



HBP

Booklet 2024/25

Undergraduate Programme



Quantity Surveying



CPM 2028
QS 2027
IA 2028
Archi 2027
BEST 2028
BS 2028
URP 2028

QS WORLD UNIVERSITY RANKINGS[®]
2022 *by subject*
ARCHITECTURE / BUILT ENVIRONMENT
TOP 100

Student Information	
Student Name:	
Matrix No.:	
Contact No.:	
Email Address:	
Academic Advisor Name:	

Bachelor of Science in **Quantity** **Surveying** with Honours



SCHOOL OF
HOUSING,
BUILDING &
PLANNING

Ranked **TOP 5**
among
Public Universities

& **TOP 100**
faculty in the
world by subject

Editors

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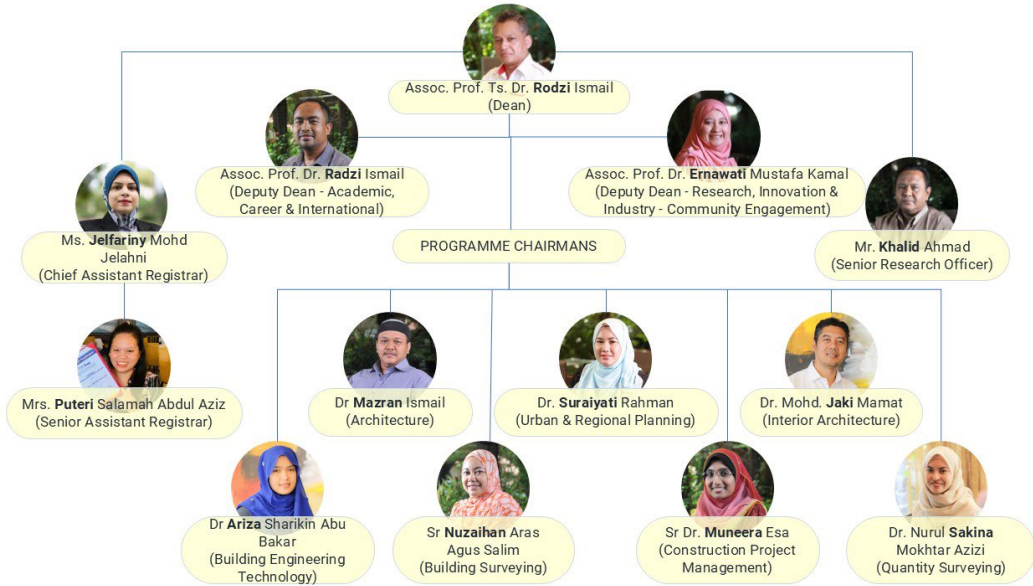
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Sponsor

Bahagian Akademik dan Antarabangsa USM (BAA)



School of Housing, Building and Planning (HBP) Organisation Chart, 2022 – 2024



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School of Housing, Building & Planning

Envisioned and crafted in 1972 as a holistic school entrusted with nation building and national development, the School of Housing, Building and Planning (HBP), Universiti Sains Malaysia (USM) opened its doors to the first batch of enrolled students in 1973. 50 years on, HBP has matured into a multi-disciplinary built environment institution that seamlessly entwines 7 fields of study into one comprehensive learning and teaching experience that is strong in fundamentals but mercurial in adapting to change, innovation and dynamism. The school has made tremendous progress in teaching, research, consultancy and publication.

Currently, there are seven undergraduate programmes offered by the school. They are recognized by the respective professional bodies such as the Board of Town Planners Malaysia (LPBM), Board of Architects Malaysia (LAM), Board of Quantity Surveyors Malaysia (BQSM), Royal Institution of Chartered Surveyors (RICS), Royal Institution of Surveyors Malaysia (RISM), and Chartered Institute of Building (CIOB).

