 100.00 | A+ | 4.0 | High Distinction |
| 80.00 – 89.99 | A | 4.0 | Distinction |
| 75.00 – 79.99 | A- | 3.7 | |
| 70.00 – 74.99 | B+ | 3.3 | Pass |
| 65.00 – 69.99 | B | 3.0 | |
| 60.00 – 64.99 | B- | 2.7 | Fail |
| 55.00 – 59.99 | C+ | 2.3 | |
| 50.00 – 54.99 | C | 2.0 | |
| 45.00 – 49.99 | C- | 1.7 | |
| 40.00 – 44.99 | D+ | 1.5 | |
| 35.00 – 39.99 | D | 1.0 | |
| 0.00 – 34.99 | F | 0.00 | |

## FAILED AND TERMINATED FROM PROGRAMME OF STUDY (COURSEWORK)

Based on the Universiti Malaya (Master's Degree) Regulations 2019 stated that a candidate is termed as failed and terminated from the programme of study if:

- Candidate does **not achieve at least a minimum passing grade** for the core course including compulsory courses by the Faculty **after three (3) attempts**.
- Obtains a **GPA of less than 3.00 for three (3) consecutive semesters** including Special Semester (if any).
- A candidate who is **re-admitted after being terminated** from his programme of study and obtains a CGPA of **less than 3.00 for the examinations** in the semester in which he has registered immediately upon re-admission will be terminated from his study.
- Fails to **fulfil the conditions and graduation requirements of the programme of study within the specified maximum duration**.
- **Failure to renew his candidature for two (2) consecutive semesters**.
- The candidate was found to **plagiarise his dissertation or research report** as stipulated under the Universiti Malaya (Discipline of Students) Rules 1999.
- The candidate was found to have **given false information pertaining to his admission** to the University or committed any academic dishonesty other than that stipulated in the Universiti Malaya (Discipline of Students) Rules 1999.

# MASTER OF ARCHITECTURE
**(Coursework)**

# [BQD] MASTER OF ARCHITECTURE (COURSEWORK)

## PROGRAM OVERVIEW

The programme is serviced by highly qualified and experienced academic staff including two (2) Associate Professors, two (2) Associate Professor (Industry) and fifteen (15) 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 200 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 spesific requirements for the Master of Architecture (by Coursework) and the Master of Project Management (by Coursework) programme:

A. **UM graduates with Bachelor of Science in Architecture** degree can be considered if they meet all of the following criteria:

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation.
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of six (6) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 2.70 – 2.99**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twenty-four (24) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 2.70 – 2.99**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and 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:

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation.
- Attained an overall grade of 'B' and above for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of twelve (12) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

**Candidates with CGPA of 3.00 and above**

- Obtained the Board of Architects Malaysia (LAM) Part 1 accreditation
- Attained an overall grade of 'B -' and below for Architectural Design Studio course in the final semester of the undergraduate degree program.
- Completed a minimum of thirty-six (36) months working experience upon completion of the undergraduate degree.
- Pass competency interview (Interview, portfolio and technical drawing test).

C. 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 physically at Universiti 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 Universiti Malaya (UM).

## PROGRAMME FEES

https://study.um.edu.my

## PROGRAM STRUCTURE AND ASSESSMENT

This program consists of fourteen (14) core courses and three (3) elective courses. Each course is delivered over a 17-week period (normal semester) or 9-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 LEARNING OUTCOMES (PLO)

Graduate will be able to:

**PLO1** Command adequate knowledge in the field of design, research, sustainable building technology and environment, culture, theory & philosophy, urban studies, professional practice rules, regulation and management.

**PLO2** Command adequate practical skills and use of computer software in researching, designing, presenting and managing the architectural projects to meet the requirements of clients and stakeholders in the construction industry.

**PLO3** Demonstrate social skills and responsibility towards the society and environment in designing, researching, managing and implementing architectural projects.

**PLO4** Practicing ethical values, professionalism and integrity in the process of designing, researching, managing and implementing professional practices in the field of architecture.

**PLO5** Communicate effectively in groups in managing architectural projects and demonstrate leadership skills and teamwork abilities in performing tasks related to the field of architecture.

**PLO6** Apply scientific research skills in decision making and solving design and technical related issues for works related to the field of architecture.

**PLO7** Command adequate ICT information management skills and practice the concept of lifelong learning by relating to resources for deeper applications in completing works related to the field of architecture.

**PLO8** Command adequate management and entrepreneurial skills in the implementation of architectural projects optimally and professionally.

## PROGRAMME COORDINATOR

**Ar. Dr. Mohd Firrdhaus Mohd Sahabuddin**
Coordinator for Master of Architecture (by Coursework)
Ph.D in Sustainable Architecture (Strathclyde, Glasgow)
M.Sc Advanced Sustainable Design (Edinburgh, UK)
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## ADMINISTRATIVE STAFF

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## COURSE STRUCTURE

### Year 1

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | BQD 7001 | Advanced Architectural Design I | 7 | BQD 7005 | Advanced Architectural Design II | 7 | BQD 7008 | Pre-Thesis Research | 3 | 35 |
| | BQD 7002 | Green and Sustainable Technology I | 3 | BQD 7006 | Architectural Comparative Studies | 3 | BQD 7009 | Research Methodology | 3 | |
| | BQD 7003 | Professional Practice | 3 | BQD 7007 | Architect and Construction Management | 3 | | | | |
| | BQD 7004 | Architectural Theory and Philosophy | 3 | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 35 |

### Year 2

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | **BQD 7010** | Architectural Design Thesis Lab I | 8 | **BQD 7015** | Architectural Design Thesis Lab II | 8 | | | | 27 |
| | **BQD 7018** | Architectural Research I | 5 | **BQD 7016** | Green and Sustainable Technology II | 3 | | | | |
| | | | | **BQD 7019** | Architectural Research II | 3 | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1) | **BQD 7012** | Advanced Building Conservation | 3 | | | | | | | 3 |
| | **BQD 7013** | Advanced Urban Studies | 3 | | | | | | | |
| | **BQD 7014** | Advanced Sustainability | 3 | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 30 |

## SYLLABUS SUMMARY

**BQD 7001** **ADVANCED ARCHITECTURAL DESIGN I**

7 credits

Through this course, students will:

- design a small-scale masterplan & its urban appraisal report.
- design a complex institutional building typology from the small-scale master plan, which addresses the architectural project issues, urban studies and sustainable design strategies.

At the end of the course, students are able to:

- Appraise the urban development of selected location for planning a small-scale masterplan concept and design.
- Integrate the findings of precedent studies on climatically responsive buildings, green building approach, building performance and design simulation for a complex institutional building typology.
- Integrate passive and active architectural design strategies for a complex institutional building typology.
- Design appropriate architectural solutions for a complex institutional building typology via drawings and models in addressing the architectural project issues, urban studies and sustainable design strategies.

**BQD 7002** **GREEN AND SUSTAINABLE TECHNOLOGY I**

3 credits

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:

- Building physics
- Design & fire protection
- Environmental performance
- Design integration of building servicesOther related topics
- The course will also involve precedents studies.

At the end of the course, students are able to:

- Determine the advantages and disadvantages of conventional and 'green' building services.
- Illustrate elements of green building services and building environmental control strategies to enhance the ability to design according to the concept of sustainability.
- Analyse the applicability of green building services and building environmental control.

**BQD 7003** **PROFESSIONAL PRACTICE**

3 credits

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:

- Types of practice
- Code of Conduct and Conditions of Engagement
- Marketing strategies
- Financial management, fees, remuneration and expenses
- Managing work distribution and human resources.

At the end of the course, students are able to:

- Explain different types of architectural practices as professional business entities.
- Adapt principles of marketing strategies for architectural practices.
- Explain the fees, remuneration and expenses of an architectural practice.
- Explain the work distribution model in an architectural practice according to agreement of appointment and phases of work.

**BQD 7004** **ARCHITECTURAL THEORY AND PHILOSOPHY**

3 credits

The course would cover the importance of architectural theories and philosophies as part of the design process with emphasis on knowledge and methods of design in creating meaningful design.

At the end of the course, students are able to:

- 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.
- Explain the theories, philosophies and manifestos of various architects or architectural movements based on their differing characters and values.
- Synthesize the theories and philosophies of various architects or architectural movements based on their salient features.

**BQD 7005** **ADVANCED ARCHITECTURAL DESIGN II**

7 credits

Ability to design a highrise building that takes into consideration green design strategies, social and cultural aspects.

At the end of the course, students are able to:

- Integrate feasibility study, building statutory and other development requirements to justify the viability of the highrise project.
- Appraise lessons learned from precedent studies research for highrise project in an urban context.
- Integrate views, opinions and green design strategies gathered from discussions with people of different cultural backgrounds or related disciplines professionally into the highrise project.
- Design appropriate architectural solutions for the highrise project via drawings and models in addressing the architectural project issues, site planning, urban studies, social-cultural issues, universal design and green design strategies.

**BQD 7006** **ARCHITECTURAL COMPARATIVE STUDIES**

3 credits

This course introduces the students to:

- the culture, site and context in architecture
- design impact of the building
- comparative studies between local and abroad
- building styles
- significant cultural and social aspects
- specific technical and/or environmental studies.
- Students will have the opportunity to present research findings effectively and professionally.

