



STUDENT HANDBOOK

2024/2025

FACULTY OF ENGINEERING
UNIMAS

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Relationship with :
student

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FOREWORD BY THE DEAN

Welcome to the Faculty of Engineering.

At the Faculty of Engineering, we are committed to fostering a learning environment that encourages creativity, critical thinking, and collaboration. Our curriculum is designed not only to equip you with the technical skills required in today's ever-evolving engineering landscape but also to nurture leadership qualities, ethical awareness, and a strong sense of responsibility towards society and the environment.

We believe that engineering is a discipline that plays a crucial role in shaping the future, solving global challenges, and improving the quality of life for all. Therefore, the faculty provides you with the tools, resources, and support needed to excel both academically and professionally.

I encourage you to take full advantage of the opportunities available here, engage with your professors and peers, and actively participate in both academic and extracurricular activities. Your time at the Faculty of Engineering will be challenging, but it will also be immensely rewarding.

Thank you for choosing to be a part of our community. We are excited to see you thrive and achieve great things.

Best wishes for your journey ahead!

ASSOC. PROFESSOR Ir. DR NORAZZLINA M. SA'DON
DEAN
FACULTY OF ENGINEERING

UNIMAS VISION

A leading global university for a sustainable future.

UNIMAS MISSION

To enhance the social and economic impacts. on the global community through the pursuit of excellence in teaching, research and strategic engagement.

UNIMAS CORE VALUES

Exemplary

We continuously strive to become role models to others through outstanding conducts. in both professional and personal contexts.

Collegiality

We value unity. We collaborate and cooperate towards achieving collective goals for the betterment of the University.

Integrity

We uphold accountability and fully commit to exceptional work ethic.

Tenacity

We do not give in to hardships. We practice persistence and resilience in managing and solving challenges.

Equity

We embrace differences and work towards a safe environment that values, respects. and offers fair opportunities to everyone in our community.

UNIMAS SENIOR MANAGEMENT



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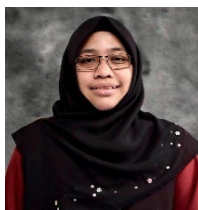


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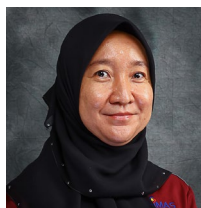
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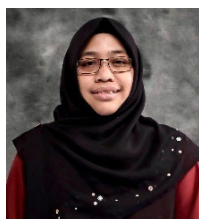
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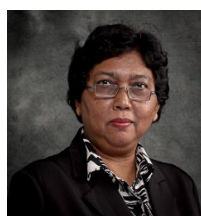
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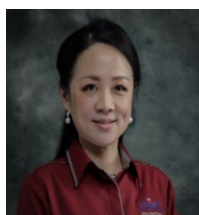
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FACULTY VISION

A leading global engineering faculty for sustainable future.

FACULTY MISSION

To provide quality engineering education through excellence in teaching, research and development by scholarly faculty members and to improve society and economic impacts through innovative knowledge.

FACULTY OBJECTIVES

To ensure all activities are appropriate to the development and advancement of new technologies and the future, relevant to the development of the country and in line with efforts to improve professionalism. All this is done by offering various opportunities in engineering education, training and services through the application of scholarship and knowledge in strategic and innovative ways to improve the quality of the nation's culture and prosperity of its citizens.

FACULTY HISTORY

The Faculty of Engineering is one of ten faculties in UNIMAS and was formed on 30th December 1993. The faculty started off with only two engineering programmes namely Civil Engineering and Electronics and Telecommunications Engineering with the first intake in July 1994. The Mechanical Engineering and Manufacturing Programme was introduced in 1996 and the Electronics and Computer Engineering Programme was introduced in May 2000 in order to fulfil the need and broaden the range of opportunities in the world of engineering. In 2008, as our commitment to support the workforce in the Chemical Engineering industries, the Department of Chemical Engineering and Energy Sustainability was established.

ACADEMIC STRUCTURE

Each programme at UNIMAS has been designed in accordance with the curriculum that is based on individual development as an autonomous citizen but working together in the community.

CORE COURSE

The courses provide knowledge and skills specializing in a particular field required for a programme. Each programme not only focuses on the theory and practice of specialization, but also on technology and management.

GENERAL EDUCATION COURSES (MPU)

General Education Courses (Mata Pelajaran Umum – MPU) are compulsory university courses which are the pre-requisite for the undergraduate award. Courses under the category of MPU are able to produce holistic graduates, appreciate the values of patriotism and Malaysian-born identity and mastering soft skills towards fulfilling job-oriented skills. The course code under this category starts with MPU.

UNIVERSITY ELECTIVE COURSES (KEU)

Courses from other faculties that provide opportunities for students to explore another area of study beside its own specialization, to the extent that is meaningful and satisfying. Minimum requirement is 9 credits

PPD1041 SOFTS.KILLS AND BASIC VOLUNTEERISM

PPD1041 Soft skills and Basic Volunteerism is a compulsory course for all UNIMAS students which aims to promote volunteerism and enhance soft skills in the students. This course exposes first year undergraduate students to the personal, social and academic skills that are essential to ensure the survival and self-efficacy in ensuring their success throughout their studies. This course places strong emphasis on personal skills, academic writing, information literacy, understanding career profiles and professional conduct in collaborative environment.

PBI ENGLISH COURSES

English courses which aim to improve students' English proficiency in both writing and oral presentation for more effective communication. The English courses are segmented for these MUET results:

MUET BAND 1.0– 3.5 IELTS: 4.0-5.0	PBI1102 Academic English I PBI1072 English for Professional Communication
MUET BAND 4.0 – 6.0 IELTS: 5.5-9.0	PBI1092 Academic English 2 PBI1082 English for Occupational Purposes

BAHASA MELAYU COURSES

Bahasa Melayu courses for communication: -

PBM2072 BM (for Malaysian)

PBM2082 BM Komunikasi Lanjutan (for non-Malaysian)

PRE-REQUISITES & REQUISITES

PRE-REQUISITES are courses which must be PASSED as a condition before registering for a specific course.

REQUISITES = courses which must be TAKEN as a condition before registering for a specific course

Example: KNF1013 Engineering Mathematics I is a pre-requisite for KNF1023 Engineering Mathematics II. (The students must PASS KNF1013 before they are allowed to register for KNF1023)

COURSE REGISTRATION

Registration for all courses must be done on time and within a specific period.

(Refer to Undergraduate Studies Division)

PROGRAMME DURATION

Minimum Semesters = 8 semesters (4 years)

Maximum Semesters = 14 semesters (upon Year of Admission)

CREDIT TRANSFER (WITHOUT GRADE)

Credit Transfer is applicable for equivalent course credits and 80% course contents. in the course. The result to be used for the transfer of credit without grade must be obtained within the recent **FIVE (5)** years. The allowed course content to be equated must be not more than two courses if to be combined, and the total credit without grade must be not less than the course credit value to be equated. The course applied for the transfer of credit must be part of a Certified Accreditation academic programme recognized by EAC and MQA.

Minimum grade for transfer is **Grade B** and must be supported by the Programme Coordinator / Head of Department before subject to approval by the Faculty Dean.

Credit Exemption /Transfer may be done in two (2) categories as follows:

- a) Vertical - Credit and Course Exemption from lower to higher level, i.e., accredited/ recognised Diploma to Bachelor degree. A maximum Credit and Course Exemption of 30% of the total programme credits is allowed.
- b) Horizontal - Credit Transfer between accredited/recognised programmes of same level, i.e., from Bachelor to Bachelor degree. A maximum Credit Transfer of 50% of the total programme credits is allowed.

Total credit exemption and transfer should not exceed 50%.

Transfer of credit without grade will NOT be allowed in the event of the following cases:

- a) All courses in a Foundation/ Matriculation level to a Bachelor's Degree programme.
- b) Industrial Training is not eligible for transfer of credit.
- c) General Education Subject courses (MPU) at a Diploma level except for the following courses under U1 MPU cluster:
 - (i) Philosophy and Current Issue/ Falsafah dan Isu Semasa
 - (ii) Ethical Appreciation and Civilisation/ Penghayatan Etika dan Peradaban

CREDIT TRANSFER (WITH GRADE)

Subjected to approval from Faculty/ Centre, Transfer of Credit with Grade by student, will only be allowed for the following situation:

- a) For students. currently undertaking programmes in UNIMAS:
 - (i) Student switching study programme in UNIMAS.
 - (ii) Student undertaking the mobility programme.

- b) For students currently undertaking programmes at other IHL:
 - (i) Students from other IHL who are continuing their studies in UNIMAS at the same level and programme.
 - (ii) Students from other IHL who are continuing their studies in UNIMAS at the same level but a different programme.