Vision

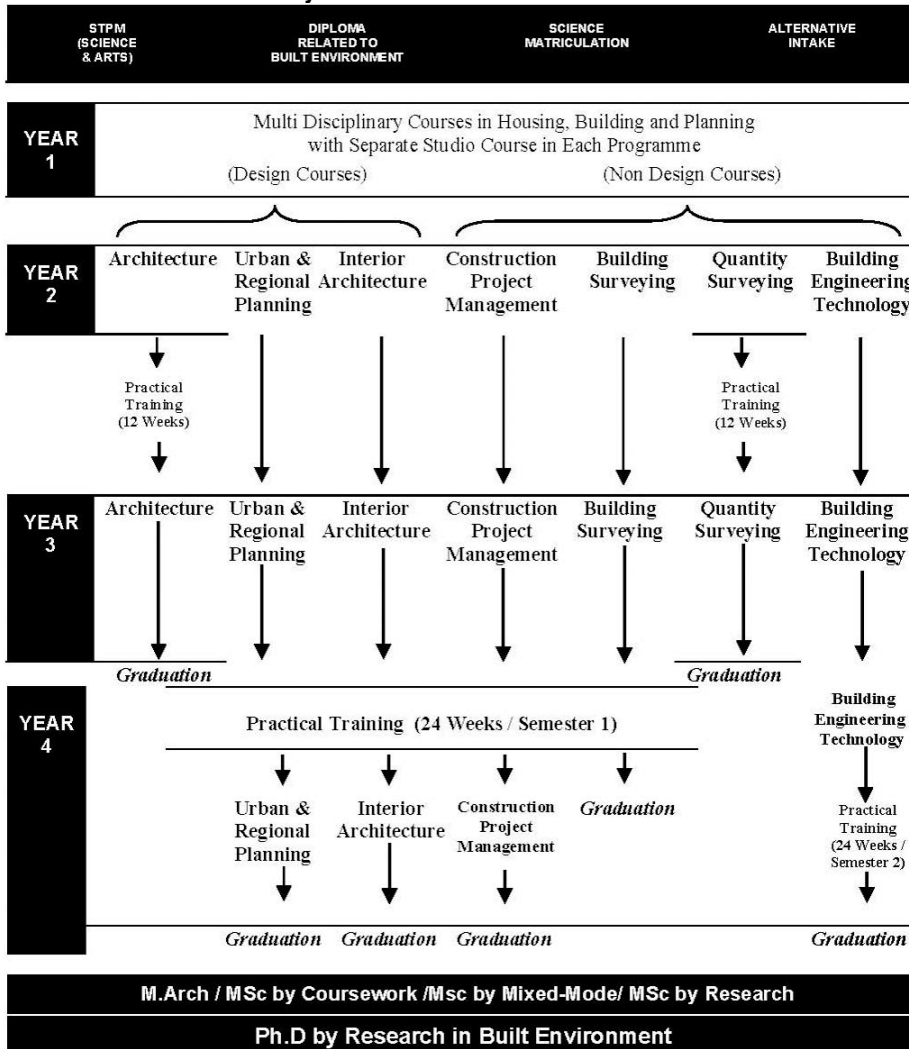
'Championing a sustainable future through comprehensive education and embracing a global perspective'

Mission

HBP as a prominent institution in the field of built environment education, cultivating transdisciplinary interconnectivity and committed to championing sustainability.



Study Path at The School of HBP



Programme Structure/Curriculum

Bachelor of Science (Housing, Building and Planning)(Honours)(Quantity Surveying)

The School of Housing, Building and Planning (HBP) offers a curriculum that is unique amongst programmes of advanced education dealing with the built environment. Where curricula in architecture, quantity surveying, engineering or planning are generally based upon a professional training in one of these disciplines, the School eschews professional specialism in favour of a broad based education cutting across both professional and disciplinary boundaries. As such, it is more correct to describe the broad focus of education at the School as a field of knowledge and skills, rather than the more narrowly focused concept of a single discipline. The students of HBP on the main campus USM Penang and Offshore Programme campus draw upon many different disciplines during the course of their studies, in so far as they are all relevant to the activities of housing, building and planning.

These theoretical and practical componen grouped in the curriculum according to the fo categories:

1. Courses in theory and methodology
2. Studio projects
3. Laboratory projects
4. Practical training
5. Research

R	A	S	1	2	3
				Courses in Series	
				00 - Studio	
				10 - Workshop/Laboratories	
				20 - Physical Environment Studies	
				30 - Theory and Methodology	
				40 - Cultural & Etiquette Studies	
				50 - Management Administration & Regulation	
				60 - Science and Technology	
				70 - Research and Practical	
				Course Level	
				Course Implementation:	
				S = Studio	
				B = Workshop/Laboratories	
				K = Lecture only	
				G = Combination of lectures and practicals	
				T = Combination of lectures & tutorial/seminar	
				L = Research	
				Course Classification:	
				U = General	
				A = Architecture	
				P = Urban & Regional Planning	
				M = Construction Management	
				D = Interior Architecture	
				E = Building Technology	
				Q = Quantity Surveying	
				B = Building Surveying	
				R - Code for the School of Housing, Building and Planning	

2.0 School Requirements

Courses

The requirements for students at the School of HBP are summarised as follows:

(A) Core Courses

These courses are mandatory for all students and they have to obtain a pass at minimum to graduate. These courses contain the fundamental topics of the School's curriculum and are coded 'T'.

(B) Elective Courses

Elective courses are alternative courses offered by the School. Students who have chosen to major in one of the programmes, are required to take certain related electives that are classified as priority. When this requirement is satisfied, the student may register for any other electives of their own choice. Code to be used is 'E'.

(C) Practical Training Course

All B.Sc. (HBP) students are required to undergo Practical Training for a period of 12 weeks during their long term vacation in their second year. Practical training carries 6 units.