At the end of the course, students are able to:

- Study issues of culture, site and context in architecture of a site outside Malaysia and the influence of different civilisations on architecture.
- Analyze the design of selected buildings and sites in terms of concept, space, structure, materials, sustainability and uniqueness.
- Demonstrate the presentation of research findings effectively and professionally.

**BQD 7007** **ARCHITECT AND CONSTRUCTION MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Master the course of a construction project from the letter of appointment of contractor to the handover of site to the project owner.
- Explain management knowledge and tools in managing construction and work progress in accordance with the building contract.
- Explain in detail the roles and responsibilities of an architect and relevant consultants during the five-construction phase.

**BQD 7008** **PRE-THESIS RESEARCH**

3 credits

Through this course, students will:

- Conduct an in depth study to form a viable and suitable architectural design thesis project with adequate complexity.
- Identify, analyse and develop a proposal for the design thesis project.
- 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.

At the end of the course, students are able to:

- Determine the conceptual framework based on research topic to assist the formulation of a design brief.
- Prepare a comprehensive report for the proposed topic.
- Appraise selection of design topic/project.

**BQD 7009** **RESEARCH METHODOLOGY**

3 credits

Students will be exposed to:

- library search
- research methodology
- scientific research elements
- problem formulation process and hypotheses
- research design
- data collection
- research findings
- writing up

At the end of the course, students are able to:

- Apply qualitative and/or quantitative research methods suitable to the research scope, data analysis and academic writing.
- Determine theory and techniques of research development and implementation.
- Justify research arguments based on findings from literature review.

**BQD 7010** **ARCHITECTURAL DESIGN THESIS LAB I**

8 credits

Students will develop works that were produced in BAGS6203 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

At the end of the course, students are able to:

- Develop design thesis concept based on areas of research such as sustainable design, building typology, conservation/adaptive reuse, site/ issue-driven arguments and community architecture.
- Translate design concept into detailed architectural design scheme.
- Analyse site through series of studies from macro to micro level.
- Explain design thesis project through verbal and architectural graphics.

**BQD 7018** **ARCHITECTURAL RESEARCH I**

5 credits

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. Students will continue the title/ topic or issue that has been suggested in the Research Methodology (BQD7009) course and continue the research towards scholarly writing. Each student will be supervised by a lecturer who will advise and monitor the process of conducting research and progress in writing.

At the end of the course, students are able to:

- Appraise literature review critically.
- Report primary and related data.
- Analyse data and syntheses findings.
- Prepare an academic report.

**BQD 7015 ARCHITECTURAL DESIGN THESIS LAB II**

8 credits

This course is a continuation of the development of conceptual design, ideas and scheme explored in BQD7010 Architectural Design Thesis Lab I. The emphasis is on the development of:

- architectural design proposal
- design Special Study
- design proposal report

Students will be able to:

- Translate design concept into a detailed architectural design proposal.
- Develop a special study that focuses on the core ideas of the design thesis project.
- Explain design thesis project through verbal and architectural graphics.
- Explain design proposal in a written report.

**BQD 7016 GREEN AND SUSTAINABLE TECHNOLOGY II**

3 credits

This course will expose the students to:

- analyses, discussions and applications of the sustainability concept
- green building construction
- green building materials in green building design
- environmental impact assessments (EIA)
- green building rating methods

At the end of the course, students are able to:

- Master various methods of 'green' building construction and the characteristics of green building materials.
- Propose green building solutions into the studio architectural design project.
- Explain the sustainability, performance and cost-effectiveness of green buildings utilising available building assessment software.

**BQD 7019 ARCHITECTURAL RESEARCH II**

3 credits

This course totally depends totally on discussions between the student and supervisor. Discussions cover:

- various levels of refereed journals or other publication
- communication with publisher
- writing research papers
- preparing a submission-ready manuscript
- graphic presentation techniques

At the end of the course, students are able to:

- Organize architectural research thesis outcome.
- Appraise ready-made information.
- Prepare an academic paper.

## ELECTIVE COURSES

**BQD 7012** **ADVANCED BUILDING CONSERVATION**

3 credits

The course focuses on the basic theories in the practice of conservation, an understanding of which is vital for responsible conservation of architectural heritage. It includes 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. It also 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.

At the end of the course, students are able to:

- Determine the principles of building conservation that emphasizes on the importance of cultural significance, authenticity and integrity of built forms.
- Master various forms of conservation practice in architecture, international conventions and guidelines on conservation of cultural properties and relevant existing Malaysian legislations.
- Explain best conservation practices related to the use of materials, techniques, approaches, philosophies, measured drawings, dilapidation surveys and conservation statements.

**BQD 7013** **ADVANCED URBAN STUDIES**

3 credits

Through this course, students will acquire:

- Overview of the major concepts and ideas of urban design dimension, theory and practice, urban development policy and land use policy
- Undertake critique of both contemporary and traditional urban design projects and concepts.
- Situate urban design theories and practices within the fields of urban planning, architecture, landscape architecture and property.

At the end of the course, students are able to:

- Determine major concept of urban design dimensions, theories, practices and policies.
- Master basic implementation of urban design, policies and strategies in contemporary and traditional urban design projects and concepts.
- Explain an existing urban development area using urban design theories and practices in urban planning, architecture, landscape architecture and property.

**BQD 7014** **ADVANCED SUSTAINABILITY**

3 credits

This course will expose students to:

- Building analysis simulation software;
- Principles of living buildings;
- Influence of climatic conditions on buildings;
- Technical aspect of living buildings;
- Consideration of various dimensions of building functionality in proposing living building solutions.

At the end of the course, students are able to:

- Examine the energy usage intensity and daylighting of the building.
- Formulate innovative techniques for buildings to adapt to the climate without human intervention.
- Modify the design of a proposed building into a living building.

# MASTER OF FACILITIES & MAINTENANCE MANAGEMENT

**(Coursework)**

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

## PROGRAM OVERVIEW

The programme aims to produce professional Facilities Management and Maintenance (MFMM) 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 physically after-office and / or weekend session for Conventional Mode candidates at the Universiti Malaya's Faculty of Built Environment.
- The Online classes will only be conducted for the Online & Distance Learning (ODL) candidates.
- The medium of instruction are taught fully in English.
- 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 Universiti Malaya (UM).

## PROGRAMME FEES

https://study.um.edu.my

## PROGRAMME LEARNING OUTCOMES (PLO)

Graduate will be able to:

| | |
|---|---|
| **PLO1** | Synthesize knowledge, skills and good management practice in the field of facilities management and building maintenance |
| **PLO2** | Integrate knowledge and ability in solving building facilities problems with critical, creative and innovative approach |
| **PLO3** | Communicate and work collaboratively in a learning environment ethically and professionally. |

**PLO4** Adapt application and systems to address defined and new situations in consultation works.

**PLO5** Demonstrate significant autonomy, independence, leadership and interpersonal skills in collaborative learning.

**PLO6** Apply latest development of techniques, resources and tools in facilities and maintenance management research.

**PLO7** Demonstrate adherence to legal, ethical and professional code of practice in facilities and maintenance management.

**PLO8** Demonstrate awareness for entrepreneurial skills and sustainable development projects.

**PLO9** Exemplify self advancement through continuous academic and professional development in facilities and maintenance management.

## PROGRAMME COORDINATOR

**Sr Dr. Brennan Brit Anak Kayan**
Coordinator for Master of Facilities and Maintenance Management (by Coursework)
PhD (Construction Management), Heriot-Watt University, UK
MSc (Building), University of Malaya
BSc (Hons) (Building Surveying), University of Malaya
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## ADMINISTRATIVE STAFF

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Universiti Malaya
Telephone: 03 – 7967 6856
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## COURSE STRUCTURE

### Master of Facilities & Maintenance Management (*Conventional*)

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL 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 (prerequisite subject) | 3 | BQC 7015 | Research Project (prerequisite subject) | 12 | BQC 7014 | Digital Facilities Management | 5 | 43 |
| | BQC 7003 | Organisational Behaviour and Resource Management | 3 | BQC 7013 | Workplace, 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 SUBJECTS (CHOOSE 1) | BQC 7010 | Sustainable & Environmental Management | 3 | | | | | | | 3 |
| | BQC 7011 | Corporate Real Estate | 3 | | | | | | | |
| | BQC 7012 | Principles of Project Management | 3 | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 46 |

## COURSE STRUCTURE

### Master of Facilities & Maintenance Management (*Online & Distance Learning - Odl*)

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL 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 7001D | Research Methodology (prerequisite subject) | 3 | BQC 7002D | Research Project (prerequisite subject) | 12 | BQC 7014D | Digital Facilities Management | 5 | 43 |
| | BQC 7003D | Organizational Behaviour and Resource Management | 3 | BQC 7013D | Workplace, Productivity & Wellbeing | 4 | | | | |
| | BQC 7004D | Operation & Maintenance | 4 | BQC 7008D | Financial & Business Management | 4 | | | | |
| | BQC 7005D | Total Asset & Facilities Management | 4 | | | | | | | |
| | BQC 7006D | Procurement & Contract Management | 4 | | | | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1) | BQC 7010D | Sustainable & Environmental Management | 3 | | | | | | | 3 |
| | BQC 7011D | Corporate Real Estate | 3 | | | | | | | |
| | BQC 7012D | Principles of Project Management | 3 | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 46 |

## PREREQUISITE COURSE

Candidates need to register and complete the **BQC7001 / BQC7001D – Research Methodology** before proceed with **BQC7015 / BQC7002D - Research Project** in the following semester.