For Transfer of Credit Application, it must be based on subject-to-subject mapping and the following general regulation must be complied with:

- a) The minimum grade requirement for the requested course for transfer of credit is Grade C;
- b) The course content equivalent must not be less than 80%;
- c) The allowed course content to be equated must be not more than two courses if to be combined, and the total credit without grade must be not less than the course credit value to be equated;
- d) For University Elective Courses, transfer of credit with grade will only be considered if the said course is part of the listed University Elective courses under a different cluster/programme from the student's programme; and
- e) Students. who switch universities; therefore, the transfer of credit is subjected to the student residential year regulation, at least after a year of undertaking the programme at UNIMAS.

Grade obtained by the previous course is given to the approved course for transfer of credit. The grade is then used for the calculation of CGPA of the affected student following course of studies.

Transfer of Credit with Grade IS NOT ALLOWED for students. who have been dismissed from their studies due to academic failure and henceforth continuing their studies in a same/different programme.

PROGRAMME ACCUMULATED CREDIT

All students. must undertake the following remedial courses:

- Soft Skills and Basic Entrepreneurship course
- Preparatory English Course 1 and Preparatory English Course 2 for students. with MUET Band 2

For students. undertaking any uniform body courses by fulfilling the Uniform Body Course Training 1, 2 and 3 with a total of three (3) credit are exempted from taking Soft Skills and Basic Entrepreneurship and Credited Co-Curriculum Course. Students. may opt to continue their Uniform Body training 4, 5 and 6 in order to qualify them for commissioning. However, students. who do not fulfil the three (3) credit hours must undertake either one of the following: Soft Skills; Basic Entrepreneurship or Credited Co-Curriculum Course.

Scoring and grade will be awarded to all listed courses mentioned above except for Soft Skills and Basic Entrepreneurship which are graded with a Pass/Fail.

ASSESSMENT SYSTEM

In the event where a student failed to undertake the final examination of a course, the scoring of marks for the overall course will still take into account the carry mark and final examination mark. The Schedule of Grade and Grade Value applicable to all Core Courses for all Faculty of Engineering programmes: -

Grade	Score Range	Grade Point	Core Course Achievement Standards
A	80-100	4.00	Excellent
A-	75-79	3.67	
B+	70-74	3.33	Credit
B	65-69	3.00	
B-	60-64	2.67	Good
C+	55-59	2.33	
C	50-54	2.00	Pass
C-	45-49	1.67	Fail
D	40-44	1.00	
F	< 40	0.00	

In the event where a student fails repetitively, the grade taken into account will be the best grade.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Programme Educational Objectives are broad statements that describe quality that are supposed to be acquired by the graduates upon graduation and after a few years of employment.

PROGRAMME LEARNING OUTCOMES (PLO)

Programme Outcomes are statements that describe what students are expected to know and be able to perform or attain by the time of graduation. These relate to the skills, knowledge, and behaviour that students acquired upon completion of the programme.

IMPORTANT: For engineering students, all TWELVE (12) Programme Learning Outcomes must be achieved before graduation in compliance with the requirement from the Engineering Accreditation Council (EAC). Students who do not achieve all complete 12 PLOs will have to sit for supplementary remedial assessments before their completion of studies for graduation purposes.

ACADEMIC ADVISOR

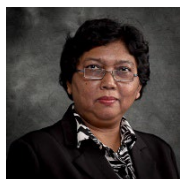
A student (Mentee) is assigned to an Academic Advisor (Mentor) at the beginning of their studies in UNIMAS. The Academic Advisor shall advise the students on various matters as well as the monitor the academic performances of the student.

The Academic Advisor responsibilities also include:

- Set appointments with mentees at least two times per semester
- Monitor academic progress and development of the mentees
- Provide guidance and offer advices to mentees with problems
- Refer mentees to counsellors in case of extended problems
- Assist mentees to make decisions with regards to academic and career planning
- Retain a good relationship with mentee for an effective implementation of ACAD system
- Allow mentees to "Print Examination Slip" in the ACAD system after end of semester meetings

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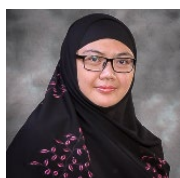
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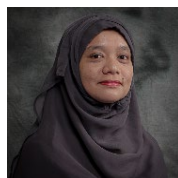
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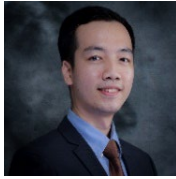
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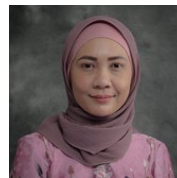
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1.0 BACHELOR OF CIVIL ENGINEERING WITH HONOURS PROGRAMME

The Bachelor of Civil Engineering with Honours programme at UNIMAS aims to develop highly competent and technically proficient engineers equipped to meet the nation's growing demands in civil infrastructure. Civil engineering plays a pivotal role in planning, designing, constructing, and operating a wide range of critical structures such as buildings, bridges, wharves, dams, power stations, highways, railways, airports, and water distribution systems. Additionally, it addresses essential systems like solid waste management, wastewater treatment, and flood mitigation.

The programme's primary objective is to produce graduates capable of integrating various fields within civil engineering to drive the country's rapid economic and industrial growth. By equipping students with both technical expertise and professional responsibility, the programme fosters the development of forward-thinking engineers who are ready to lead and innovate in their respective fields.

2.0 PROGRAMME EDUCATIONAL OBJECTIVES

PEO 1	Practice professionalism, ethics and responsibility of Civil engineering profession
PEO 2	Broaden knowledge, skills and abilities through lifelong learning and continuously improve competency, to be abreast with technology advancement
PEO 3	Engage with government and industry, domestically or globally to contribute to engineering community and beyond

3.0 PROGRAMME LEARNING OUTCOMES

Upon completion of this programme, the students are expected to:

PLO 1	Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization to the solution of complex Civil Engineering problems. (WK1-WK4)
PLO 2	Identify, formulate, conduct research literature and analyse complex Civil Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. (WK1-WK4)
PLO 3	Design solutions for complex Civil Engineering problems and design systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (WK5)
PLO 4	Conduct investigation of complex Civil Engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions (WK8)
PLO 5	Create, select and apply appropriate techniques, resources, and modern engineering and IT Tools, including prediction and modelling, to complex Civil Engineering problems, with an understanding of the limitations (WK6)
PLO 6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional Civil Engineering practice and solutions to complex Civil Engineering problems (WK7)
PLO 7	Understand and evaluate the sustainability and impact of professional Civil Engineering work in the solutions of complex Civil Engineering problems in societal and environmental contexts. and demonstrate knowledge of and need for sustainable development (WK7)
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of Civil Engineering practice (WK7)
PLO 9	Communicate effectively on complex Civil Engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports. and design documentation, make effective presentations, and give and receive clear instructions

PLO 10	Function effectively as an individual, and as a member or leader in diverse teams and multi-disciplinary settings
PLO 11	Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change
PLO 12	Demonstrate knowledge and understanding of engineering management principles and economic decision making and apply these to one's own work, as a member and leader in a team, to manage projects. in multidisciplinary environments.

4.0 MAIN COMPONENTS AND SPECIALIZATIONS OF THE PROGRAMME

The Bachelor of Civil Engineering with Honours programme offers a dynamic and comprehensive curriculum designed to prepare students for the multifaceted challenges of modern civil engineering. Through a combination of theoretical knowledge and practical application, students are equipped with the skills to excel in diverse specializations within the field. The program features five core modules:

[i] Structural Engineering and Materials

In this module, students explore the design and construction of structures such as bridges, buildings, and power stations. Emphasis is placed on the use of materials like steel, timber, and concrete, alongside collaboration with architects to ensure that the structures are not only visually impressive but also safe, functional, and durable.

[ii] Geotechnical Engineering

This specialization provides students with an in-depth understanding of the Earth's subsurface structures, which are foundational to civil engineering projects such as buildings, tunnels, retaining walls, pipelines, and dams. Students learn to assess soil strength and geological properties to ensure structural safety, stability, and cost-effectiveness in design and construction.

[iii] Water and Wastewater Engineering

This specialization addresses the analysis and management of water resources. Students learn to design key water systems, including reservoirs, dams, water distribution networks, and wastewater treatment plants. The module also tackles the unique challenges of river and coastal engineering, focusing on sustainable water management and infrastructure.

[iv] Highway and Transportation Engineering

Students in this module focus on the planning, design, and management of transportation systems. This includes roadways, highways, and other transportation infrastructure, with the goal of ensuring safe, efficient, and sustainable movement of people and goods. Emphasis is placed on creating transportation solutions that meet economic, environmental, and social demands.

[v] Building and Construction Engineering

Focusing on the end-to-end management of engineering projects, this module covers everything from the initial planning stages to project completion. Students gain expertise in managing construction workflows, adhering to project specifications, and maintaining timelines and budgets. They also learn to adapt to the evolving demands of the construction process to ensure the efficient use of resources.