3.0 Unit Requirements

Unit requirement for graduation is as follows:-

(A) **Bachelor of Science** in Quantity Surveying with Honours (3 years)

Bachelor of Science in Quantity Surveying with Honours (3 years) (QS)	
B.Sc.(HBP) Programme	Units
Core Courses	72
Elective Courses	36
University Courses	19
Total	127



3.1 Course Duration

Bachelor of Science in Quantity Surveying with Honours (3 years) (QS)

Period

Minimum semesters	6 (3 years)
Maximum semesters	10 (5 years)

For Core and Elective Courses:

- Grade F (Fail) will be required to repeat the course.
- Grade D- and above is considered as a passing grade (Pass)

For Studio Courses under the Core Courses:

- Grade of C and above is considered as a passing grade (except for Architecture Studio Courses which the passing grade is B-). Students obtaining grade C- (C+ for Architecture Studio Courses) and below will be required to repeat the course.

Repeat Courses:

- Students awarded with a grade 'C-' and below for a particular course may be given a chance to improve their grades by repeating the course during the KSCP or normal semester. Students awarded with a grade 'C' and above for a particular course will not be allowed to repeat the course whether during KSCP or normal semester.

3.2 Studio Courses

Studio courses are **mandatory** for all students to pass, i.e. with achievements of Grade C and above. Students obtaining Grade C- and below will be required to repeat the course.

QUANTITY SURVEYING (42 Units)

Code	Title
RQS101/7	Quantity Surveying Studio 1
RQS102/7	Quantity Surveying Studio 2
RQS201/7	Quantity Surveying Studio 3
RQS202/7	Quantity Surveying Studio 4
RQS303/7	Quantity Surveying Studio 5
RQS304/7	Quantity Surveying Studio 6

3.3 Quantity Surveying Programme

A. Core Courses (72 Units)

Code and Title		Unit	Semester	Year	TICK ✓
RQS 101	- Quantity Surveying Studio 1	7	1	1	
RQS 102	- Quantity Surveying Studio 2	7	2	1	
RQG 131	- Principles of Quantity Surveying	3	1	1	
RAG 161	- Building Construction I	3	1	1	
RQS 201	- Quantity Surveying Studio 3	7	1	2	
RQS 202	- Quantity Surveying Studio 4	7	2	2	
RQG 236	- Measurement 1	3	2	1	
RQG 237	- Measurement 2	3	1	2	
RUL 274	- Compulsory Practical Training	6	2	2	
RQG 358	- Professional Practice	3	2	3	
RQG 256	- Principles of Cost Management	3	1	2	
RQS 303	- Quantity Surveying Studio 5	7	1	3	
RQS 304	- Quantity Surveying Studio 6	7	2	3	
RQL 371	- QS Final Year Project	6	1&2	3	

B. Elective Courses (36 Units)

Code and Title		Unit	Semester	Year	TICK ✓
REG 161	- Construction Materials*	3	2	1	
RMK 153	- Principles of Construction Economics*	3	1	1	
RMK 156	- Health, Safety and Environmental Management *	3	1	2	
RMK 155	- Fundamentals of Construction Law*	3	1	1	
RMK 252	- Principles of Project Management*	3	2	2	
RMK 255	- Law and Practice of Construction Project Management 1*	3	2	2	
REG 261	- Building Services*	3	2	1	
RQB 261	- Computerised Quantity Measurement *	3	2	2	
REG 265	- Infrastructure Technology *	3	1	3	
RAG 265	- Building Construction 2*	3	2	2	
RMK 264	- Construction and Financial Management	3	2	1	
RMK 262	- Fundamentals of Construction Business and Accounting	3	1	2	
RQG 355	- Management, Sustainability and Internationalisation*	3	2	3	
REG 361	- Methods of Construction*	3	1	3	

* Recommended courses to meet the requirements approved by Board of Quantity Surveying Malaysia (BQSM)

4.0 University Requirements

19 units of University Courses are required for Quantity Surveying Program

UNIVERSITY COURSE REQUIREMENTS		CREDIT TOTAL		
		Local Students	International Students	
General Studies (MPU)				
U1	<u>Local Students</u> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ HFE224 (Appreciation of Ethics and Civilisations) (2 credits) ▪ LKM400 (Bahasa Malaysia IV) (2 credits) <u>International Students of Science and Technology</u> <ul style="list-style-type: none"> ▪ HFF225 (Philosophy and Current Issues) (2 credits) ▪ LKM100 (Bahasa Malaysia I) (2 credits) 	6	4	
U2 (Local Students) AND U3 (International Students)	<u>Local Students</u> <ul style="list-style-type: none"> ▪ WUS101 (Core Entrepreneurship) (2 credits) ▪ English Language Courses (4 credits) <u>International Students</u> <ul style="list-style-type: none"> ▪ SEA205E (Malaysian Studies) (4 credits) ▪ English Language Courses (4 credits) 	6	8	
U4	<u>Local Students</u> WAR122 (Integrity and Anti-Corruption Course) / Co-Curricular Courses*	<u>International Students</u> Co-Curricular Courses*	2	2
Options	Skill courses/Foreign Language Courses/ Other courses offered by other schools. Students have to choose any of the following: <ul style="list-style-type: none"> ▪ Co-curricular courses ▪ Skill courses/Foreign Language Courses/ Other courses offered by other schools 	5	5	
CREDIT TOTAL		19	19	