## SYLLABUS SUMMARY

**BQC 7001 / BQC 7001D** **RESEARCH METHODOLOGY**

3 credits

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.

At the end of the course, students are able to:

- Illustrate processes and methods in designing research in the field of facilities and maintenance management.
- Adapt research methods and systematic approaches in research planning.
- Display self advancement in making research plans.

**BQC 7015 / BQC 7002D** **RESEARCH PROJECT**

12 credits

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.

At the end of the course, students are able to:

- Design research objectives based on problems in the field of Facilities and Maintenance Management.
- Perform empirical data collection based on identified research methodology.
- Analyze the data and findings of the study based on the objectives of the study.
- Present the result of the study to various groups effectively.

**** Pre-requisite: BQC7001/BQC7001D Research Methodology*

**BQC 7003 / BQC 7003D** **ORGANIZATIONAL BEHAVIOUR AND RESOURCE MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Identify teamwork skills in management organization which include relationship of individual, industries and workplace environment
- Interpret knowledge of theories in organizational concept and effective resource management
- Explain issues and problems in organization and human behaviour through critical and practical approach.

**BQC 7004 / BQC 7004D** **OPERATION & MAINTENANCE**

4 credits

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.

At the end of the course, students are able to:

- Propose procedures for operation and maintenance of asset and facilities
- Identify guideline and legislation in the current practices of asset and facilities maintenance
- Adapt techniques and technologies in asset and facilities maintenance

**BQC 7005 / BQC 7005D** **TOTAL ASSET AND FACILITIES MANAGEMENT**

4 credits

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 the theories in forecasting and managing future financial requirements.

At the end of the course, students are able to:

- Appraise the total asset & facilities management theory.
- Adapt strategic and operational total facilities management approaches to fulfil the core organizational objectives.
- Propose appropriate quality management approach in achieving value added in operational maintenance and facilities management.

**BQC 7006 / BQC 7006D** **PROCUREMENT & CONTRACT MANAGEMENT**

4 credits

This course introduces how business support are developed and outsourced competitively via strategic or conventional framework.Students will also learn how procurement (pre and post) of asset and facilities management are managed as part of the operational delivery of a built asset. In post procurement phase, it involves the creation, analysis, and execution of contract (i.e., SLA) by the parties to those contracts to ensure value for money and, added value is built-in, and risks are mitigated. SLAs are output-based in that their purpose is specifically to define what the customer will receive and experience. This course enables student to draft an SLA and logistics decisions-making to develop and implement reliable service, and predictable manner for measuring performance and innovative solutions.

At the end of the course, students are able to:

- Explain the type, process, procedure, procurement and liability of contract.
- Integrate the key component parts in a Service Level Agreement
- Propose performance measurement system for facilities management service contract
- Develop service level agreement for facilities management service delivery.

**BQC 7008 / BQC 7008D** **FINANCIAL AND BUSINESS MANAGEMENT**

4 credits

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.

At the end of the course, students are able to:

- Identify the theories and application of business and financial management in facilities management
- Appraise the suitable financial management techniques towards effective facilities and business performance
- Integrate the function of financial analysis in organizational decision making.

**BQC 7013 / BQC 7013D** **WORKPLACE, PRODUCTIVITY AND WELLBEING**

4 credits

Introduction to physical and environmental quality in the workplace, and ways of producing desirable environments in organization, energy aspects, resources and healthy work culture. 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.

At the end of the course, students are able to:

- Identify the importance of ergonomics, design principles and practices in the workplace.
- Adapt methods of workplace assessment and energy audit in buildings.
- Solve workplace performance and users wellbeing through sustainable or green building solutions.

**BQC 7014 / BQC 7014D** **DIGITAL FACILITIES MANAGEMENT**

5 credits

Candidate will learn and demonstrate the application and integration of Digitalization tool in FM. The initiation of digital FM will transform and provide new ways to the building industry. This course aims to enable students to acquire skills and knowledge on digital FM focusing on Building Information Modelling Facilities Management (BIMFM). The core relating to these two imperative areas of BIM and FM, starting from theory introduction, to hands on implementation of the theory and innovate tools.

At the end of the course, students are able to:

- Acquire theoretical knowledge and good practice in digital construction and facilities management
- Integrate precise data and information requirements through BIM applications in facilities management.
- Develop digital analytical techniques in solving building facilities issues and challenges critically, creatively and innovatively.

## ELECTIVE COURSES

**BQC 7010 / BQC 7010D** **SUSTAINABLE AND ENVIRONMENTAL MANAGEMENT**

3 credits

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 & 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.

At the end of the course, students are able to:

- Identify sustainable development principles and practices in facilities management
- Evaluate sustainable development principles in facilities management to mitigate environmental risks.
- Display professional skills in achieving sustainable environmental management system.

**BQC 7011 / BQC 7011D** **CORPORATE REAL ESTATE**

3 credits

This course provides an understanding on the management and strategic planning of corporate real estate assets. This course introduces the tools and techniques to develop corporate real estate (CRE) strategies. The course also covers procurement analysis, corporate relocation, space strategy and corporate real estate asset performance measurement.

At the end of the course, students are able to:

- Determine major concept of urban design dimensions, theories, practices and policies.
- Master basic implementation of urban design, policies and strategies in contemporary and traditional urban design projects and concepts.
- Explain an existing urban development area using urban design theories and practices in urban planning, architecture, landscape architecture and property.

**BQC 7012 / BQC 7012D** **PRINCIPLES OF PROJECT MANAGEMENT**

3 credits

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)

At the end of the course, students are able to:

- Appraise the concept and principles of project management.
- Analyse effective project management methodology towards successful and effective projects.
- Coordinate effective project plan covering the period of the project, monitoring and controlling the project delivery (including implementation and closure).

# MASTER OF PROJECT MANAGEMENT

**(Coursework)**

# [BQB] MASTER OF PROJECT MANAGEMENT (COURSEWORK)

## 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 spesific requirements for the Master of Project Management programme:

1. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with CGPA of 3.00 and above; OR
2. Professional qualification from a recognized professional body; OR other qualifications as written by the Senate from time to time;

   **AND**

3. Have at least one (1) year of project-related working experience in related field upon completion of Bachelor Degree; OR
4. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with CGPA of 2.70 to 2.99 with a minimum of two (2) years of project-related working experience in related field upon completion of Bachelor Degree; OR
5. Bachelor's Degree in Science or Non-Science qualification in a relevant discipline from a recognized University with CGPA of 2.50 to 2.69 with a minimum of three (3) years of project-related working experience in related field upon completion of Bachelor Degree and fulfils one (1) of the following criteria:
   - Universiti Malaya (UM) graduate; OR
   - Produce at least one (1) publication in related fields; OR
   - Scholarship recipient; OR
6. Bachelor's Degree with CGPA of 2.00 to 2.49 with a minimum of five (5) years of project-related working experience in related field and fulfils upon completion of Bachelor Degree two (2) of the following criteria:
   - Universiti Malaya (UM) graduate; OR
   - Produce at least one (1) publication in related fields; OR
   - Scholarship recipient; OR

## 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 physically after-office and / or weekend session for Conventional Mode candidates at the Universiti Malaya's Faculty of Built Environment.
- The Online classes will only be conducted for the Open & Distance Learning (ODL) candidates.
- The medium of instruction are taught fully in English.
- 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 Universiti Malaya (UM).

## PROGRAMME FEES

https://study.um.edu.my

## PROGRAMME STRUCTURE AND ASSESSMENT

This program consists of eleven (11) courses. Each course is delivered over a 17-week period (normal semester). The courses are assessed by examination and/or continuous assessment.

## PROGRAMME LEARNING OUTCOMES (PLO)

Graduate will be able to:

**PLO1** Demonstrate in-depth comprehension of the knowledge areas in the project management body of knowledge

**PLO2** Apply project management knowledge critically and integratively to manage and resolve complex problems and issues in project environment

**PLO3** Apply the tools and techniques related to project management in work environment

**PLO4** Assess strategic options and being able to make decisions with supporting evidence and providing good judgement.