Each of these specializations equips students with the necessary knowledge and practical skills to contribute to solving both local and global civil engineering challenges. The program is designed to foster critical thinking, innovation, and professional competence, preparing graduates for leadership roles in the civil engineering industry.

CURRICULUM STRUCTURE

YEAR 1 SEMESTER 1

CORE	KNF1013 Engineering Mathematics 1		3 credits
	KNS1022 Engineering Drawing		2 credits
	KNS1042 Civil Engineering Materials		2 credits
	KNS1451 Civil Engineering Laboratory 1		1 credit
	KNS1472 Civil Engineering Management		2 credits
	KNS1633 Engineering Mechanics		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1102 Academic English 1 (MUET 1.0-3.5 or IELTS 4.0-5.0)		2 credits
	PBI1092 Academic English 2 (MUET 4.0-6.0 or IELTS 5.5-9.0)		
	MPU3192 Appreciation of Ethics and Civilisation MPU3142 Malay Language for Communication 2 (non-Malaysian)		2 credits
	PPD1041 Soft Skill and Basic Volunteerism		1 credit

YEAR 1 SEMESTER 2

CORE	KNF1023 Engineering Mathematics 2	Pre-requisite: KNF1013	3 credits
	KNS1063 Strength of Materials	Requisite: KNS1633	3 credits
	KNS1073 Engineering Survey		3 credits
	KNS1102 Engineering Geology		2 credits
	KNS1461 Civil Engineering Laboratory 2		1 credit
	KNS1482 Engineering Programming		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1072 English for Professional Communication (MUET 3.0-3.5 or IELTS 4.0-5.0)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4.0-6.0 or IELTS 5.5-9.0)		
	MPU3432 / MPU3442 / MPU3452 / MPU3462 / MPU3472 / MPU3482 / MPU3492 / MPU34102 – Co- curricular		2 credits
	MPU3332 National Heritage / MPU3352 Government and Administration in Malaysia / MPU3362 Introduction to Organization Behaviour in Malaysia / MPU3372 Integrity and Anti-Corruption MPU3342 Culture and Ethnicity in Malaysia (non-Malaysian)		2 credits

YEAR 2 SEMESTER 1

CORE	KNF2033 Engineering Mathematics 3	Pre-requisite: KNF1023	3 credits
	KNS2093 Theory of Structure	Requisite: KNS1063	3 credits
	KNS2113 Fluid Mechanics		3 credits
	KNS2123 Soil Mechanics		3 credits
	KNS2591 Civil Engineering Laboratory 3		1 credit
MPU, GENERIC, REMEDIAL, ELECTIVE	PBM2072 Bahasa Melayu PBM2082 Bahasa Melayu Komunikasi Lanjutan (non-Malaysian)		2 credits
	MPU3222 Foundation of Entrepreneurship Inculturation		2 credits

YEAR 2 SEMESTER 2

CORE	KNS2133 Structural Analysis	Pre-requisite: KNS2093	3 credits
	KNS2153 Hydraulics	Pre-requisite: KNS2113	3 credits
	KNS2163 Geotechnical Engineering	Pre-requisite: KNS2123	3 credits
	KNS2601 Civil Engineering Laboratory 4		1 credit
	KNS2723 Numerical Methods and Statistics	Pre-requisite: KNF2033	3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 01 – University Elective Course 1		3 credits
	MPU3182 Philosophy and Current Issues		2 credits

YEAR 3 SEMESTER 1

CORE	KNS3143 Engineering Hydrology*	Requisite: KNS2153	3 credits
	KNS3243 Foundation Engineering *	Requisite: KNS2163	3 credits
	KNS3493 Highway Engineering*		3 credits
	KNS3611 Civil Engineering Laboratory 5		1 credit
	KNS3742 Reinforced Concrete Design 1	Pre-requisite: KNS2133	2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 02 – University Elective Course 2		3 credits

YEAR 3 SEMESTER 2

CORE	KNS3233 Water and Wastewater Engineering*		3 credits
	KNS3333 Construction Technology*	Requisite: KNS1472	3 credits
	KNS3433 Traffic Engineering*		3 credits
	KNS3621 Civil Engineering Laboratory 6		1 credit
	KNS3753 Reinforced Concrete Design 2*	Pre-requisite: KNS3742	3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 03 – University Elective Course 3		3 credits

YEAR 3 INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
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YEAR 4 SEMESTER 1

CORE	KNS4193 Water Resources Engineering	Requisite: KNS3143	3 credits
	KNS4222 Final Year Project 1		2 credits
	KNS4442 Integrated Design Project 1	Pre-requisite: Any two (2) from seven (7) of Year 3 Core Courses (*)	2 credits
	KNS4713 Project Management		3 credits
	KNS4793 Structural Steel Design	Requisite: KNS2133	3 credits
	KNS4xx3 Elective 1		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

YEAR 4 SEMESTER 2

CORE	KNS4254 Final Year Project 2	Pre-requisite: KNS4222	4 credits
	KNS4343 Engineering Economy		3 credits
	KNS4673 Integrated Design Project 2	Pre-requisite: KNS4442	3 credits
	KNS4732 Ethics in Civil Engineering		2 credits
	KNS4xx3 Elective 2		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

TOTAL CREDITS FOR GRADUATION = 140

PROGRAMME ELECTIVE COURSES
KNS4313 Bridge Engineering
KNS4393 Hydraulics Structures
KNS4403 River and Coastal Engineering
KNS4423 Timber Engineering
KNS4503 Housing Technology
KNS4523 Energy Management
KNS4533 Concrete Technology
KNS4543 Geo-Environmental Engineering
KNS4553 Soil Dynamics
KNS4573 Urban Transportation System and Planning
KNS4583 Pre-stressed Concrete Design
KNS4683 Environmental Impact Assessment and Waste Management
KNS4803 Water for a Sustainable Future

TOTAL CREDITS FOR GRADUATION = 140

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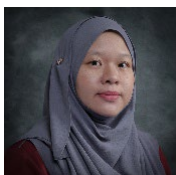
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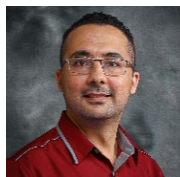
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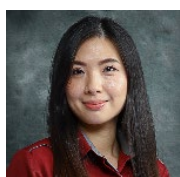
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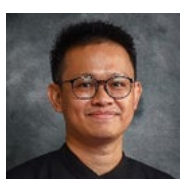
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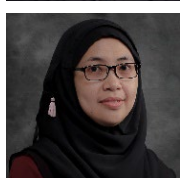
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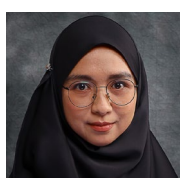
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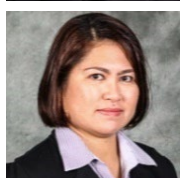
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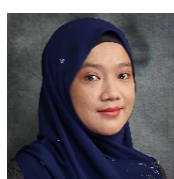
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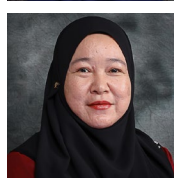
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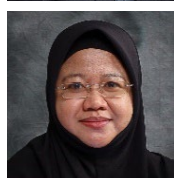
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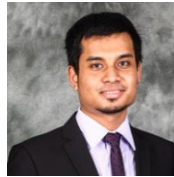
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1.0 BACHELOR OF ELECTRICAL AND ELECTRONICS WITH HONOURS PROGRAMME

Electrical and Electronics Engineering is an important professional field in Malaysia where it has been identified as the catalytic activities of public or private sector needs in electrical and electronics industries that can contribute to the national economy. With this programme, it is hoped that it can accommodate the shortage of professionals in this field.

2.0 PROGRAMME EDUCATIONAL OBJECTIVES

PEO 1	Apply Electrical and Electronics Engineering knowledge at their respective career in globally competitive environment.
PEO 2	Uphold the importance of professionalism and ethics in engineering profession to contribute to the society.
PEO 3	Practice leadership and management skills in workplace and/or society

3.0 PROGRAMME LEARNING OUTCOMES

Upon completion of this programme, the students. are expected to:

PLO 1	Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization as specified in WK1 to WK4 respectively to solve complex Electrical and Electronics engineering problems.
PLO 2	Identify, formulate, conduct research literature and analyse complex Electrical and Electronics engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1 to WK4).
PLO 3	Design solutions for complex Electrical and Electronics engineering problems and design systems, components. or processes that meet specified needs with appropriate consideration for public health and safety, cultural societal, and environment considerations (WK5).
PLO 4	Conduct investigation into complex Electrical and Electronics engineering problems using research- based knowledge (WK8) and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions.
PLO 5	Create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling, to complex Electrical and Electronics engineering problems, with an understanding of the limitations (WK6).
PLO 6	Apply reasoning informed by contextual knowledge to assess societal, health, safety and cultural issues and the consequent responsibilities relevant to professional Electrical and Electronics engineering practice and solutions to complex Electrical and Electronics engineering problems (WK7).
PLO 7	Understand and evaluate the sustainability and impact of professional Electronics Engineering works in the solutions of complex Electrical and Electronics engineering problems in societal and environmental contexts. (WK7).
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of Electrical and Electronics Engineering practice (WK7).
PLO 9	Communicate effectively on Electrical and Electronics engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports. and design documentation, make effective presentations, and give and receive clear instructions.
PLO 10	Function effectively as an individual, and as a member or leader in diverse teams and multi-disciplinary settings.
PLO 11	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.
PLO 12	Demonstrate knowledge and understanding of engineering and management principles and economic decision-making and apply these to one's own work, as a member and leader in a team, to manage projects. and in multidisciplinary environments.