Course Structure

YEAR 1								
SEMESTER 1					SEMESTER 2			
RQS 101	Quantity Surveying Studio 1	T	7		RQS 102	Quantity Surveying Studio 2	T	7
RMK155	Fundamentals of Construction Law	E	3		REG 161	Construction Materials	E	3
RQG 131	Principles of Quantity Surveying	T	3		REG 261	Building Services	E	3
RAG 161	Building Construction I	T	3		RQG 236	Measurement 1	T	3
RMK 153	Principles of Construction Economics	E	3		WUS 101	Core Entrepreneurship	U	2
HFF 225	Philosophy and Current Issues	U	2		HFE 224	Appreciation of Ethics and Civilisations	U	2
UNITS			21		UNITS			20
YEAR 2								
SEMESTER 3					SEMESTER 4			
RQS 201	Quantity Surveying Studio 3	T	7		RQS 202	Quantity Surveying Studio 4	T	7
RQG 237	Measurement 2	T	3		RMK 252	Principles of Project Management	E	3
RMK 156	Health, Safety and Environmental Management	E	3		RAG265	Building Construction 2	E	3
RQG 356	Cost Management	T	3		RMK255	Law and Practice of Construction Project Management 1	E	3
					RQB 261	Computerized Quantity Measurement	E	3
	University Courses	U	4			University Courses	U	2
UNITS			20		UNITS			21
					SEMESTER 4 (Semester Break July-September)			
					RUL 274	Compulsory Practical Training		6
					UNITS			6
YEAR 3								
SEMESTER 5					SEMESTER 6			
RQS 303	Quantity Surveying Studio 5	T	7		RQS 304	Quantity Surveying Studio 6	T	7
REG 265	Infrastructure Technology	E	3		RQG 358	Professional Practice	T	3
REG 361	Methods of Construction	E	3		RQG 355	Management, Sustainability & Internationalisation	E	3
RQL 371	QS Final Year Project	T	TL		RQL 371	QS Final Year Project	T	6
	University Courses	U	5			University Courses	U	2
UNITS			18		UNITS			21
					Core Courses			T 72
					Elective Courses			E 36
					University Courses			U 19
					TOTAL UNITS			127

5.0 Course Synopsis

5.1 Practical Training

RUL 274– Compulsory Practical Training

This course emphasizes on compulsory practical training to students on matter related to practicing professional in related fields.

Learning Outcomes

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

- (i) Complete tasks assigned by a firm or organization in a professional manner
- (ii) Display the ability to solve problems based on industrial requirements
- (iii) Solve relevant design issues via teamwork

5.2 Courses in Quantity Surveying

RQS 101 – Quantity Surveying Studio 1

This course exposes students to roles and contribution of various disciplines in built environment. Students will be trained in aspects of drawing, material, building element and structures. This course enhances creativity, communication skill and perception on development process that involves analysis of issues and case study, specifications and detailing.

Learning Outcomes

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

- (i) Demonstrate engineering drawing and measured drawing skill using appropriate scale.
- (ii) Explain the technical aspects and construction structure as well as the stakeholder's role in project development
- (iii) Explain the stakeholders' roles and construction process clearly.
- (iv) Organize existing information for individual portfolio
- (v) Demonstrate leadership ability in assuring successful execution of planning.

RQS 102 – Quantity Surveying Studio 2

This course provides an understanding on building design morphology, infrastructure works, building services, building elements, various preliminary cost estimate methods, and environmental issues in construction industry.

Learning Outcomes

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

- (i) Explain design morphology, building services and infrastructure in the context of built environment
- (ii) Demonstrate calculation of preliminary cost estimates based on standard methods used in the field of quantity surveying
- (iii) Discuss the environmental issues that occurs in construction industry

RQG 131 – Principles of Quantity Surveying

This course introduces the construction industry and focuses on quantity surveying profession and their roles within the construction process. The course also covers basic understanding in building economics, procurement methods, types of contract, tendering process and cost estimating. It also focuses on various standard methods of measurement and mensuration principles.

Learning Outcomes

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

- (i) Explain the work scope of a quantity surveyor following the phase of project development
- (ii) Relate roles and functions of quantity surveyors in project development.
- (iii) Explain the opportunities, challenges and competencies of quantity surveyors in construction industry clearly

RMK 153 – Principles of Construction Economics

This course introduces the economic concepts of demand, supply and market equilibrium; market structures; costs and production and in identifying the main economic problems. Emphasis is also given to supply and demand as well as market structures in the

construction and building industries.

Learning Outcomes

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

- (i) Explain the economic principles and economic development model based on the current situation clearly in the construction industry
- (ii) Explore current problems in the construction industry and practices related to the construction economy.
- (iii) Report the results of the study in groups of the basic elements of building economic principles.

RMK 156 – Health, Safety and Environmental Management

The structure of this course covers the identification and control of hazards and the supervision of health, safety and environment management in the workplace within the context of the construction industry.