**PLO5** Demonstrate the ability to provide clear, reasonable and professional views in all forms of communications

**PLO6** Demonstrate significant leadership and interpersonal skills in managing work within project environment independently and collaboratively

**PLO7** Exemplify self-advancement through continuous academic and professional development in project management

**PLO8** Contribute ethically and professionally to social, technological and economic development in the project environment both nationally and internationally

## PROGRAMME COORDINATOR

**Associate Professor Sr Dr. Umi Kalsum Zulkifli @ Zolkafli**
Coordinator for Master of Project Management (by Coursework)
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
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## ADMINISTRATIVE STAFF

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## COURSE STRUCTURE

### Master of Project Management (*Conventional*)

Year 1

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | BQB 7001 | Research Methodology for Project Management (prerequisite subject) | 3 | BQB 7017 | Research Project I (prerequisite subject) | 5 | | | | 24 |
| | BQB 7004 | Principles of Project Management | 3 | BQB 7016 | Integrated Project | 4 | | | | |
| | BQB 7005 | Project Management Professional Development | 3 | BQB 7008 | Project Management Professional Development II | 3 | | | | |
| | BQB 7006 | Organizations and Strategic Management for Projects | 3 | | | | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | | | | BQB 7011 | Health and Safety Management | 3 | | | | 3 |
| | | | | BQB 7012 | Legal Studies for Project Management | | | | | |
| TOTAL CREDIT | | | | | | | | | | 27 |

Year 2

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | BQB 7018 | Research Project II (prerequisite subject) | 7 | | | | | | | 13 |
| | BQB 7009 | Value and Risk Management for Projects | 3 | | | | | | | |
| | BQB 7010 | Project Investment and Financial Management | 3 | | | | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | BQB 7013 | Assets and Facilities Management | 3 | | | | | | | 3 |
| | BQB 7014 | IT Management for Projects | | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 16 |

## COURSE STRUCTURE

### Master of Project Management (*Online & Distance Learning - Odl*)

Year 1

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | BQB 7001D | Research Methodology for Project Management (prerequisite subject) | 3 | BQB 7002D | Research Project I (prerequisite subject) | 5 | | | | 24 |
| | BQB 7004D | Principles of Project Management | 3 | BQB 7016D | Integrated Project | 4 | | | | |
| | BQB 7005D | Project Management Professional Development | 3 | BQB 7008D | Project Management Professional Development II | 3 | | | | |
| | BQB 7006D | Organizations and Strategic Management for Projects | 3 | | | | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | | | | BQB 7011D | Health and Safety Management | 3 | | | | 3 |
| | | | | BQB 7012D | Legal Studies for Project Management | | | | | |
| TOTAL CREDIT | | | | | | | | | | 27 |

Year 2

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL CREDIT |
|---|---|---|---|---|---|---|---|---|---|---|
| | SEM 1: NORMAL SEMESTER | | | SEM 2: NORMAL SEMESTER | | | SEM 3: SPECIAL SEMESTER | | | |
| | CODE | COURSE | CDT | CODE | COURSE | CDT | CODE | COURSE | CDT | |
| CORE SUBJECTS | BQB 7015D | Research Project II (prerequisite subject) | 7 | | | | | | | 13 |
| | BQB 7009D | Value and Risk Management for Projects | 3 | | | | | | | |
| | BQB 7010D | Project Investment and Financial Management | 3 | | | | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | BQB 7013D | Assets and Facilities Management | 3 | | | | | | | 3 |
| | BQB 7014 | IT Management for Projects | | | | | | | | |
| TOTAL CREDIT | | | | | | | | | | 16 |

## PREREQUISITE COURSE

Candidates need to register and complete the **BQB7001/ BQB7001D – Research Methodology for Project Management** before proceed with **BQB7017/ BQB7002D - Research Project I** and then after with **BQB1018/ BQB7015D - Research Project II** in the following semester.

## SYLLABUS SUMMARY

**BQB 7001 / BQB 7001D** **RESEARCH METHODOLOGY FOR PROJECT MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Propose different types of qualitative and quantitative methods related to the assessment, methods of project management, data interpretation and report writing.
- Evaluate research reports with critical thinking and problem-solving skills.
- Select the theory and technique development and implementation of research in related fields.

**BQB 7017 / BQB 7002D** **RESEARCH PROJECT I**

7 credits

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.

At the end of the course, students are able to:

- Evaluate fundamental knowledge including theories, concepts, frameworks, literature and issues in the field of project management.
- Manage the collection and analysis of secondary data using appropriate techniques in an ethical and professional manner.
- Identify research methods and analytical techniques that are appropriate to the chosen research topic.

**BQB 7018 / BQB 7015D** **RESEARCH PROJECT II**

5 credits

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 a balance of about 4-6 comprising about data collection, analysis and conclusions. It also includes a complete research report produced by integrated with previous chapters that have been generated during the course investigational Project I and comply with the procedures earnings reports research projects required by the university.

At the end of the course, students are able to:

- Carry out the collection and analysis of primary data using appropriate techniques in an ethical and professional manner.
- Evaluate the achievement of the objectives of research, the research questions / hypotheses and research findings.
- Compose a report of research projects using appropriate format and recommended academic references and citation style.

**BQB 7004 / BQB 7004D** **PRINCIPLES OF PROJECT MANAGEMENT**

3 credits

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).

At the end of the course, students are able to:

- Interpret the concept and principles of project management.
- Identify effective project management methodology towards successful and effective projects.
- Develop effective project plan covering the period of the project, monitoring and controlling the project delivery (including implementation and closure).

**BQB 7005 / BQB 7005D** **PROJECT MANAGEMENT PROFESSIONAL DEVELOPMENT I**

3 credits

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:

- Project Integration Management,
- Project Scope Management,
- Project Schedule Management,
- Project Cost Management, and
- Project Quality Management.

At the end of the course, students are able to:

- Explain about Project Management Body of Knowledge (PMBOK).
- Justify best practices recognized by the discipline of project management for implementation into a successful project management.
- Propose a successful project management disciplines through a strong foundation, intellectually, and professionally.

**BQB 7006 / BQB 7006D** **ORGANIZATIONS AND STRATEGIC MANAGEMENT FOR PROJECTS**

3 credits

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.

At the end of the course, students are able to:

- Interpret the concept and principles of organization and strategic management for the project.
- Specify the context of strategic management and project organization.
- Solve the relate it to organisation and project strategic management.

**BQB 7016 / BQB 7016D** **INTEGRATED PROJECT**

4 credits

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.

At the end of the course, students are able to:

- Appraise the interests of the combination and integration of knowledge.
- Relate concepts, principles, techniques and the academic knowledge acquired.
- Use the knowledge gained and confidence to solve problems.

**BQB 7008 / BQB 7008D** **PROJECT MANAGEMENT PROFESSIONAL DEVELOPMENT II**

3 credits

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:

- Project Resource Management,
- Project Communication Management,
- Project Risk Management,
- Project Procurement Management, and
- Project Stakeholder Management.

At the end of the course, students are able to:

- Explain about Project Management Body of Knowledge (PMBOK).
- Identify best practices recognized by the discipline of project management for implementation into a successful project management.
- Propose a successful project management disciplines through a strong foundation, intellectually, and professionally.

**BQB 7009 / BQB 7009D** **VALUE AND RISK MANAGEMENT FOR PROJECTS**

3 credits

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.

At the end of the course, students are able to:

- Interpret the value and risk management aspects that are needed in projects.
- Explain the concepts and principles of value and risk management in projects.
- Develop the skills and methods of implementation of value and risk management in the context of projects.

**BQB 7010 / BQB 7010D** **PROJECT INVESTMENT AND FINANCIAL MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Explain the financial concepts, especially opportunity cost and time value of money.
- Evaluate the ways in which business plans are developed and the role of projected financial statements in the planning process.
- Adapt financial management methods professionally and ethically for short-term and long-term business finance implications

## ELECTIVE COURSES

**BQB 7011 / BQB 7011D** **HEALTH AND SAFETY MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Develop perspectives on comprehensive occupational safety and health management.
- Coordinate the role of safety and health at all levels within the organisation including investigation and safety planning activities.
- Assess different perspectives of safety and health performance using the programme and procedures for effective implementation in the project.

**BQB 7012 / BQB 7012D** **LEGAL STUDIES FOR PROJECT MANAGEMENT**

3 credits

This course focuses on the legal issues that will emerge throughout the project management life cycle. It includes issues on rights and liabilities, agency and representation, formation and negotiation of contracts, as well as implications on project
management and contract procurement strategy. This module will also touch on ethical and professionalism issues in project management, and provide exposure on the dispute avoidance and settlement methods.

At the end of the course, students are able to:

- Interpret the legal issues related to rights and liabilities, agency and representation, formation and negotiation of contracts throughout the project management life cycle.
- Specify the legal implications on the issues related to ethics, project management and contract procurement strategy throughout the project management life cycle.
- Solve the conflict through dispute avoidance and settlement methods throughout the project management life cycle.

**BQB 7013 / BQB 7013D** **ASSETS AND FACILITIES MANAGEMENT**

3 credits

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 & maintenance; which use higher cost of facilities.

At the end of the course, students are able to:

- Understand the strategies and operational facility management.
- Translating the main capital through proper maintenance and achieve the value of the cost of daily operations
- Apply appropriate management theory to meet the core objectives of a business.

**BQB 7014 / BQB 7014D** **INFORMATION TECHNOLOGY MANAGEMENT FOR PROJECTS**

3 credits

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.

At the end of the course, students are able to:

- Integrate knowledge in a business context and technical developments of the management aspects of information technology in contemporary projects
- Use conceptual and analytical skills to the management of information technology projects
- Formulate comprehensive business and information technology strategy using skills acquired in managing complex projects.