4.0 CONCEPT OF THE PROGRAMME

Sarawak State Government has announced a new economic corridor, Sarawak Corridor of Renewable Energy (SCORE) which is based along the coast from Tanjung Manis to Samalaju. UNIMAS as a centre of research and development of human resource in the country, has been called to intensify the human capital development especially in the field of electrical and electronics engineering to accommodate skilled workers and professionals. Electrical and Electronics Engineering programme is offered in order to produce graduates that meet the needs of manpower in power generation sector, power distribution and transmission sector, and other sectors in the field of Electrical and Electronic Engineering.

CURRICULUM STRUCTURE**YEAR 1 SEMESTER 1**

CORE	KNR1723 Circuit Theory 1		3 credits
	KNR1073 Electrical Instrumentation		3 credits
	KNR1743 Object Oriented Programming		3 credits
	KNF1013 Engineering Mathematics 1		3 credits
	KNR1042 Measurement and Instrumentation		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1102 Academic English 1 (MUET 1.0-3.5 or IELTS 4.0-5.0)		2 credits
	PBI1092 Academic English 2 (MUET 4.0-6.0 or IELTS 5.5-9.0)		
	PBM2072 Bahasa Melayu PBM2082 Bahasa Melayu Komunikasi Lanjutan (non-Malaysian)		2 credits
	PPD1041 Soft skills and Basic Volunteerism		1 credit

YEAR 1 SEMESTER 2

CORE	KNR1733 Circuit Theory 2		3 credits
	KNR1063 Digital Electronics		3 credits
	KNR1053 Analog Electronics		3 credits
	KNF1023 Engineering Mathematics 2	Pre-requisite:KNF1013	3 credits
	KNR1082 Engineering Design Foundation		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1072 English for Professional Communication (MUET 3.0-3.5 or IELTS. 4.0-5.0)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4.0-6.0 or IELTS. 5.5-9.0)		
	PBI1122 Preparatory English 2* (MUET 1.0-2.5)		
	MPU3432 / MPU3442 / MPU3452 / MPU3462 / MPU3472 / MPU3482 / MPU3492 / MPU34102 – Co-curricular		2 credits

YEAR 2 SEMESTER 1

CORE	KNR2113 Signals & Systems		3 credits
	KNR2463 Safety and Health in Engineering		3 credits
	KNR2443 Electrical Engineering Technology		3 credits
	KNF2033 Engineering Mathematics 3	Pre-requisite:KNF1023	3 credits
	KNR2452 Analog and Digital Electronic Application		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	MPU3192 Appreciation of Ethics and Civilisation		2 credits
	MPU3142 Malay Language for Communication 2 (non-Malaysian)		
	MPU3222 Foundation of Entrepreneurship Inculturation		2 credits

YEAR 2 SEMESTER 2

CORE	KNR2103 Telecommunication Engineering Principles		3 credits
	KNR2153 Electrical Machines		3 credits
	KNR2433 Electromagnetic Theory		3 credits
	KNR2473 Numerical Methods and Statistics	Pre-requisite:KNF2033	3 credits

MPU, GENERIC, REMEDIAL, ELECTIVE	KNR2753 Computer Systems Architecture		3 credits
	MPU3182 Philosophy and Current Issues		2 credits
	MPU3332 National Heritage / MPU3352 Government and Administration in Malaysia / MPU3362 Introduction to Organization Behaviour in Malaysia / MPU3372 Integrity and Anti-Corruption MPU3342 Culture and Ethnicity in Malaysia (non-Malaysian)		2 credits

YEAR 3 SEMESTER 1

CORE	KNR3183 Control System Engineering		3 credits
	KNR3193 Microprocessor		3 credits
	KNR3233 Electrical Power System		3 credits
	KNR3492 Electrical Laboratory 1		2 credits
	KNF3102 Engineering Ethics		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 01 – University Elective Course 1		3 credits
	PBI1102 Academic English I * (MUET 3.0-3.5 or IELTS. 4.0-5.0)		2 credits *

YEAR 3 SEMESTER 2

CORE	KNR3243 Power Electronics		3 credits
	KNR3483 Power Quality and Reliability		3 credits
	KNR3522 Electrical Laboratory 2		2 credits
	KNR3762 Integrated Design Project 1		2 credits
	KNR3xx3 Elective 1		3 credits
	KNR3xx3 Elective 2		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1082 English for Occupational Purposes * (MUET 4.0-6.0 or IELTS. 5.5-9.0)		2 credits *

YEAR 3 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
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YEAR 4 SEMESTER 1

CORE	KNR4553 Engineering Management		3 credits
	KNR4272 Final Year Project 1	Pre-requisite: KNR4272	2 credits
	KNR4543 Integrated Design Project 2	Pre-requisite: KNR3762	3 credits
	KNR4xx3 Elective		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 02 – University Elective Course 2		3 credits

YEAR 4 SEMESTER 2

CORE	KNR4593 High Voltage Technology		3 credits
	KNR4344 Final Year Project 2		4 credits
	KNR4xx3 Elective		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 03 – University Elective Course 3		3 credits

TOTAL CREDITS FOR GRADUATION = 138 (142*)

PROGRAMME ELECTIVE COURSES

3rd YEAR

(ELECTRICAL OPTIONS)

KNR3503 Power System Protection

KNR3513 Power System Analysis

(ELECTRONIC OPTIONS)

KNR3693 Digital Signal Processing

KNR3703 Microelectronics

4th YEAR

(POWER)

KNR4303 Renewable Energy Technology

KNR4373 Energy Economics and Planning

KNR4603 High Power Transmission and Distribution

(TELECOMMUNICATION)

KNR4653 Optical Fiber Communication

KNR4663 Wireless Telecommunication System

KNR4673 Microwave and Antenna Technology

KNR4683 Data and Computer Networking

(COMPUTER)

KNR4613 VLSI Design

KNR4623 Embedded System Design

KNR4633 Machine Learning

KNR4643 Image Processing

DEPARTMENT OF MECHANICAL AND MANUFACTURING ENGINEERING

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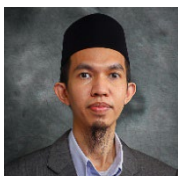
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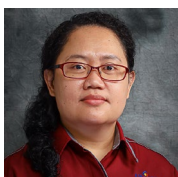
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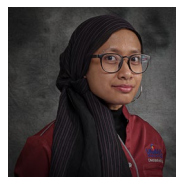
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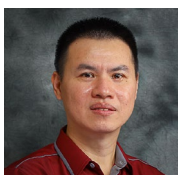
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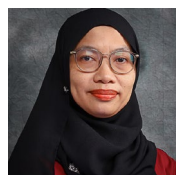
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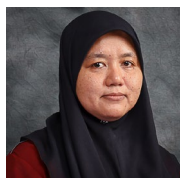
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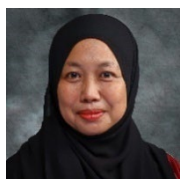
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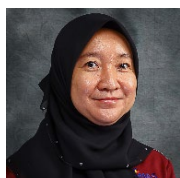
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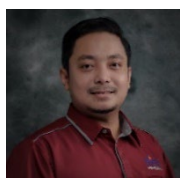
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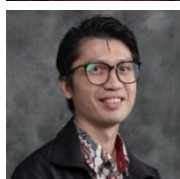
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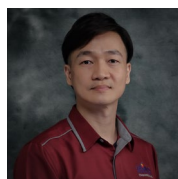
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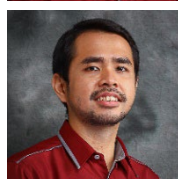
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1.0 BACHELOR OF MECHANICAL ENGINEERING WITH HONOURS PROGRAMME

Work force in the field of Mechanical Engineering is extremely required. This is in accordance with its position as one of the oldest, biggest and widest field of studies in developed countries. This field of engineering covers a wide scope of specialization, including energy and petroleum, materials research, systems design, fluid mechanics research and manufacturing. These research areas are important for the development of industries and technologies. Malaysia as a developing nation requires graduates in the field of Mechanical and Manufacturing Engineering to ensure continuous development to achieve a strong economic and industrial growth in the future.