Learning outcomes:

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

- (i) Explain the basic concepts in the health, safety and environmental management of an organisation
- (ii) Select risk management best practices for application at construction site
- (iii) Differentiate acts and methods that are practiced for effective health, safety and environmental management in construction industry

RMK 252 – Principles of Project Management

The course content covers three knowledge areas comprising organization, management and planning techniques in construction projects.

Learning Outcomes

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

- (i) Explain the theory and concept of management and organization in construction project management
- (ii) Describe the psycho-social aspects of

management, organization and planning techniques in construction project management.

- (iii) Identify organizational management methods that are appropriate to the environment and changes of time in the construction industry

RMK 255 – Law and Practice of Construction Project Management 1

This course discusses the construction law in Malaysia, the relationship between the parties in construction industry from legal perspective and the application of standard form of contracts.

Learning Outcomes

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

- (i) Explain the legal concepts related to the Construction Industry
- (ii) Solve legal problems related to the construction industry in Malaysia.
- (iii) Complete assignments in groups based on the application of laws related to the construction industry

RMK 264 – Construction and Financial Management

The main objective of this subject is to introduce to the students the importance of construction management and method of financial analysis in construction industry.

Learning Outcomes

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

- (i) Differentiate of construction management and finance methods
- (ii) Evaluate of construction management method and financial analysis
- (iii) Show the calculation and financial analysis
- (iv) Complete the assignment in a group based on the construction management and financial knowledge

RMK 262 – Fundamentals of Construction Business and Accounting

This course introduces to students the process and applications of construction business and accounting fundamentals in the construction industry. There are two main sections: 1) to study the issues relating to business ownership, goals of the firm, procurement and tender system; and 2) to establish the elements of accounting systems and financial statements as well as the available banking facilities in the market.

Learning Outcomes

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

- (i) Explain the concept of construction business and accounting as well as related process.
- (ii) Differentiate the fundamental of construction business and accounting.
- (iii) Show the calculation in the accounting form.
- (iv) Complete the assignment in a group based on the fundamental of construction business and accounting knowledge.

REG 261 - Building Services

This course introduces the principles and design of various building service systems.

Learning Outcomes

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

- (i) Explain the concept of all building services components.
- (ii) Apply theories and techniques in designing building services systems.
- (iii) Propose the design of building services systems based on the relevant equations and design manuals.

REG 265 – Infrastructure Technology

This course focuses on the components of physical infrastructures that support the development of a nation, which includes roads, water supply system, drainage system, sewerage system, power system, communication system and other relevant public

facilities. Students will be exposed to the principles, components and the knowledge to design the infrastructure system. This course also discusses the technology being applied to develop such infrastructure by providing actual examples from the existing infrastructure and mega infrastructure projects in this country and overseas.

Learning Outcomes

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

- (i) Elaborate principles of each components of basic facilities which is needed in development
- (ii) Manipulate theories and techniques in designing infrastructure systems
- (iii) Propose the design of infrastructure components according to standards

REG 361 - Methods of Construction

This course exposes students to the construction process and methods. It emphasised the knowledge of the soil and tests involved; site work and construction of structure.

Learning Outcomes

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

- (i) Identify appropriate construction management methods according to current developments.
- (ii) Describe construction techniques at construction sites.
- (iii) Report construction issues using engineering principles.

RQS 201 – Quantity Surveying Studio 3

This course introduces professional quantity surveying practices with emphasis on pre-contract works which include cost budgeting, tendering process and contract management. Students will measure a small building to practice preparation of tender document.

Learning Outcomes

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

- (i) Explain the method in preparing a complete tender document and the tendering process.
- (ii) Present tendering and contract practice clearly
- (iii) Justify the use of clauses in the conditions of contract to solve contractual issues.
- (iv) Prepare cost-estimate documents in accordance with the appropriate methods and standards.

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

- (i) Demonstrate method of measurement and building element description in quantity measurement.
- (ii) Prepare quantity of each building elements in detail and accurately based on the Standard Method of Measurement 2 (SMM2).

RQS 202 – Quantity Surveying Studio 4

This course exposes students to the basic understanding of the role and contribution of various disciplines in the built environment. Students will be trained in all basic aspects of drawing, sketches, material, building element and building structures. Furthermore, this course will develop the creativity, communication skill and perception through development process that involves with site analysis, site planning, measured drawing, specification and detailing.

Learning Outcomes

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

- (i) Explain the types of project procurement and contract document in construction process
- (ii) Demonstrate the calculations of built-up rates, tender pricing and tender evaluation for a building project
- (iii) Present project procurement method and career development for Quantity Surveying profession clearly
- (iv) Organise sub-contract document and information for career development systematically

RQG 236 – Measurement 1

This course explains the basic principles of building measurement according to the Standard Methods of Measurement for Building 2 (SMM2) and covers the method of measuring quantities for all major building elements which includes substructure, superstructure, finishing, external works and Bills of Quantities (BQ) preparation.

