

2022/2023

STUDENT HANDBOOK

FACULTY OF ENGINEERING

<http://www.feng.unimas.my>

Community-Driven University For A Sustainable World

VISION

A leading global university for sustainable future.

MISSION

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

STUDENT'S PROFILE

Name :
Student ID :
Programme :
Address in Campus :

Permanent Address :

HP No :
Email :

In case of emergency please contact:

Name :
Contact No :
Relationship with :
student

ACADEMIC ADVISOR INFORMATION

Name :
Contact No :
Email :
Office Room :

CONTENTS

	PAGE
Foreword	6
UNIMAS Senior Management	7
Faculty Management Committee	8
Faculty Academic Committee	9
Administrative & IT Staffs	11
Faculty Vision	13
Faculty Mission	13
Faculty Objectives	13
Faculty History	13
Academic Structure	14
Core Courses/ Mata Pelajaran Pengajian Umum (MPU)/Elective/Softskills/English/Bahasa Melayu	14
Course Registration	15
Programme Duration	15
Credit Transfer (Without Grade)	16
Credit Transfer (With Grade)	16
Programme Accumulated Credit	16
Assessment System	17
Programme Educational Objectives (PEO)	17
Programme Learning Outcomes (PLO)	17
Academic Advisor (Mentor-Mentee) System	18

CONTENTS

PROGRAMMES OFFERED	PAGE
Department of Civil Engineering	19
Department of Electrical and Electronics Engineering	27
Department of Mechanical Engineering	35
Department of Chemical Engineering and Energy Sustainability	43
List of University Courses	49

Attachment:

Academic Calendar for Undergraduate Studies (2022/2023 Session)



FOREWORD BY THE DEAN

Engineers today, play an increasingly important role in the future of our nation and the world. The Faculty of Engineering UNIMAS is uniquely positioned to provide innovative and systematic engineering education and produce engineers with strong technical and interpersonal skills through the dedication and commitment of its faculty members having expertise in diverse niche areas. Through innovative curricula, teamwork approach, problem-based learning, soft skills programme and leadership-building experiences, the Faculty of Engineering imparts to its students' vital communication and critical-thinking skills.

I invite you to become better acquainted with the UNIMAS Faculty of Engineering, where you will discover not only engineering merit but also a campus alive with intellectual, cultural and health activities.

Professor Ir. Dr Hajah Siti Noor Linda Binti Taib
Dean
FACULTY OF ENGINEERING

UNIMAS SENIOR MANAGEMENT



Professor Datuk Dr Mohamad Kadim bin Suaidi
VICE-CHANCELLOR



**Professor Dr Wan Hashim bin
Wan Ibrahim**
Deputy Vice-Chancellor
(Research & Innovation)



**Professor Dr. Ahmad Hata bin
Rasit**
Deputy Vice-Chancellor
(Academic & International)



**Professor Dr. Thomas Kana
@ Kamarudin bin Kana**
Deputy Vice Chancellor
(Student Affairs & Alumni)



**Professor Datu Mohd Fadzil
bin Abdul Rahman**
Assistant Vice-Chancellor



Haji Azlan bin Ramli
Registrar



Haji Mazlan bin Kiflie
Bursar

FACULTY MANAGEMENT COMMITTEE



Professor Ir. Dr Hajah Siti Noor Linda binti Taib
Dean



Dr Nordiana binti Rajae
Deputy Dean
(Undergraduate)
rnordiana@unimas.my
Ext : 3324/3395



Associate Professor Dr Norhuzaimin bin Julai
Deputy Dean (Postgraduate and Commercialization)
inorhuza@unimas.my
Ext : 3326



Dr Ervina Junaidi
Deputy Dean
(Student Affairs and Alumni)
jervina@unimas.my
Ext: 3332/2603



Professor Ir. Dr Andrew Ragai Henry Rigit
Deputy Dean
(Industry and Community Engagement)
arigit@unimas.my
Ext : 3220



Associate Professor Dr Mohammad Ibrahim Safawi bin Mohammad Zain
Head of Department
Civil Engineering
mzmibrahim@unimas.my
Ext : 3337



Dr Noor Hisyam bin Noor Mohamed
Head of Department Mechanical and Manufacturing Engineering
nmnhisyam@unimas.my
Ext : 3340



Associate Professor Ir. Ts. Dr Kismet anak Hong Ping
Head of Department
Electrical and Electronic Engineering
hpismet@unimas.my
Ext : 2692



Dr Ibrahim bin Yakub
Head of Department
Chemical Engineering and Energy Sustainability
yibrahim@unimas.my
Ext : 4584



Ir. Dr Khairul Fikri Bin Tamrin
Head of Strategy FENG
tkfikri@unimas.my
ext : 2290



Hajah Nor Fadzillah binti Kamarudzaman
Deputy Registrar
knfadzilah@unimas.my
Ext : 3955



Rosmanti binti Kiflie
Senior Assistant Registrar
krosmanti@unimas.my
Ext : 3334

FACULTY ACADEMIC COMMITTEE



Professor Ir. Dr Hajah Siti Noor Linda binti Taib
Dean



Dr Nordiana binti Rajae
Deputy Dean
(Undergraduate)
rnordiana@unimas.my
Ext : 3395



**Associate Professor Dr
Norhuzaimin bin Julai**
Deputy Dean (Postgraduate and
Commercialization)
jnorhuza@unimas.my
Ext : 3326



Dr Ervina Junaidi
Deputy Dean (Student Affairs
and Alumni)
iervina@unimas.my
Ext: 2603