# MASTER OF REAL ESTATE
**(Coursework)**

# [BQA] MASTER OF REAL ESTATE (COURSEWORK)

## 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 physically after-office and / or weekend session for Conventional Mode candidates at the Universiti Malaya's Faculty of Built Environment.
- The Online classes will only be conducted for the Online & Distance Learning (ODL) candidates.
- The medium of instruction are taught fully in English.
- The program is delivered through lectures, tutorials and seminars.

## CONFERMENT OF DEGREE

Upon successful completion of the program, students will be conferred the **Master of Real Estate** degree from the Universiti Malaya (UM).

## PROGRAMME FEES

https://study.um.edu.my

## PROGRAMME STRUCTURE AND ASSESSMENT

This program consists of twelve (12) courses apportioned as follows: Semester 1 has four (4) compulsory courses and one (1) elective course. In Semester 2, candidates need to register four (4) compulsory courses and one (1) elective course from a choice of three courses. Meanwhile in Semester 3 (Special Semester) candidates need to register for one (1) compulsory course. The courses are assessed by examination and / or continuous assessment.

## PROGRAMME LEARNING OUTCOMES (PLO)

Graduate will be able to:

| | |
|---|---|
| **PLO1** | Apply the real estate knowledge and skills in the real estate industry |
| **PLO2** | Adapt the relevant approaches related to real estate |
| **PLO3** | Use up-to-date techniques, resources and/or standards in their jobs |
| **PLO4** | Interact professionally with clients or stakeholders |
| **PLO5** | Develop analytical and problem solving skills |
| **PLO6** | Able to make decisions, lead, motivate and communicate effectively in a career |
| **PLO7** | Integrate personal skills for professional development and real estate entrepreneurship |
| **PLO8** | Demonstrate ethical values and professionalism in performing tasks to meet the needs of clients, the profession and society |

## PROGRAMME COORDINATOR

**Dr. Noorame Mohd Foudzy**
Coordinator for Master of Real Estate
PhD (Property Finance & Investment), Universiti Malaya
M. (Real Estate), Universiti Malaya
B. (Hons) Estate Management, Universiti Malaya
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## ADMINISTRATIVE STAFF

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## COURSE STRUCTURE

### Master of Real Estate (*Conventional*)

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL 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 7001 | Research Methodology in Real Estate (prerequisite subject) | 3 | BQA 7018 | Research Project I (prerequisite subject) | 6 | BQA 7019 | Research Project II (prerequisite subject) | 6 | 39 |
| | BQA 7003 | Development Economics and Planning | 4 | BQA 7006 | Real Estate Development Process | 4 | | | | |
| | BQA 7012 | Real Estate Law | 4 | BQA 7015 | Real Estate Market Research | 4 | | | | |
| | BQA 7013 | Real Estate Finance and Investment | 4 | BQA 7016 | Real Estate Valuation | 4 | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | BQA 7009 | Corporate Real Estate | 3 | BQA 7009 | Corporate Real Estate | 3 | | | | 6 |
| | BQA 7010 | Real Estate Project Management | | BQA 7010 | Real Estate Project Management | | | | | |
| | BQA 7011 | Sustainable Real Estate Development | | BQA 7011 | Sustainable Real Estate Development | | | | | |
| TOTAL CREDIT | | | | | | | | | | 45 |

## COURSE STRUCTURE

### Master of Real Estate (*Online & Distance Learning - ODL*)

| COMPONENTS | SEMESTERS | | | | | | | | | TOTAL 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 7001D | Research Methodology in Real Estate (prerequisite subject) | 3 | BQA 7014D | Research Project I (prerequisite subject) | 6 | BQA 7017D | Research Project II (prerequisite subject) | 6 | 39 |
| | BQA 7003D | Development Economics and Planning | 4 | BQA 7006D | Real Estate Development Process | 4 | | | | |
| | BQA 7012D | Real Estate Law | 4 | BQA 7015D | Real Estate Market Research | 4 | | | | |
| | BQA 7013D | Real Estate Finance and Investment | 4 | BQA 7016D | Real Estate Valuation | 4 | | | | |
| ELECTIVE SUBJECTS (CHOOSE 1 ONLY) | BQA 7009D | Corporate Real Estate | 3 | BQA 7009D | Corporate Real Estate | 3 | | | | 6 |
| | BQA 7010D | Real Estate Project Management | | BQA 7010D | Real Estate Project Management | | | | | |
| | BQA 7011D | Sustainable Real Estate Development | | BQA 7011D | Sustainable Real Estate Development | | | | | |
| TOTAL CREDIT | | | | | | | | | | 45 |

## PREREQUISITE COURSE

Candidates need to register and complete the **BQA7001 / BQA7001D – Research Methodology for Real Estate** before proceed with **BQA7018 / BQA7014D - Research Project I** and then after with **BQA7019 / BQA7017D - Research Project II** in the following semester.

## SYLLABUS SUMMARY

**BQA 7001 / BQA 7001D** **RESEARCH METHODOLOGY IN REAL ESTATE**

3 credits

This course provides an understanding and guidance on research and research methodology. Students are provided with the knowledge on literature review and the design of research framework. At the end of this course, the students will be able to prepare a research proposal.

At the end of the course, students are able to:

- Review relevant literature for the proposed study
- Propose a significant research problem with research questions, aim, objectives and significance of study
- Adopt suitable methodology for the proposed study

**BQA 7003 / BQA 7003D** **DEVELOPMENT ECONOMICS AND PLANNING**

4 credits

This course provides an overview of economics and planning in real estate development. Among others this course covers land economics, urbanisation issues and government intervention in real estate market.

At the end of the course, students are able to:

- Illustrate theories and issues related to real estate development and design.
- Describe real estate issues in the real estate development process.
- Evaluate problem solving measures in land development.

**BQA 7006 / BQA 7006D** **REAL ESTATE DEVELOPMENT PROCESS**

4 credits

This course covers stakeholders and processes in real estate development. It also includes marketing and appraisal of the proposed development project.

At the end of the course, students are able to:

- Identify real estate development process models.
- Explain relevant attributes of a successful property development.
- Appraise the performance and viability of the development project.

**BQA 7012 / BQA 7012D** **REAL ESTATE LAW**

4 credits

The course provides students knowledge in law related to real estate development which includes land, building and environmental laws [Federal Constitutions, National Land Code 1965, Town and Country Planning Act 1976, Local Government Act 1976, Street, Drainage and Building Act 1974, Environmental Quality Act 1974 and Housing Development Act (Control and Licensing) 1966.

At the end of the course, students are able to:

- Explain the legal framework in real estate law.
- Relate the different law provisions to real estate development stages.
- Evaluate the importance of various law provisions for real estate development.

**BQA 7013 / BQA 7013D** **REAL ESTATE FINANCE AND INVESTMENT**

4 credits

This course provides an understanding of the types of real estate finance system available at Malaysian and global contexts. The course also includes the process used by financial institutions in Malaysia in determining the financial position of the bridging and end financing of a development project. It also provides an understanding of various types of investment, investment analysis techniques and risk elements in real estate.

At the end of the course, students are able to:

- Identify the principles of financial and investment property.
- Evaluate the performance of real estate investment.
- Use real estate financial analysis and investment techniques in decision-making related to real estate investment

**BQA 7018 / BQA 7014D** **ORGANIZATIONS AND STRATEGIC MANAGEMENT FOR PROJECTS**

6 credits

This course involved a sustained, in-depth and research-informed project in consultation with the supervisor. At this stage, students will produce Chapter 1 to Chapter 3, which includes the introduction, literature review and research methodology.

At the end of the course, students are able to:

- Develop concepts and frameworks based on issues in the field of real estate.
- Write a literature review of the research project.
- Apply a suitable research methodology for the research project.

**BQA 7015 / BQA 7015D** **REAL ESTATE MARKET RESEARCH**

4 credits

This course covers property market research topics including types of data, methods of data collection, survey design, sampling, data analysis, forecasting and market research findings.

At the end of the course, students are able to:

- Explain the real estate market research process.
- Evaluate real estate market research findings.
- Report real estate market research findings.

**BQA 7016 / BQA 7016D** **REAL ESTATE VALUATION**

4 credits

This course covers methods of valuation and discounting techniques; Market, Cost and Income approaches as outlined by the Malaysian Valuation Standards in determining the Market Value of various types of property.

At the end of the course, students are able to:

- Explain the different property valuation approaches.
- Apply the valuation methods and discounting techniques.
- Justify the suitability of valuation methods for different types of property.

**BQA 7019 / BQA 1017D** **RESEARCH PROJECT II**

6 credits

This course involved a sustained, in-depth and research-informed project in consultation with the supervisor. At this stage, students will produce the final project report.

At the end of the course, students are able to:

- Conduct the collection and analysis of data using appropriate techniques.
- Prepare a report of research projects using appropriate format and recommended academic references and citation style.
- Demonstrate the knowledge acquired from the programme in the research project.

## ELECTIVE COURSES

**BQA 7009 / BQA 7009D** **CORPORATE REAL ESTATE**

3 credits

This course provides an understanding on the management and strategic planning of corporate real estate assets. This course introduces the tools and techniques to develop corporate real estate (CRE) strategies. The course also covers procurement analysis, corporate relocation, space strategy and corporate real estate asset performance measurement.