Learning Outcomes

RQG 237 – Measurement 2

This course explains the basic principles of building and infrastructure measurement according to Standard Method of Measurement for Building 2 (SMM2) and Malaysian Civil Engineering Standard Methods of Measurement (MyCESMM) which also covers the method of measuring quantities for building and infrastructure elements which includes basements, piling, electrical installation, roadworks, drainage, sewer reticulation, water reticulation, structural steel, and external works.

Learning Outcomes

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

- (i) Demonstrate method of measurement and building element description in quantity measurement.
- (ii) Prepare quantity of each building elements in detail and accurately based on the Standard Method of Measurement 2 (SMM2) and Malaysian Civil Engineering Standard Method of Measurement (MyCESMM)

RQB 261 – Computerized Quantity Measurement

This course provides hands-on training in using special software to organize quantities measured from hardcopy drawings and to generate the Bill of Quantity (BQ) upon completion of the entire taking-off process. It also offers the same hands-on experience in using CAD software to take-off quantities from CAD drawings and finally the use of BIM application to extract and organize quantities from 3D CAD drawings for BQ purposes.

Learning Outcomes:

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

- (i) Identify methods in using software and preparation of bill of quantities in construction project
- (ii) Show the ability of using software to produce bill of quantities.
- (iii) Prepare building measurement quantities using relevant software and applications

RQS 303 – Quantity Surveying Studio 5

This course introduces professional QS practices with emphasis on management which includes value management, project management and organization and self-development. Construction contracts is also covered in this course.

Learning Outcomes

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

- (i) To demonstrate the application of value management, site management and organizational management for project planning.
- (ii) To solve project management issues as a team.
- (iii) Display ethical practices as professionals in the construction industry
- (iv) Present issues clearly and confidently.
- (v) Propose digitally the evolution to quantity surveying practices in creative and informative manner

RQS 304 – Quantity Surveying Studio 6

This course emphasizes on contemporary issues in local and international construction industry, professional practices and encourages participation in activities organized by professional body.

Learning Outcomes

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

- (i) To justify the decisions made in a construction project using the relevant evaluation method
- (ii) Organize QS Manual Practice using technology application.

- (iii) Differentiate work practices at local and international levels in the field of Quantity Surveying
- (iv) To propose entrepreneurial and management ideas in the context of the built environment
- (v) Demonstrate qualities of responsibility in planning of a project

RQG 355 – Management, Sustainability And Internationalisation

This course focuses on three area namely, management, sustainability and internationalization in construction industry and within the context of quantity surveyors. The management aspect covers entrepreneurship, leadership and organizational management. Sustainability includes green concept, heritage conservation and environmental regulation. Internationalisation covers economic policies, work expectation and services of working overseas.

Learning Outcomes:

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

- (i) Explain the theory and concept relating to organisational management, sustainability practices and internationalisation in the construction industry
- (ii) Relate the management practice, sustainability and career challenges in the context of built environment
- (iii) Discuss sustainability in built environment to safeguard the needs of social and environment aspects
- (iv) Justify management practices and entrepreneurship within quantity surveying firms

RQG 356 – Cost Management

This course focuses on cost management of both pre and post contract stage. Cost management at pre-contract covers cost modelling and cost budgeting studies while post-contract focuses on cost monitoring and cost control activities such as progress payment, extension of time, loss and expense, variation order

and final account. The theory of whole life cycle costing are also covered in this course.

Learning Outcomes:

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

- (i) Explain the theories of cost management used in the construction projek
- (ii) Relate theory and method of cost management in construction project
- (iii) Demonstrate the use of suitable cost management method in the pre and post contract

RQG 358 - Professional Practice

This course introduces the Quantity Surveyor Act and related professional bodies, followed by work ethics, values and responsibilities. Apart from that, this course also focuses on negotiation skills, management of consultant team and the changing role of quantity surveyors.

Learning Outcomes:

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

- (i) Explain professional practice and legal related to Quantity Surveying in Malaysia
- (ii) Relate QS professional practice with responsibilities, value and ethic of quantity surveyors
- (iii) Relate the importance of professionalism in quantity surveying professional practice.
- (iv) Explain method of quantity surveying firm establishments in Malaysia.

RQL 371 - Quantity Surveying Final Year Project

This course exposes students to the entire research process which include research proposal, literature review, conceptual and theoretical framework, quantitative and qualitative research methods as well as data analysis techniques. Students are required to work individually to produce a dissertation which will be evaluated through continuous supervision and viva voce.

Learning outcomes:

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

- (i) Relate literature review in producing suitable research proposal in built environment
- (ii) Identify critical issues for research and to Defend research findings in clear, creative and informative manner
- (iii) Conduct research work professionally and ethically
- (iv) Produce complete dissertation in built environment
- (v) Show responsibilities in implementing research project

RAG 265 – Building Construction 2

This course is a continuation of Building Construction 1 with emphasis on more complex building systems and advanced materials. It covers sub-structure, super structure and wide span roof structures. It also comprises of components such as piles, retaining walls, basements, in-situ reinforced concrete, precast concrete as well as steel frames and various floor systems and wall claddings.