This programme aims to produce graduates who are capable of facing challenges and changes in science and technology, with critical thinking and higher problem-solving skills. This programme also aims to equip graduates with attributes that include professionalism, ethics and moral values; in addition to the graduates capable of applying engineering knowledge. Finally, this programme aims to produce graduates with leadership skills, proactive and sensitive to society's needs and forward looking in order to support nation's growth through research and development.

2.0 PROGRAMME EDUCATIONAL OBJECTIVES

PEO 1	Uphold the professionalism and ethics of the Mechanical Engineering profession in national and/or international area
PEO 2	Enhance knowledge by practicing independence and lifelong learning in order to contribute to the advancement of the profession through involvement in research and development activities
PEO 3	Promote multicultural harmony and unity amongst different races and cultures through involvement in the technical and/or non-technical societies

3.0 PROGRAMME LEARNING OUTCOMES

Upon completion of this programme, the students. are expected to:

PLO 1	Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization to the solution of complex Mechanical Engineering problems (WK1-WK4)
PLO 2	Identify, formulate and analyse complex Mechanical Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1-WK4)
PLO 3	Design solutions for complex Mechanical Engineering problems and design systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal, and environmental considerations (WK5)
PLO 4	Conduct investigation of complex Mechanical Engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions (WK8)
PLO 5	Create, select and apply appropriate techniques, resources, and modern engineering and IT tools, including prediction and modelling, to complex Mechanical Engineering problems, with an understanding of the limitations (WK6)
PLO 6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional Mechanical Engineering practice and solutions to complex Mechanical Engineering problems (WK7)
PLO 7	Understand and evaluate the sustainability and impact of professional Mechanical Engineering work in the solutions of complex Mechanical Engineering problems in societal and environmental contexts.
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of Mechanical Engineering practice.

PLO 9	Communicate effectively on complex Mechanical Engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports. and design documentation, make effective presentations, and give and receive clear instructions.
PLO 10	Function effectively as an individual, and as a member or leader in diverse teams and in multi-disciplinary settings.
PLO 11	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change
PLO 12	Demonstrate knowledge and understanding of engineering management principles and economic decision making and apply these to one's own work, as a member and leader in a team, to manage projects. in multidisciplinary environment.

4.0 CONCEPT OF THE PROGRAMME

The department offers programme in Mechanical Engineering including elements. of Manufacturing Engineering which equips engineers in the following fields:

(i) Mechanical Engineering

Careers as Mechanical Engineer are diverse which includes conducting research, giving advice and designing machineries, plants. and industrial equipment. They are also responsible for the development of industrial systems, ensuring that the systems function, as well as maintaining the systems. Mechanical Engineers also conduct research and give consultations on materials' technology and processes, as well as certain maintenance procedures. Mechanical engineers could practice in sectors that include technology, manufacturing and process, mechanical system design, metal fabrication, rubber and plastic, automotive, electrical and electronic and oil and gas.

(ii) Manufacturing Engineering

Careers as Manufacturing Engineer are also diverse and highly demanded by the manufacturing industry. Manufacturing Engineers have a high level of technical expertise and skills, which they utilize to plan, design, setup, modify, optimize and monitor manufacturing processes. Amongst others, a Manufacturing Engineer could work in quality planning and control section, industrial safety, maintenance or design new systems and processes in local or international companies.

CURRICULUM STRUCTURE

YEAR 1 SEMESTER 1

CORE	KNJ1013 Statics		3 credits
	KNJ1072 Engineering Drawing		2 credits
	KNJ1033 Thermodynamics 1		3 credits
	KNP1091 Workshop Practice		1 credit
	KNJ1433 Engineering Materials		3 credits
	KNF1013 Engineering Mathematics 1		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1102 Academic English 1 (MUET 1.0-3.5 or IELTS. 4.0-5.0)		2 credits
	PBI1092 Academic English 2 (MUET 4.0-6.0 or IELTS. 5.5-9.0)		
	MPU3192 Appreciation of Ethics and Civilisation MPU3142 Malay Language for Communication 2 (non-Malaysian)		2 credits
	PPD1041 Soft skills and Basic Volunteerism		1 credit

YEAR 1 SEMESTER 2

CORE	KNJ1023 Dynamics	Pre-requisite: KNJ1013	3 credits
	KNJ1083 Solid Mechanics 1	Pre-requisite: KNJ1013	3 credits
	KNJ1231 Engineering Laboratory 1		1 credit
	KNJ1053 Fluid Mechanics 1		3 credits
	KNF1023 Engineering Mathematics 2	Pre-requisite: KNF1013	3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1072 English for Professional Communication (MUET 1.0-3.5 or IELTS 4.0-5.0)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4.0-6.0 or IELTS. 5.5-9.0))		
	PBI1122 Preparatory English 2* (MUET 1.0-2.5)		
	MPU3182 Philosophy and Current Issues		2 credits
	PBM2072 Bahasa Melayu PBM2082 Bahasa Melayu Komunikasi Lanjutan (non-Malaysian)		2 credits

YEAR 2 SEMESTER 1

CORE	KNJ2133 Solid Mechanics 2	**Requisite: KNJ1083	3 credits
	KNJ2093 Thermodynamics 2	Requisite: KNJ1033	3 credits
	KNJ2472 Electrical Engineering Technology		2 credits
	KNJ2511 Engineering Laboratory 2	Requisite: KNJ1023 & KNJ1083	1 credit
	KNF2033 Engineering Mathematics 3	Pre-requisite: KNF1023	3 credits
	KNJ2222 Analysis of Mechanics and Machines	Requisite: KNJ1023	2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	MPU3222 Foundation of Entrepreneurship Inculturation		2 credits
	KEU 01 – University Elective Course 1		3 credits

YEAR 2 SEMESTER 2

CORE	KNP2013 Manufacturing Technology		3 credits
	KNJ2103 Fluid Mechanics 2	Requisite: KNJ1053	3 credits
	KNJ2251 Engineering Laboratory 3	Requisite: KNJ2093	1 credit
	KNJ2523 Heat Transfer	Requisite: KNJ2093	3 credits
	KNJ2463 Electronics and Microprocessors		3 credits
	KNJ2332 Engineering Programming		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	MPU3432 / MPU3442 / MPU3452 / MPU3462 / MPU3472 / MPU3482 / MPU3492 / MPU34102 – Co-curricular		2 credits
	MPU3332 National Heritage / MPU3352 Government and Administration in Malaysia / MPU3362 Introduction to Organization Behaviour in Malaysia / MPU3372 Integrity and Anti-Corruption MPU3342 Culture and Ethnicity in Malaysia (non-Malaysian)		2 credits

YEAR 3 SEMESTER 1

CORE	KNP3053 Manufacturing System	Requisite: KNP2013	3 credits
	KNF3102 Engineering Ethics		2 credits
	KNJ3423 Engineering Economy & Finance		3 credits
	KNP3483 Engineering Design 1	Requisite: KNJ2133 & KNJ1072	3 credits
	KNJ3543 Instrumentation and Measurement		3 credits
	KEU3531 Engineering Laboratory 4	Requisite: KNJ2103	1 credit
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 02 – University Elective Course 2		3 credits
	PBI1102 Academic English I * (MUET 1.0-3.5 or IELTS. 4.0-5.0)		2 credits *

YEAR 3 SEMESTER 2

CORE	KNJ3373 Finite Element Analysis (FEA)		3 credits
	KNP3063 Robotics and Automation		3 credits
	KNJ3553 Mechanical Vibration	Requisite: KNJ3543	3 credits
	KNP3493 Engineering Design 2	Pre-requisite: KNP3483	3 credits
	KNJ3562 Numerical Methods	Requisite: KNF2033 & KNJ2332	2 credits
	KEU 03 – University Elective Course 3		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1072 English for Professional Communication* (MUET 1.0-3.5 or IELTS. 4.0-5.0)		2 credits *

YEAR 3 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
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YEAR 4 SEMESTER 1

CORE	KNJ4192 Final Year Project 1		2 credits
	KNP4414 Integrated Design	Requisite: KNP3493	4 credits
	KNP4073 Advanced Manufacturing Systems	Requisite: KNP3053	3 credits
	KNJ4573 Control Engineering	Requisite: KNJ3543	3 credits
	KNJ4xx2 Elective A		2credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

YEAR 4 SEMESTER 2

CORE	KNJ4214 Final Year Project 2	Pre-requisite: KNJ4192	4 credits
	KNP4083 Quality Control & Reliability		3 credits
	KNP4443 Engineering Management		3 credits
	KNJ4xx2 Elective B		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