At the end of the course, students are able to:

- Explain the roles of corporate real estate asset in an organisation.
- Propose suitable strategies in corporate real estate.
- Evaluate corporate real estate holdings performance and tenure decision.

**BQA 7010 / BQA 7010D** **REAL ESTATE PROJECT MANAGEMENT**

3 credits

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.

At the end of the course, students are able to:

- Evaluate constraints, assumptions and other activities in real estate project management.
- Formulate measurable criteria for assessment of project performance and success.
- Identify the key needs and interests of stakeholders for successful execution of projects.

**BQA 7011 / BQA 7011D** **SUSTAINABLE REAL ESTATE DEVELOPMENT**

3 credits

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.

At the end of the course, students are able to:

- Identify sustainable development principles and practices in real estate development.
- Explain sustainable development principles in real estate development.
- Integrate sustainable development ethics and values in real estate development.

# MASTER & DOCTOR OF PHILOSOPHY

**(Research)**

# [BVA] DOCTOR OF PHILOSOPHY & [BMA] MASTER BY RESEARCH

## PROGRAM OVERVIEW

Candidates 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. Candidates may experience research attachments and collaborative exchange arrangements with internationally recognised research centres subject to availability.

## PROGRAMME STRUCTURE AND ASSESSMENT

This Ph.D and Master's programme are purely based on individual supervised research. Candidates will be exposed to [Code: BVX8001 / BMX7001] Research Methodology Course (3 Credits) to strengthen their research knowledge. At the end of the candidate's study, a thesis / dissertation must be submitted and upon successful defence, the candidate will be granted a Ph.D / a Masters' degree. 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. Meanwhile Master candidates' dissertation must not exceed 60,000 words and complete their studies within 8 semesters.

## PROGRAMME FEES

https://study.um.edu.my

## PROGRAMME COORDINATOR

**Sr Dr. Raha Sulaiman**
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## CANDIDACY

| | [BVA] DOCTOR OF PHILOSOPHY (BY RESEARCH) | [BMA] MASTER OF BUILT ENVIRONMENT (BY RESEARCH) |
|---|---|---|
| **Minimum period** | 4 semesters | 2 semesters |
| **Graduate on time** | 7 semesters (42 months from first registration) | - |
| **Maximum period** | 12 semesters | 8 semesters |

## REGISTERED CANDIDATE

A candidate will be classified as a registered candidate of the Universiti Malaya (UM) 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

1. Attend at least 3 credits of **[Code: BVX8001/BMX7001] Research Methodology Course not later than the second (2nd) semester** of candidature;
2. Candidates need to present his/her **initial research proposal in the Pre-Research Proposal at the end of Research Methodology Course**;
3. Fulfill attendance requirements for the **University Bahasa Malaysia course not later than the second (2nd) semester** of candidature (International Students only);
4. Present research proposal at **Proposal Defence not later than the second (2nd) semester** of candidature;
5. Present research progress at **Candidature Defence not later than the fifth (5th) semester** of candidature;
6. For PhD candidates only, present research progress at **Thesis Seminar before the submission of thesis for examination**. This is not applicable to Master' candidates.
7. Must show proof of acceptance for publication as per the following (according to the criteria set in the publication guidelines), prior to graduation:

   **For PhD candidates**

   - at least **one (1) article** in journals indexed by Web of Science (WoS) **OR**;
   - at least **one (1) article** in journals indexed in Scopus Q1/Q2 **OR**;
   - at least **two (2) articles** journals indexed in Scopus/ Emerging Sources Citation Index (ESCI) / ERA Journal List (Australian Research Council) **OR**;
   - at least **one (1) article** indexed in Scopus **AND two (2) articles** in Universiti Malaya Journals. **OR**;
   - at least **one (1) book** published by publishers listed in the Web of Science (WoS) Master Book List or by Universiti Malaya Press or Dewan Bahasa dan Pustaka or Majlis Penerbitan Ilmiah (MAPIM) or any publishers listed and recognized by the Faculty **OR**:
   - at least **two (2) book** chapters of different books published by publishers listed in the Web of Science (WoS) Master Book List, Majlis Penerbitan Ilmiah (MAPIM) or by Universit 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.

**For Master by Research candidates**

- at least **one (1) article** in journals indexed by Web of Science (WoS) **OR**;
- at least **one (1) article** in journals indexed in Scopus/Emerging Sources Citation Index (ESCI)/ERA Journal List (Australian Research Council) **OR**;
- at least **two (2) articles** journals indexed in Scopus/ Emerging Sources Citation Index (ESCI) / ERA Journal List (Australian Research Council) **OR**;
- at least **one (1) book** published by publishers listed in the Web of Science (WoS) Master Book List or by Universiti Malaya Press or Dewan Bahasa dan Pustaka or Majlis Penerbitan Ilmiah Malaysia (MAPIM) or any publishers listed and recognized by the Faculty **OR**:
- at least **one (1) book** chapters of different books published by publishers listed in the Web of Science (WoS) Master Book List, Majlis Penerbitan Ilmiah (MAPIM) or by Universiti Malaya Press or Dewan Bahasa dan Pustaka or any publishers listed and recognized by the Faculty.

8. Fulfill the residential requirement of **6 months**.

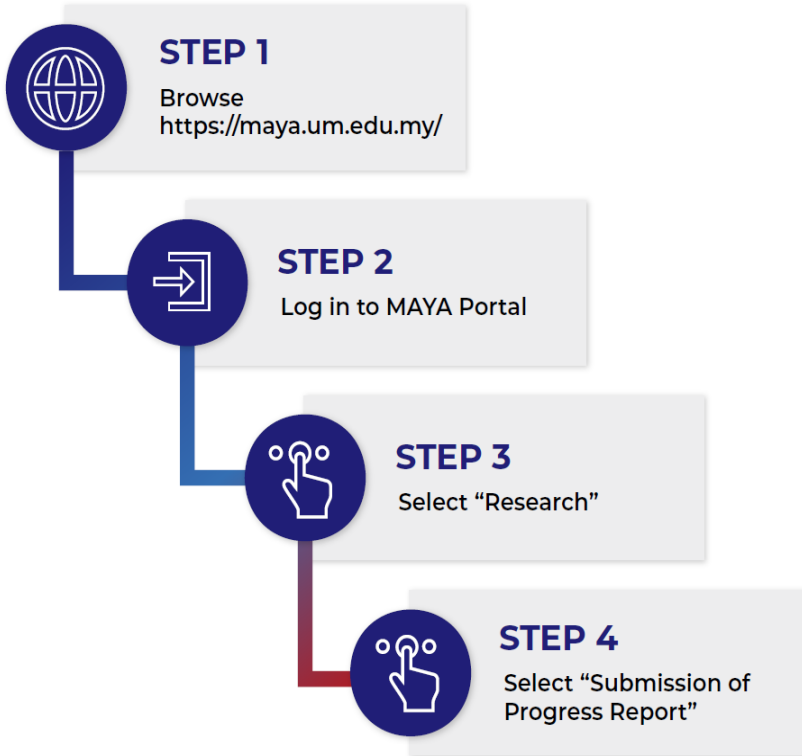
## ADDITIONAL REQUIREMENTS

Compulsory to attend the seminars/conference/workshop or special seminars organized by the faculty or others at least 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:




## CANDIDATURE REQUIREMENTS

1. **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
   - brief bibliography.

2. **Submission for the Confirmation Defence** (*applicable for direct admission / fast track 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:
   - introduction, statement of problem and scope of research;
   - research objective;
   - complete literature review;
   - credible research methodology;
   - importance and relevance of study;
   - initial findings (preliminary findings) / pilot test (if any)
   - proposed work schedule based on the designated date of submission of thesis/dissertation; and
   - brief bibliography.

3. **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:
   - abstract (500 words in Malay and English);
   - objective and Statement of Problem
   - importance and relevance of the study;
   - brief and concise literature review;
   - credible research methodology;
   - research findings that have been obtained to this point;
   - brief and concise bibliography;
   - research plan that will lead to the submission of the dissertation/thesis on the designated date; and
   - list of publications or conference papers presented during the candidature period.

4. **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. This applies only for PhD candidates.

5. **Submission of Thesis for Examination**

   Candidates shall submit their thesis for examination after the minimum period and within the maximum period of the candidature. Candidate must ensure that they will submit the thesis with the title which has been approved by the Faculty prior to submission of the thesis for examination. 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.

## FAILED AND TERMINATED FROM PROGRAMME OF STUDY

Based on the **Universiti Malaya (Doctoral Degree) Regulations 2019** and **Universiti Malaya (Master's Degree) Regulations 2019** stated that a candidate is termed as failed and terminated from the programme of study if:

1. The candidate's **progress report is unsatisfactory for two (2) consecutive semesters**.
2. **Fails in his/her Candidature Defense presentation twice (2)**.
3. **Fails in the thesis or dissertation's examination** and viva voce.
4. **Fails to fulfil the conditions and graduation requirements of the programme of study within the specified maximum** duration.
5. **Failure to renew his candidature for two (2) consecutive semesters**.
6. The candidate was found to **plagiarise his thesis or dissertation** as stipulated under the Universiti Malaya (Discipline of Students) Rules 1999.
7. Candidate was found to have **given false information pertaining to his admission** to the University or committed any academic dishonesty other than that stipulated in the Universiti Malaya (Discipline of Students) Rules 1999.