Learning Outcomes

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

- (i) Describe the advanced building construction, materials, components and detailing with the aid of sketches.
- (ii) Draw construction detail drawings according to materials and appropriate building component systems with accuracy
- (iii) Analyse the application of the systems and process of construction with technical understanding in a comprehensive report
- (iv) Explain the research data information with good communication skills.

RAG 161 – Building Construction 1

This course introduces basic comprehension pertaining to building and materials used in the building components, beginning with systems, basic structure

and its building relationship. It covers the main component of substructure, superstructure, ceiling, building's envelope, materials and roof systems.

Learning Outcomes

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

- (i) Explain the basic theory of construction and building materials as well as explain the details of construction through sketches and labeling and a clear description
- (ii) Sketch building components in the form of technical drawings along with details using drawing equipment correctly.
- (iii) Explain with diagrams and building components with naming, analysis and sketch of building details.
- (iv) Present ideas clearly using technical communication methods to re-state visual observations and material specifications in the form of building model and technical drawings

**PROGRAMME STRUCTURE/CURRICULUM, SCHOOL OF HOUSING, BUILDING AND PLANNING
SESSION 2024-2025**

YEAR 1

CONSTRUCTION PROJECT MANAGEMENT		BUILDING ENGINEERING TECHNOLOGY		QUANTITY SURVEYING		URBAN AND REGIONAL PLANNING		INTERIOR ARCHITECTURE		ARCHITECTURE		BUILDING SURVEYING	
1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	Semester 1	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester
RMS 101/5	RMS 102/5	RES 103/7	RES 104/7	RQS 101/7	RQS 102/7	RPS 104/7	RPS 106/7	RDS 101/7	RDS 102/7	RAS 101/7	RAS 102/7	RBS 101/7	RBS 102/7
RMK 155/3	RMK 252/3	REG 131/3	REG 161/3	RMK 155/3	REG 161/3	RPK 131/3	RPK 123/3	RAG 121/3	RDB 263/3	RAG 121/3	RMK 252/3	RAG 121/3	RMK 233/3
RMK 156/3	RMG 131/3	REG 132/3	RMK 252/3	RQG 131/3	REG 261/3	RAG 121/3	RPK 133/3	RAG 132/3	RMK 252/3	RAG 132/3	REG 161/3	RAG 132/3	RMK 252/3
RMK 153/3	RMK 233/3	RMK 153/3		RAG 161/3	RQG 236/3	RAG 132/3		RAG 161/3		RAG 161/3		RAG 161/3	RAG 265/3
RAG 161/3	REG 261/3			RMK 153/3				RMK 153/3		REG 132/3		REG 132/3	

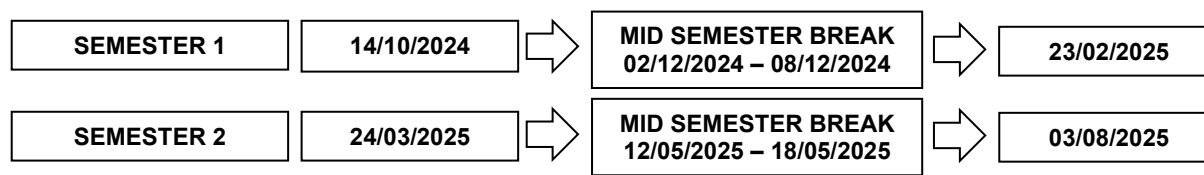
YEAR 2

CONSTRUCTION PROJECT MANAGEMENT		BUILDING ENGINEERING TECHNOLOGY		QUANTITY SURVEYING		URBAN AND REGIONAL PLANNING		INTERIOR ARCHITECTURE		ARCHITECTURE		BUILDING SURVEYING	
1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	Semester 1	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester
RMS 203/5	RMS 204/5	RES 203/7	RES 204/7	RQS 201/7	RQS 202/7	RPS 205/7	RPS 206/7	RDS 201/7	RDS 202/7	RAS 203/7	RAS 204/7	RBS 205/7	RBS 206/7
RMK 262/3	RMK 255/3*	REG 233/3	REG 261/3	RQG 237/3	RMK 252/3	RPK 221/3	RPG 235/3	RDG 235/3	RDB 217/3	RAK 232/3	RAG 265/3	RBK 351/3	RBG 231/3
RMK 234/3*	RMK 264/3*	REG 265/3	RMK 264/3	RMK 156/3	RAG 265/3	RPK 238/3	RPK 223/3	RAG 234/3	REG 261/3	RAG 234/3	RAK 244/3	RBG 262/3	RBG 263/3
RMK 363/3*	RMK 353/3*	REG 266/3	RQG 236/3	RMK 156/3	RMK 255/3	REG 233/3	RPK 232/3	RDG 262/3	RDG 323/3	RBG 351/3 or REG 266/3 or REG 233/3	RAG 232/3	RMK 234/3	RMK 353/3
RAG 132/3*	RAG 265/3*	RMK 155/3		RQG 356/3	RQB 261/3			RDG 313/3			REG 261/3		
REG 132/3*	RMK 357/3*												
*Choose 2 only	*Choose 3 only												
				RUL 274/6 (Practical Training)						RUL 274/6 (Practical Training)			