TOTAL CREDITS FOR GRADUATION = 143 (147*)

PROGRAMME ELECTIVE COURSES

KNJ4302	Computational Fluid Dynamics	Requisite: KNJ1033 & KNJ2103
KNP4042	Energy Resources and Management	Requisite: KNJ1033 & KNP2013
KNJ4392	Polymer and Composite	Requisite: KNJ1433
KNJ4582	Engineering Statistics	
KNP4592	Manufacturing Modelling and Simulation	
KNJ4312	Tribology	
KNJ4322	Internal Combustion Engine	Requisite: KNJ2093
KNP4342	Operations Research	Requisite: KNJ3423
KNP4602	Manufacturing Systems Analysis	Requisite: KNP3053
KNP4612	Remanufacturing Operations and Management	

DEPARTMENT OF CHEMICAL ENGINEERING AND ENERGY SUSTAINABILITY

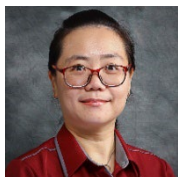
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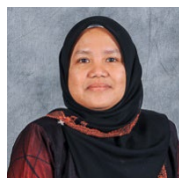
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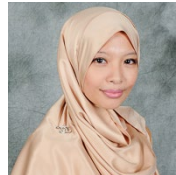
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1.0 BACHELOR OF CHEMICAL ENGINEERING WITH HONOURS PROGRAMME

This programme offers chemical engineering courses which are focusing more on the specialization in energy engineering application and natural resources which are abundance in our country. Natural resources such as oil, gas, fossil, agricultural products, biochemistry as well as renewable energy have the potential to be utilized and developed for the benefit of the country. In order to solve the problems in energy management and pollution which is related to these natural resources processes namely air, water and environmental pollution, require the latest knowledge in engineering. In line with country rapid development, more chemical engineers are needed to cater for the inadequacy of this profession.

2.0 PROGRAMME EDUCATIONAL OBJECTIVES

The goal of this programme is to produce future engineer who is skilful, efficient and high calibre based on the department programme objectives as follows:

PEO 1	Graduates are able to apply engineering knowledge at their respective career.
PEO 2	Graduates are able to pursue their career in national and multinational organisations.
PEO 3	Graduates are competent to explore, utilise and diversify natural resources sustainably.
PEO 4	Graduates utilise engineering tools and skills necessary to perform job as professional in their workplace.

3.0 PROGRAMME LEARNING OUTCOMES

Upon completion of this programme, the students are expected to:

PLO 1	Apply knowledge of mathematics, natural science, engineering fundamentals and an engineering specialization to the solution of complex Chemical Engineering problems (WK1-WK4)
PLO 2	Identify, formulate, conduct research literature and analyse complex Chemical Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1-WK4)
PLO 3	Design solutions for complex Chemical Engineering problems and design systems, components, or processes that meet specified needs with appropriate consideration for public health and safety, cultural, societal and environmental considerations (WK5)
PLO 4	Conduct investigation of complex Chemical Engineering problems using research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of information to provide valid conclusions (WK8)
PLO 5	Create, select and apply appropriate techniques, resources and modern engineering and IT tools, including prediction and modelling, to complex Chemical Engineering problems, with an understanding of the limitations (WK6)
PLO 6	Apply reasoning informed by contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to professional engineering practice and solutions to complex engineering problems (WK7)
PLO 7	Understand and evaluate the sustainability and impact of professional engineering work in the solutions of complex engineering problems in societal and environmental contexts.
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice

PLO 9	Communicate effectively on complex engineering activities with the engineering community and with society at large, such as being able to comprehend and write effective reports. and design documentation, make effective presentations, and give and receive clear instructions
PLO 10	Function effectively as an individual, and as a member or leader in diverse teams and in multidisciplinary settings
PLO 11	Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change
PLO 12	Demonstrate knowledge and understanding of engineering management principles and economic decision making and apply these to one's own work, as a member and leader in a team, to manage projects. in multidisciplinary environments. and to cultivate entrepreneurship skills

4.0 CONCEPT OF THE PROGRAMME

This programme offers specialization in chemical engineering field. Chemical Engineering is an important professional field which has been acknowledged as the catalyst to the public and private sector activities or to the needs of the chemical industry sectors which contributes to the economy of the country.

CURRICULUM STRUCTURE**YEAR 1 SEMESTER 1**

CORE	KNC1013 Fluid Mechanics		3 credits
	KNC1023 Engineering Physical Chemistry		3 credits
	KNC1032 Engineering Drawing		2 credits
	KNC1041 Workshop Practice		1 credit
	KNC1472 Introduction to Chemical Engineering		2 credits
	KNC1482 Engineering Mathematics 1		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1102 Academic English 1 (MUET 1.0-3.5 or IELTS. 4.0-5.0)		2 credits
	PBI1092 Academic English 2 (MUET 4.0-6.0 or IELTS. 5.5-9.0)		
	MPU3192 Appreciation of Ethics and Civilisation MPU3142 Malay Language for Communication 2 (non-Malaysian)		2 credits
	PPD1041 Soft skills and Basic Volunteerism		1 credit

YEAR 1 SEMESTER 2

CORE	KNC1052 Engineering Programming		2 credits
	KNC1063 Engineering Organic Chemistry		3 credits
	KNC1073 Thermodynamics 1		3 credits
	KNC1101 Chemical Engineering Laboratory 1		1 credit
	KNC1492 Engineering Mathematics 2	Pre-requisite: KNC1482	2 credits
	KNC1503 Mass Balance		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	PBI1072 English for Professional Communication (MUET 1.0-3.5 or IELTS. 4.0-5.0)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4.0-6.0 or IELTS. 5.5-9.0)		
	MPU3432 / MPU3442 / MPU3452 / MPU3462 / MPU3472 / MPU3482 / MPU3492 / MPU34102 - Co- curricular		2 credits
	PBM2072 Bahasa Melayu PBM2082 Bahasa Melayu Komunikasi Lanjutan (non-Malaysian)		2 credits

YEAR 2 SEMESTER 1

CORE	KNC2113 Thermodynamic 2	Requisite: KNC1073	3 credits
	KNC2123 Heat and Mass Transfer		3 credits
	KNC2133 Analytical Chemistry		3 credits
	KNC2141 Chemical Engineering Laboratory 2		1 credit
	KNC2513 Energy Balance	Requisite: KNC1503	3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 01 - University Elective Course 1		3 credits
	MPU3222 Foundation of Entrepreneurship Inculturation		2 credits

YEAR 2 SEMESTER 2

CORE	KNC2093 Material and Polymer Engineering		3 credits
	KNC2153 Transport Process		3 credits
	KNC2443 Numerical Methods and Statistics	Pre-requisite: KNC1492	3 credits
	KNC2462 Process Instrumentation		2 credits
	KNC2523 Unit Operations 1		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	MPU3182 Philosophy and Current Issues		2 credits
	MPU3332 National Heritage / MPU3352 Government and Administration in Malaysia / MPU3362 Introduction to Organization Behaviour in Malaysia / MPU3372 Integrity and Anti-Corruption		2 credits
	MPU3342 Culture and Ethnicity in Malaysia (non-Malaysian)		

YEAR 3 SEMESTER 1

CORE	KNC3181 Chemical Engineering Laboratory 3		1 credit
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	KNC3203 Chemical Reaction Process		3 credits
	KNC3213 Process Control System	Requisite: KNC2462	3 credits
	KNC3453 Engineering Management		3 credits
	KNC3533 Unit Operations 2		3 credits
	KNF3102 Engineering Ethics		2 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 02 – University Elective Course 2		3 credits

YEAR 3 SEMESTER 2

CORE	KNC3221 Chemical Engineering Laboratory 4		1 credit
	KNC3262 Engineering Economics		2 credits
	KNC3413 Process Integration and Optimisation		3 credits
	KNC3543 Occupational Safety and Health		3 credits
	KNC3553 Integrated Design Project 1		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 03 – University Elective Course 3		3 credits

YEAR 3 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
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YEAR 4 SEMESTER 1

CORE	KNC4233 Environmental Engineering		3 credits
	KNC4283 Energy Resources and Applications		3 credits
	KNC4312 Energy and Environmental Management		2 credits
	KNC4322 Final Year Project 1		2 credits
	KNC4564 Integrated Design Project 2	Pre-requisite: KNC3553	4 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

YEAR 4 SEMESTER 2

CORE	KNC4293 Quality Control & Reliability		3 credits
	KNC4344 Final Year Project 2	Pre-requisite: KNC4322	4 credits
	KNC4xx3 Elective 1		3 credits
	KNC4xx3 Elective 2		3 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