## CONVERSION OF CANDIDATURE STATUS FROM MASTER'S PROGRAMME BY RESEARCH TO A DOCTORAL PROGRAMME BY RESEARCH

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) counted from candidates' first registration during Master's programme. An application for this option should be made before the expiry of the third semester of study (no later than 15 months from registration).

## TERMS AND REQUIREMENTS

A full-time Master's by research candidate may be considered for a change in his candidature status to a full-time Doctoral programme by research, subject to the following conditions:

1. the duration of **application for the change of candidature is between twelve (12) to fifteen (15) months** from the commencement date of the registration for the Master's programme;
2. submit a **written application to the Supervisor** using the form provided;
3. submit **one (1) research report not exceeding 6,000 words** regarding:
   - introduction and scope of research;
   - research objectives;
   - research methodology;
   - research plans leading to the Doctoral programme.
4. submit **research findings during the duration of the Master's programme** which is:
   - a journal paper accepted for publication and a seminar presentation at the university or national or international level; OR
   - a patent application pending approval or approved and a seminar presentation at the university or national or international level;
5. A full-time candidate must **present their research findings in one (1) seminar** in front of a panel of assessors consisting of two (2) experts from within or outside the University in the field concerned as determined by the Faculty.
6. The candidature duration of the Master's degree is taken into account in the duration of the Doctoral programme by research.
7. A full-time candidate who has been approved for a change in candidature status shall register for the Doctoral programme by research not later than the second lecture week of the following semester.
8. A full-time candidate who has been approved for a change in candidature status need not to retake the Research Methodology course at the Doctoral programme by research level.
9. A full-time candidate who has been approved for a change in candidature status shall meet the graduation requirement.

## EVALUATION RUBRIC FOR PROPOSAL DEFENCE (PD) AND CANDIDATURE DEFENCE (CD)

The assessment of Proposal Defence (PD) is based on the evaluation criteria below:

| UNSATISFACTORY (unacceptable & requires major revision) | SATISFACTORY (acceptable with major revision) | GOOD (acceptable with minor revision) | EXCELLENT (acceptable with minor or no revision) |
|---|---|---|---|
| 0 - 4 | 5 - 6 | 7 - 8 | 9 - 10 |
| **Title and Abstract (5%)** | | | |
| The title does not reflect the proposal.<br><br>The abstract fail to address the following:<br>• the research purpose and objectives<br>• summarize methods used<br>• highlight the research gap | The title reflects the proposal to some extent.<br><br>The abstract attempt to address most of the following:<br>• the research purpose and objectives<br>• summarize methods used<br>• highlight the research gap | The title appropriately reflects the proposal.<br><br>The abstract addresses all of the following clearly:<br>• the research purpose and objectives<br>• summarize methods used<br>• highlight the research gap | The title aptly reflects the proposal.<br><br>The abstract addresses all of the following very clearly:<br>• the research purpose and objectives<br>• summarize methods used<br>• highlight the research gap |
| **Introduction (25%)** | | | |
| The introduction **fails to address most** of the following:<br>• problem/issues<br>• overview of a research framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction **attempts to address most** of the following:<br>• problem/issues<br>• overview of a research framework<br>• research questions /objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction **addresses** all the following appropriately:<br>• problem/issues<br>• overview of a research framework<br>• research questions /objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction addresses all the following **very clearly:**<br>• problem/issues<br>• overview of a research framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) |

| **Literature review (25%)** | | | |
|---|---|---|---|
| The **review fails to address most** of the following:<br>● Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature. summarize methods used<br>● Attention is given to different perspectives, threats to validity, and opinion vs evidence. | The review **attempts to address most** of the following:<br>● Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>● Attention is given to different perspectives, threats to validity, and opinion vs evidence. | The review appropriately addresses all of the following:<br>● Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>● Attention is given to different perspectives, threats to validity, and opinion vs evidence. | The review aptly addresses all the following:<br>● Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>● Attention is given to different perspectives, threats to validity, and opinion vs evidence. |
| **Conceptual Framework / Methods / Approach (20%)** | | | |
| The descriptions of the conceptual framework and methodology **fails to address most** of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method | The descriptions of the conceptual framework and methodology **attempts to address most** of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method | The descriptions of the conceptual framework and methodology appropriately address all of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method | The descriptions of the conceptual framework and methodology aptly address all of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method |

| Summary / Conclusion (5%) | | | |
|---|---|---|---|
| The summary/ conclusion fails to address most of the following:<br>● expected research outcome<br>● coherent connection between parts of the proposal<br>● preliminary findings (if applicable). | The summary/ conclusion attempts to address most of the following:<br>● expected research outcome<br>● coherent connection between parts of the proposal<br>● preliminary findings (if applicable). | The summary/ conclusion appropriately addresses all of the following:<br>● expected research outcome<br>● coherent connection between parts of the proposal<br>● preliminary findings (if applicable). | The summary/ conclusion aptly addresses all of the following:<br>● expected research outcome<br>● coherent connection between parts of the proposal<br>● preliminary findings (if applicable). |
| **Academic Style, Language and References (10%)** | | | |
| ● No consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language carries inappropriate tone and use of vague as well as inaccurate terminology, expressions and signposting. Language inaccuracies impede the readability of the proposal.<br>● Significant editing needed.<br>● Several errors per paragraph and informal language used in multiple instances.<br>● The reference list is incomplete and inaccurate. | ● Inconsistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language clearly lacks formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting. Language inaccuracies impede the full understanding of the proposal.<br>● Moderate editing needed.<br>● The reference list is incomplete and / or contains some inaccuracies.<br>● Adherence to word limit; not more than 500 words (abstract), 7,000 words (proposal report excluding reference) | ● Slightly lacking in consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language slightly lacks formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting.<br>● Some language errors are present but they do not affect a full understanding of the proposal.<br>● The reference list is mostly complete and accurate.<br>● Adherence to word limit; not more than 500 words (abstract), 7,000 words (proposal report excluding reference) | ● Consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language demonstrates formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting.<br>● There might be minimal first draft slips.<br>● The reference list is complete and accurate.<br>● Adherence to word limit; not more than 500 words (abstract); 7,000 words (proposal report excluding reference) |

| | | | |
|---|---|---|---|
| • No adherence to word limit; not more than 500 words (abstract), 7,000 words (proposal report excluding reference) | | | |
| **Communication / Presentation (Q&A) (10%)** | | | |
| • The candidate fails to demonstrate the following:<br>• Present research information in almost no logical sequence.<br>• Express ideas clearly, fluently, and confidently.<br>• Not able to answer most of the questions asked. | • The candidate attempts to demonstrate most of the following:<br>• Present research information in less logical sequence.<br>• Express ideas clearly, fluently, and confidently.<br>• Able to answer questions asked. | • The candidate demonstrates all the following appropriately:<br>• Present research information in sequence that can be followed.<br>• Express ideas clearly, fluently, and confidently.<br>• Good ability to answer questions asked. | • The candidate demonstrates all the following very clearly:<br>• Present research information in a logical, interesting and effective sequence and easy to follow.<br>• Express ideas clearly, fluently, and confidently.<br>• Very good ability to answer questions asked. |
| **TOTAL MARKS: 100%** | | | |

The assessment of Candidature Defence (CD) is based on the evaluation criteria below:

| UNSATISFACTORY (unacceptable & requires major revision) | SATISFACTORY (acceptable with major revision) | GOOD (acceptable with minor revision) | EXCELLENT (acceptable with minor or no revision) |
|---|---|---|---|
| 0 - 4 | 5 - 6 | 7 - 8 | 9 - 10 |
| **Introduction (10%)** | | | |
| The introduction fails to address most of the following:<br>• problem/issues<br>• overview of a research<br>• framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction attempts to address most of the following:<br>• problem/issues<br>• overview of a research framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction addresses all the following appropriately:<br>• problem/issues<br>• overview of a research framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/ definitions (if applicable) | The introduction addresses all the following very clearly:<br>• problem/issues<br>• overview of a research framework<br>• research questions / objectives<br>• significance of the study<br>• operational terms/definitions (if applicable) |
| **Literature review (25%)** | | | |
| The review fails to address most of the following:<br>• Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>• Attention is given to different perspectives, threats to validity, and opinion vs. evidence. | The review attempts to address most of the following:<br>• Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>• Attention is given to different perspectives, threats to validity, and opinion vs. evidence. | The review appropriately addresses all of the following:<br>• Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>• Attention is given to different perspectives, threats to validity, and opinion vs. evidence. | The review aptly addresses all of the following:<br>• Narrative integrates critical and logical details from the peer-reviewed theoretical and research literature.<br>• Attention is given to different perspectives, threats to validity, and opinion vs. evidence. |