YEAR 3													
CONSTRUCTION PROJECT MANAGEMENT		BUILDING ENGINEERING TECHNOLOGY		QUANTITY SURVEYING		URBAN AND REGIONAL PLANNING		INTERIOR ARCHITECTURE		ARCHITECTURE		BUILDING SURVEYING	
1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester
RMS 305/5 RMK 336/3* REG 233/3* REG 265/3* RBG 351/3* REG 361/3* REG 468/3*	RMS 306/5 RMK 358/3* RAK 345/3* REG 360/3*	RES 301/7 REG 361/3 REG 371/3 RMK 156/3 RQG 237/3	RES 302/7 REL 300/3 REG 360/3 RQG 355/3	RQS 303/7 REG 265/3 REG 361/3 RQL 371/3	RQS 304/7 RQG 358/3 RQG 355/3 RQL 371/3	RPS 303/7 RPK 331/3 RPK 334/3 RPK 351/3	RPS 304/7 RPK 333/3 RPK 359/3 RPK 343/3* RAK 345/3* RMK 336/3* RMK 357/3*	RDS 301/7 RAG 333/3 RDG 334/3 RAK 232/3	RDS 302/7 RDB 314/3 RDG 336/3 RDG 366/3 RDG 370/3	RAS 305/7 RAG 333/3 RAK 346/3 RAL 371/3	RAS 306/7 RAG 322/3 RAK 345/3 RMK 255/3 REG 360/3	RBS 304/7 RBG 351/3 RBL 370/3 REG 361/3	RBS 307/5 RBG 332/3 RBL 372/3
*Choose 3 only		*Choose 2 only						*Choose 1 only					

YEAR 4									
CONSTRUCTION PROJECT MANAGEMENT		BUILDING ENGINEERING TECHNOLOGY		URBAN AND REGIONAL PLANNING		INTERIOR ARCHITECTURE		BUILDING SURVEYING	
1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester	1 st Semester	2 nd Semester
RUL 474/12 (Practical Training)	RML 470/6 RMK 455/3* RQG 355/3*	REL 400/5 REG 468/3 REG 469/3 RBG 351/3	REL 471/12 (Practical Training)	RUL 474/12 (Practical Training)	RPS 409/7 RPK 435/3 RPK 439/3 RPK 472/4	RUL 474/12 (Practical Training)	RDS 401/7 RDL 470/3	RBL 401/12	
*Choose 1 only									

Academic Calendar 2024/2025



University/Option	Units	} U
Bahasa Malaysia	: 2 unit	
English language/Other language	: 4 unit	
Appreciation of Ethics and Civilizations	: 2 unit	
Philosophy and Current Issues (for local)	: 2 unit	
Malaysian Studies (for international)	: 4 unit	
Core-Entrepreneurship (for local)	: 2 unit	
Co-Curriculum/Option/Skill Courses/Third language	: 7 unit	
i) BS, QS & IA	: 3 unit	
ii) Architecture & BeST	: 9 unit	
iii) Planning & CPM	: 19 unit	
Total Unit (BS, QS & IA)	: 15 unit	
Total Unit (Architecture & BeST)	: 21 unit	
Total Unit (Planning & CPM)	: 21 unit	

Notes: Maximum Units Allowed for Registration per Semester is 21 (including University/Option courses)

ACADEMIC ADVISORY SECTION

Semester _____

Academic
Session _____

SUGGESTED COURSE REGISTRATION

Course Code	Course Name	Type of Course	Unit

_____ **Student Signature** **Date**

COMMENT/SUGGESTION FROM ACADEMIC ADVISOR

_____ **Signature and Official Stamp Academic Advisor** **Date**

Semester _____

Academic Session _____

CURRENT STUDY INFORMATION					
No	Detail	Total Unit for Graduation		Total Unit Cumulative	
1	Core Courses	72			
2	Elective Courses	36			
3	University Courses	Local	International		
	U1	6	4		
	U2	6	8		
	U3				
	U4	2	2		
	Option	5	5		
4	Courses Exempted (Approved) Example: Course Code / Unit / Type (RMK262/3/T)			Total Unit (Courses Exempted)	
				Core	Elective
SUGGESTED COURSE REGISTRATION					
No	List of Course	Type of Course		Unit	
Student Signature		Date			
COMMENT/SUGGESTION FROM ACADEMIC ADVISOR					
Signature and Official Stamp Academic Advisor				Date	

*Note: Please show the study information from Campus Online during the discussion with the Academic Advisor.

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	Option	5	5	
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				Elective
SUGGESTED COURSE REGISTRATION				
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