TOTAL CREDITS FOR GRADUATION = 139

PROGRAMME ELECTIVE COURSES

KNC4333 Polymer for Engineering Application
KNC4353 Biodiesel and Fuel Cell for Transportation
KNC4383 Natural Gas Engineering
KNC4393 Sustainability in Energy Industry
KNC4423 Multiphase Systems
KNC4363 Bio-Energy
KNC4373 Water and Wastewater Treatment Engineering
KNC4403 Processing Technology in Industry
KNC4433 Fundamental Rheology

MATA PELAJARAN PENGAJIAN UMUM (MPU) COURSES

MPU-U1	MPU3192 Appreciation of Ethics and Civilisations (for Malaysian)
	MPU3142 Malay Language for Communication 2 (for non-Malaysian)
	MPU3182 Philosophy and Current Issues
MPU-U2	MPU3222 Foundation of Entrepreneurship Inculturation
MPU-U3	MPU3332 National Heritage (for Malaysian) /
	MPU3352 Government and Administration in Malaysia /
	MPU3362 Introduction to Organization Behaviour in Malaysia /
	MPU3372 Integrity and Anti-Corruption
	MPU3342 Culture and Ethnicity in Malaysia (for non-Malaysian)
MPU-U4	MPU3432 Credited Co-curricular (Initiative and Innovation)
	MPU3442 Credited Co-curricular (Culture)
	MPU3452 Credited Co-curricular (Leadership)
	MPU3462 Credited Co-curricular (Volunteerism)
	MPU3472 Credited Co-curricular (Entrepreneurship)
	MPU3482 Credited Co-curricular (Community Service)
	MPU3492 Credited Co-curricular (Sports.)
	MPU34102 Credited Co-curricular (Public Speaking)
	Uniformed Bodies

UNIVERSITY ELECTIVE COURSES

FACULTY	COURSE CODE & NAME	SEMESTER OFFERED
FACULTY OF SOCIAL SCIENCES & HUMANITIES	SSU1013 Basics of Social Science	SEM 1 & 2
	SSU1023 Basics of Anthropology and Sociology	SEM 1 & 2
	SSU1033 Introduction to Psychology	SEM 1 & 2
	SSU1053 Introduction to Social Interaction	SEM 1 & 2
FACULTY OF APPLIED AND CREATIVE ARTS.	GKU1013 Modern Malay Drama and Theatre of Malaysia	SEM 1
	GKU1033 Digital Photography and Social Media Imaging	SEM 1
	GKU1043 History of Malaysian Cinema	SEM 1
	GKU1053 History of Drama and Theatre	SEM 2
	GKU1063 Introduction to Basic Music	SEM 2
	GKU1083 Introduction to Stage Directing	SEM 2
	GKU1093 Basic Figure Drawing	SEM 1
FACULTY OF BUILT ENVIRONMENT	BEU1013 Building Anatomy and Basic Estimating	SEM 1
	BEU1023 Creative Sketches	SEM 1
	BEU1033 Fundamentals of the Built Environment	SEM 2
FACULTY OF ENGINEERING	KNU1013 Introduction to Green Technology	SEM 1
	KNU 1033 Energy, Environment and Society	SEM 1
	KNU1073 Introduction to Solar Photovoltaic System	SEM 1
	KNU 1053 Safety Management in Workplace	SEM 2
	KNU1023 Engineers in Society	SEM 2
	KNU1103 Introduction to Hydro Power System	SEM 2
	KNU1093 Water Resources in Community Development	SEM 1 & 2
FACULTY OF RESOURCE SCIENCE AND TECHNOLOGY	STU1033 Aquatic Science and Daily Life	SEM 1 & 2
	STU1013 Introduction to Biotechnology	SEM 1 & 2
	STU1043 Introduction to Plant Physiology	SEM 1 & 2
	STU2063 Ecotourism Industry in Malaysia	SEM 1 & 2
	STU2073 Natural Resource Managements.	SEM 1 & 2

FACULTY	COURSE CODE & NAME	SEMESTER OFFERED
FACULTY OF MEDICINE AND HEALTH SCIENCES	MDU 1123 Introduction to Learning Disabilities	SEM 1
	MDU 1033 Healthy Lifestyle	SEM 1
	MDU 1073 Introduction to Biomedical Physiology	SEM 1
	MDU 1043 Introduction to Medical Entomology	SEM 2
	MDU 1013 Basic First Aid	SEM 2
	MDU 1023 Introduction to Medical Genetics	SEM 2
	MDU 1083 Introduction to Health and Behaviour	SEM 1 & 2
FACULTY OF COGNITIVE SCIENCES AND HUMAN DEVELOPMENT	KMU1063 Introduction to Mental Health	SEM 1
	KMU1053 Theories and Concepts.: Human Computer Interaction	SEM 1
	KMU1023 Introduction to Human Resource Development	SEM 2
	KMU1013 Helping Relationship	SEM 1 & 2
FACULTY OF COMPUTER SCIENCE AND INFORMATION TECHNOLOGY	TMU1013 Introduction to Computer Technologies	SEM 1 & 2
	TMU1023 Ethics in Information Technology	SEM 1 & 2
	TMU1043 Multimedia Technology	SEM 1 & 2
	TMU1053 Mathematics in Daily Life	SEM 1 & 2
FACULTY OF ECONOMICS AND BUSINESS	EBU1063 Smart Money Management	SEM 1 & 2
	EBU 2043 Introduction to Intellectual Property	SEM 1 & 2
	EBU 1023 Managing Small Business Accounts.	SEM 1 & 2
	EBU 1053 Online Business Management	SEM 1 & 2
	EBU1033 Malaysian Economics Environments.	SEM 1 & 2
FACULTY OF LANGUAGE AND COMMUNICATION	PBU1133 Arabic Language Level 1	SEM 1 & 2
	PBU2143 Arabic Language Level 2	SEM 1 & 2
	PBU3153 Arabic Level 3	SEM 1 & 2
	PBU1043 Japanese Language Level 1	SEM 1 & 2
	PBU2053 Japanese Language Level 2	SEM 1 & 2
	PBU3063 Japanese Level 3	SEM 1 & 2
	PBU1073 French Level 1	SEM 1 & 2
	PBU2083 French Level 2	SEM 1 & 2
	PBU3093 French Level 3	SEM 1 & 2
	PBU1103 Mandarin Level 1	SEM 1 & 2
	PBU2113 Mandarin Level 2	SEM 1 & 2
	PBU3123 Mandarin Level 3	SEM 1 & 2
	PBU0033 Iban Language for Communication	SEM 1 & 2

ENGLISH COURSES – INTENSIVE LANGUAGE PROGRAMME (ILP) INTERNATIONAL STUDENTS.

GRADE C+ AND C	PBI1112 Preparatory English I (Compulsory Remedial English for Band 1&2) PBI1122 Preparatory English II (Compulsory Remedial English for Band 1&2) * Prerequisite for PBI1102 & PBI1072
GRADE B+	PBI1102 Academic English I PBI1072 English for Professional Communication
GRADE A & A-	PBI1092 Academic English 2 PBI1082 English for Occupational Purposes

ENGLISH COURSES – IELTS. INTERNATIONAL STUDENTS.

4.0-5.0	PBI1102 Academic English I PBI1072 English for Professional Communication
5.5-9.0	PBI1092 Academic English 2 PBI1082 English for Occupational Purposes

**International students. with conditional offer must pass PBI0040 Intensive English Language Programme and/or obtain CEFR High B1 and above.*

UNIFORMED BODIES / BADAN BERUNIFORM

CODE/KOD	COURSE NAME / NAMA KURSUS	
MPU34112	Military Training 1	Latihan Ketenteraan Darat 1
PPA1102	Military Training 2	Latihan Ketenteraan Darat 2
PPA2112	Military Training 3	Latihan Ketenteraan Darat 3
PPA2122	Military Training 4	Latihan Ketenteraan Darat 4
PPA3132	Military Training 5	Latihan Ketenteraan Darat 5
PPA3142	Military Training 6	Latihan Ketenteraan Darat 6
MPU34122	Air Force Training 1	Latihan Ketenteraan Udara 1
PPB1072	Air Force Training 2	Latihan Ketenteraan Udara 2
PPB2082	Air Force Training 3	Latihan Ketenteraan Udara 3
PPB2092	Air Force Training 4	Latihan Ketenteraan Udara 4
PPB3102	Air Force Training 5	Latihan Ketenteraan Udara 5
PPB3112	Air Force Training 6	Latihan Ketenteraan Udara 6
MPU34142	Civil Defence Training 1	Latihan Pertahanan Awam 1
PPJ1102	Civil Defence Training 2	Latihan Pertahanan Awam 2
PPJ2112	Civil Defence Training 3	Latihan Pertahanan Awam 3
PPJ2122	Civil Defence Training 4	Latihan Pertahanan Awam 4
PPJ3132	Civil Defence Training 5	Latihan Pertahanan Awam 5
PPJ3142	Civil Defence Training 6	Latihan Pertahanan Awam 6
MPU34132	Police Training 1	Latihan Kepolisian 1
PPP1102	Police Training 2	Latihan Kepolisian 2
PPP2112	Police Training 3	Latihan Kepolisian 3
PPP2122	Police Training 4	Latihan Kepolisian 4
PPP3132	Police Training 5	Latihan Kepolisian 5
PPP3142	Police Training 6	Latihan Kepolisian 6