| Conceptual Framework / Methods / Approach (20%) | | | |
|---|---|---|---|
| The descriptions of the conceptual framework and methodology fails to address most of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method<br>● validity and reliability / trustworthiness approaches<br>● ethical aspects and issues<br>● strengths and weakness of approach, technique, or procedures used | The descriptions of the conceptual framework and methodology attempts to address most of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method<br>● validity and reliability / trustworthiness approaches<br>● ethical aspects and issues<br>● strengths and weakness of approach, technique, or procedures used | The descriptions of the conceptual framework and methodology appropriately address all of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method<br>● validity and reliability / trustworthiness approaches<br>● ethical aspects and issues<br>● strengths and weakness of approach, technique, or procedures used | The descriptions of the conceptual framework and methodology aptly address all of the following:<br>● theoretical framework<br>● research sample, sample procedure and technique<br>● instrumentation<br>● data collection procedures<br>● data analysis method<br>● validity and reliability / trustworthiness approaches<br>● ethical aspects and issues<br>● strengths and weakness of approach, technique, or procedures used |
| **Results and Discussion (20%)** | | | |
| The results and discussion fail to illustrate most of the following:<br>● Answer the research questions and / or fulfill research objectives / hypotheses raised.<br>● Results are well analysed and interpreted.<br>● Findings address the research problems/issues.<br>● Show the research significance and contribution. | The results and discussion illustrate most of the following:<br>● Answer the research questions and / or fulfill research objectives / hypotheses raised.<br>● Results are well analysed and interpreted.<br>● Findings address the research problems/issues.<br>● Show the research significance and contribution. | The results and discussion appropriately illustrate all of the following:<br>● Answer the research questions and / or fulfill research objectives / hypotheses raised.<br>● Results are well analysed and interpreted.<br>● Findings address the research problems/issues.<br>● Show the research significance and contribution. | The results and discussion aptly illustrate all of the following:<br>● Answer the research questions and / or fulfill research objectives / hypotheses raised.<br>● Results are well analysed and interpreted.<br>● Findings address the research problems/issues.<br>● Show the research significance and contribution. |

| **Conclusion (10%)** | | | |
|---|---|---|---|
| The conclusion fails to do the following:<br>● Restate the objectives<br>● Summarize the findings<br>● Provide the research continuation plan. | The conclusion vaguely does the following:<br>● Restate the objectives<br>● Summarize the findings<br>● Provide the research continuation plan. | The conclusion clearly do the following:<br>● Restate the objectives<br>● Summarize the findings<br>● Provide the research continuation plan. | The conclusion clearly, and convincingly do the following:<br>● Restate the objectives<br>● Summarize the findings<br>● Provide the research continuation plan. |
| **Academic Style, Language and References (10%)** | | | |
| ● No consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language carries inappropriate tone and use of vague as well as inaccurate terminology, expressions and signposting. Language inaccuracies impede the readability of the proposal.<br>● Significant editing needed.<br>● Several errors per paragraph and informal language used in multiple instances<br>● The reference list is incomplete and inaccurate. | ● Inconsistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language clearly lacks formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting. Language inaccuracies impede the full understanding of the proposal.<br>● Moderate editing needed.<br>● The reference list is incomplete and / or contains some inaccuracies.<br>● Adherence to word limit; not more than 500 words (abstract), 10,000 words (proposal report excluding reference) | ● Slightly lacking in consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language slightly lacks formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting. Some language errors are present but they do not affect a full understanding of the proposal.<br>● The reference list is mostly complete and accurate.<br>● Adherence to word limit; not more than 500 words (abstract), 10,000 words (proposal report excluding reference) | ● Consistent use of style for references, in-text citations, proposal structure and specific mechanics.<br>● The academic language demonstrates formal and objective tone and use of clear, precise and accurate terminology, expressions and signposting. There might be minimal first draft slips.<br>● The reference list is complete and accurate.<br>● Adherence to word limit; not more than 500 words (abstract), 10,000 words (proposal report excluding reference) |

| | | | |
|---|---|---|---|
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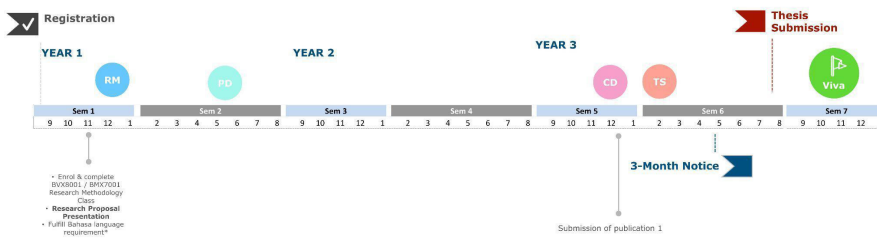
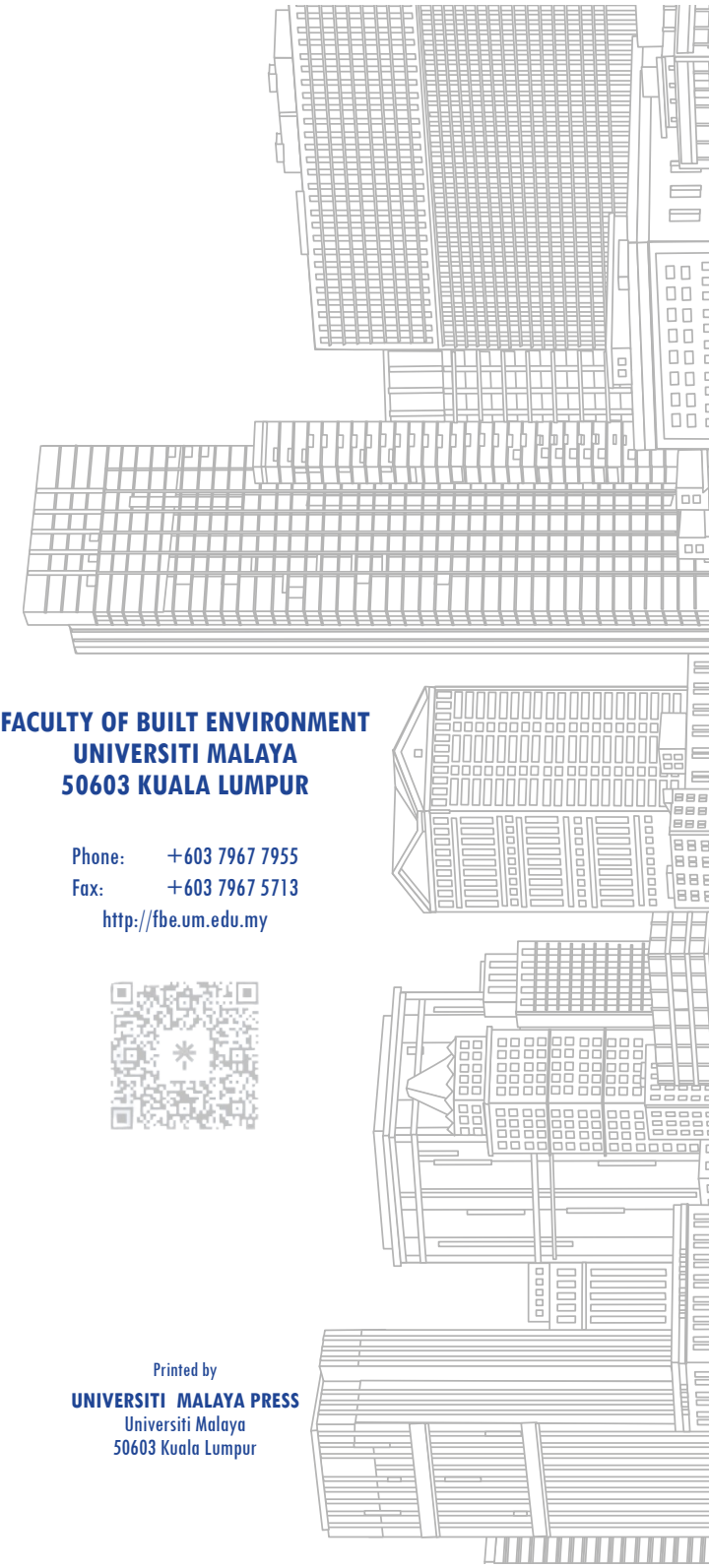
| **Communication / Presentation (Q&A) (10%)** | | | |
| The candidate fails to demonstrate the following:<br>• Present research information in almost no logical sequence.<br>• Express ideas clearly, fluently, and confidently.<br>• Not able to answer most of the questions asked. | The candidate attempts to demonstrate most of the following:<br>• Present research information in less logical sequence.<br>• Express ideas clearly, fluently, and confidently.<br>• Able to answer questions asked. | The candidate demonstrates all the following appropriately:<br>• Present research information in sequence that can be followed.<br>• Express ideas clearly, fluently, and confidently.<br>• Good ability to answer questions asked. | The candidate demonstrates all the following very clearly:<br>• Present research information in a logical, interesting and effective sequence and easy to follow.<br>• Express ideas clearly, fluently, and confidently.<br>• Very good ability to answer questions asked. |
| **TOTAL MARKS: 100%** | | | |

## IDEAL TIMELINE FOR GRADUATE ON TIME (GoT) - PHD PROGRAMME

PhD candidates may need to complete the Viva-voce session latest by 42 months of the candidacy or during Semester 7 and fulfil publication requirements according to the criteria set in the publication guidelines. The recommended timeline to graduate on time is based on the figure below.

PhD (ideal) timeline – Graduate on Time





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