ETIKA PAKAIAN PELAJAR UNIVERSITI MALAYSIA SARAWAK

Pakaian Pelajar Lelaki

1. Setiap pelajar hendaklah berpakaian kemas, sopan dan bersesuaian dengan keadaan sepertimana yang diarahkan oleh pihak Universiti (berseluar panjang dengan berbaju kemeja atau kemeja-T atau pakaian kebangsaan masing-masing yang sesuai).
2. Berambut pendek, kemas dan tidak mencecah kolar baju. Fesyen rambut tidak keterlaluan dan perlu bersesuaian serta kemas.
3. Memakai pakaian sukan yang sesuai semasa bersukan atau berekreasi.
4. Memakai kasut yang sesuai. Pemakaian selipar dan sandal adalah dilarang.
5. Tidak memakai perhiasan perempuan atau pakaian menyerupai perempuan.
6. Mempamerkan kad pelajar semasa urusan rasmi.

Pakaian Pelajar Perempuan

1. Setiap pelajar hendaklah berpakaian kemas dan sopan bersesuaian dengan keadaan sepertimana yang diarahkan oleh pihak Universiti (pakaian kebangsaan, blaus atau pakaian etnik masing-masing yang sesuai dan tidak menjolok mata. Pakaian mestilah tidak ketat/sendat/jarang/singkat serta tidak menunjukkan bentuk tubuh badan).
2. Memakai kain atau skirt yang labuhnya hendaklah di bawah paras lutut.
3. Memakai seluar yang bersesuaian, bersih dan sopan.
4. Memakai alat solek, aksesori dan pewangi secara sederhana.
5. Memakai kasut yang sesuai.
6. Mempamerkan kad pelajar semasa urusan rasmi.

Tempat Penguatkuasaan Peraturan Berpakaian

1. Menghadiri kuliah, tutorial dan amali.
2. Menggunakan Perpustakaan Tun Abdul Rahman Ya'kub (PeTARY).
3. Membuat urusan di Fakulti/Institut/Pusat/Bahagian.
4. Menghadiri majlis rasmi Universiti di dalam dan di luar kampus.
5. Menduduki peperiksaan dan ujian.
6. Berada di sekitar kampus atau tempat yang wajar berpakaian demikian.
7. Menjalani Latihan Industri.



FORMAL



TIDAK FORMAL



PAKAIAN SUKAN



PAKAIAN DI DALAM MAKMAL



CONTOH RAMBUT LELAKI
DAN RAMBUT WANITA

NOTA PENTING: Setiap pelajar adalah tertakluk kepada Peraturan Berpakaian Pelajar yang ditetapkan oleh Universiti ketika berada di dalam kampus. Penguatkuasaan peraturan berpakaian pelajar adalah dibawah Kaedah-Kaedah Universiti Malaysia Sarawak (Tatatertib Pelajar-Pelajar) 1999 serta pindaan-pindaannya.



KALENDAR AKADEMIK PENGAJIAN IJAZAH SARJANA MUDA SESI 2024/2025
(ACADEMIC CALENDAR FOR UNDERGRADUATE STUDIES SESSION 2024/2025)

Aktiviti /Activity	SEMESTER 1	
	Tarikh	Catatan
Pendaftaran Pelajar Baharu (New Student Registration) <u>Online Registration</u>	17 Sep 2024 – 27 Sep 2024 (11 hari / 11 days)	
Pendaftaran Kolej Kediaman Pelajar Baharu (Residential College Registration)	28 Sept 2024 – 29 Sept 2024 (2 hari/2 days)	
Minggu Aluan Pelajar (Student's Orientation Week) / Hari Bersama fakulti	30 Sept 2024 – 3 Okt 2024 (4 hari/4 days)	
Pendaftaran Online Pelajar Semasa (Returning Student's Registration) <u>Online Registration</u>	2 Okt 2024 – 6 Okt 2024 (5 hari/5 days)	
Pendaftaran Kolej Kediaman Pelajar Semasa (Returning Student's Residential College Registration)	5 Okt 2024 – 6 Okt 2024 (2 hari/2 days)	
Perkuliahhan (Lectures)	7 Okt 2024 – 24 Nov 2024 (7 minggu/7 weeks)	12 Oktober 2024 (12 October 2024) <ul style="list-style-type: none"> • Hari Jadi TYT Sarawak (Sarawak Governor's Birthday) 1 November 2024 (1 November 2024) <ul style="list-style-type: none"> • Hari Deepavali (Semenanjung Malaysia sahaja)
Cuti Pertengahan Semester 1 (Mid-Semester Break)	25 Nov 2024 – 1 Dis 2024 (7 hari/ 7 days)	
Perkuliahhan (Lectures)	2 Dis 2024 – 19 Jan 2025 (7 minggu/ 7 weeks)	25 Disember 2024 (25 December 2024) <ul style="list-style-type: none"> • Hari Krismas (Christmas) 1 Januari 2025 (1 January 2025) <ul style="list-style-type: none"> • Cuti Tahun Baharu 2025 (New Year)
Minggu Ulangkaji (Revision Week)	20 Jan 2025 – 2 Feb 2025 (14 hari/ 14 days)	29 & 30 Januari 2025 (29 & 30 January 2025) <ul style="list-style-type: none"> • Tahun Baru Cina (Chinese New Year)
Minggu Peperiksaan (Examination Week)	3 Feb 2025 – 23 Feb 2025 (3 minggu/3 weeks)	
Cuti Semester 1 (Semester Break)	24 Feb 2025 – 16 Mac 2025 (3 minggu /3 weeks)	

Aktiviti /Activity	SEMESTER 2	
	Tarikh	Catatan
Pendaftaran Online Pelajar Semasa (Returning Student 's Registration/Online Semester Registration)	11 Mac 2025 – 14 Mac 2025 (4 hari/4 days)	
Pendaftaran Kolej Kediaman Pelajar Semasa (Returning Student's Residential College Registration)	15 Mac 2025 – 16 Mac 2025 (2 hari/2 days)	
Perkuliahhan (Lectures)	17 Mac 2025 – 4 Mei 2025 (7 minggu/ 7 weeks)	31 Mac & 1 April 2025 (31 March & 1 April 2025) • Hari Raya Aidilfitri (Eid Mubarak) 18 April 2025 (18 April 2024) • Good Friday 1 Mei 2025 (1 May 2025) • Cuti Hari Pekerja (Labour Day)
Cuti Pertengahan Semester 2 (Mid-Semester Break)	5 Mei 2025 – 11 Mei 2025 (7 hari/ 7 days)	
Perkuliahhan (Lectures)	12 Mei 2025 – 29 Jun 2025 (7 minggu/ 7 weeks)	12 Mei 2025 (12 May 2025) • Hari Wesak (Wesak Day) 1, 2 & 4 Jun 2025 (1, 2 & 4 June 2025) • Hari Gawai (Gawai Day) 3 Jun 2025 (3 June 2025) • Hari Keputeraan YDP Agong (Agong's Birthday) 6 Jun 2025 (6 June 2025) • Hari Raya Aidiladha (Eid Al-Adha)
Minggu Ulangkaji (Revision Week)	30 Jun 2025 – 6 Jul 2025 (7 hari/ 7 days)	
Minggu Peperiksaan (Examination Week)	7 Jul 2025 – 27 Jul 2025 (3 minggu/ 3 weeks)	22 Julai 2025 (22 July 2025) • Hari Sarawak (Sarawak Day)
Cuti Panjang (Long Break)	28 Jul 2025 - 6 Okt 2025 (10 minggu/ 10 weeks)	

Aktiviti /Activity	ANTARSESI	
	Tarikh	Catatan
Pendaftaran Pelajar Semasa (Returning Student 's Registration) <u>Online Semester Registration</u>	28 Jul 2025 – 3 Ogos 2025 (1 minggu/ 1 weeks)	
Perkuliahhan (Lectures)	28 Jul 2025 – 21 Sept 2025 (8 minggu/ 8 weeks)	
Latihan Industri	28 Jul 2025 – 5 Okt 2025 (10 minggu/ 10 weeks)	

Nota: Pindaan Senat Bil 5/2024 ke-223 bertarikh 26 Jun 2024

Disediakan oleh:
Unit Pengambilan dan Kemasukan
Bahagian Pengajian Prasiswazah Universiti Malaysia Sarawak