**Professor Ir. Dr Andrew Ragai
Henry Rigit**
Deputy Dean (Industry and
Community Engagement)
arigit@unimas.my
Ext : 3220

HEAD OF DEPARTMENT (HOD)



**Associate Professor Dr
Mohammad Ibrahim Safawi
bin Mohammad Zain**
Head of Department
Civil Engineering
mzmibrahim@unimas.my
Ext : 3337



**Dr Noor Hisyam bin Noor
Mohamed**
Head of Department
Mechanical and
Manufacturing Engineering
nmnhisyam@unimas.my
Ext : 3340



**Associate Professor Ir. Ts.
Dr Kismet anak Hong Ping**
Head of Department
Electrical and Electronic
Engineering
hpkismet@unimas.my
Ext : 2692



Dr Ibrahim bin Yakub
Head of Department
Chemical Engineering and
Energy Sustainability
yibrahim@unimas.my
Ext : 4584

PROGRAMME COORDINATORS

POSTGRADUATE



Ir. Dr Ting Sim Nee
Master of Engineering
in Civil Engineering
snting@unimas.my
Ext : 3293



**Dr Dyg Norkhairunnisa binti
Abang Zaidel**
Master of Engineering in
Communication Systems
azdnorkhairunnisa@unimas.my
Ext: 2634



**Assoc. Prof. Ir. Dr Ivy
Tan Ai Wei**
Master of Engineering
in Energy and
Environment
awitan@unimas.my
Ext : 3312



**Assoc. Prof. Ir. Dr Mohd
Danial Bin Ibrahim**
Master of Engineering in
Mechanical Engineering
imdaniel@unimas.my
ext : 3265



**Assoc. Prof. Ir. Dr
Lim Soh Fong**
Master of Science in
Engineering
Management
sflim@unimas.my
Ext : 3209

UNDERGRADUATE



Dr Zamri Bin Bujang
Bachelor of Civil
Engineering with
Honours
bzamri@unimas.my
ext : 3267



**Dr Mohd Syahmi bin
Jamaludin**
Bachelor of Mechanical
Engineering with Honours
jmsyahmi@unimas.my
Ext : 3321



**Ts Dr Josephine Lai
Chang Hui**
Bachelor of Chemical
Engineering with
Honours
lchjosephine@unimas.my
Ext : 2639



**Ir. Dr Hazrul bin Mohamed
Basri**
Bachelor of Electrical and
Electronics Engineering with
Honours
mbhazrul@unimas.my
Ext: 2657

ADMINISTRATIVE OFFICERS



Hajah Nor Fadzilah Kamarudzaman
Deputy Registrar
(Admin & Finance)
knfadzilah@unimas.my
ext. 3955



Rosmanti binti Kiflie
Senior Assistant Registrar
(Academic)
krosmanti@unimas.my
ext. 3334

ACADEMIC ADMINISTRATIVE UNIT



Rokilah binti Bohari Khan
Senior Administrative Assistant
(Civil Engineering)
bkrokila@unimas.my
ext. 3346



Safaraliwati binti Ghazali
Senior Administrative Assistant
(Electrical & Electronic Engineering)
gsafaraliwati@unimas.my
ext. 3346



Maryani binti Morshidi
Administrative Assistant
(Chemical Engineering)
mmaryani@unimas.my
ext. 3348



Siti Khadijah binti Salim
Administrative Assistant
(Mechanical Engineering)
sskhadijah@unimas.my
ext. 3348

ADMINISTRATIVE & FINANCE UNIT



Roziah binti Mohamad Jai
Senior Administrative Assistant
mjroziah@unimas.my
ext. 3345



Angela Robert Lin
Senior Customer Relation Officer
rlangela@unimas.my
ext. 3342



Erwandi bin Bujang Senawi
Senior Administrative Assistant
serwandi@unimas.my
ext. 3327



Nur Huda Binti Abu Salim
Administrative Assistant
asnhuda@unimas.my
ext. 3341



Asyor bin Ayok
Operation Assistant
aashor@unimas.my
ext. 3342

SCIENCE OFFICERS



Raja Mohd Raffel bin Zulkifli
Senior Science Officer
zmr Raffel@unimas.my
ext. 3456



Norzilawatil Azwa binti Mohamad
Senior Science Officer
mnazwa@unimas.my
ext. 3458

INFORMATION TECHNOLOGY UNIT



Rose Sima anak Ika
Senior IT Officer Assistant
zmr Raffel@unimas.my
ext. 3404



Muhammad Abdul Basit bin Hussain
IT Officer Assistant
habasit@unimas.my
ext. 3250

OFFICE SECRETARIES



Shamsiah binti Sahari
Senior Secretary for Dean's Office
sshamsia@unimas.my
ext. 3329



Mubin Syahir bin Mohtada
Secretary for Deputy Dean's Office
smmubin@unimas.my
ext. 3330



Lea anak Simon
Administrative Assistant
(Deputy Dean's Office)
slea@unimas.my
ext. 3328

FACULTY VISION

A leading global engineering faculty for sustainable future.

FACULTY MISSION

To provide quality engineering education through excellence in teaching, research and strategic engagement for a sustainable global society.

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

Faculty of Engineering is one of the eight faculties in UNIMAS. It was established on 30 December 1993. On its establishment, Faculty of Engineering offered two undergraduate programmes, which are Civil Engineering and Electronics and Telecommunication and received its first admission in July 1994 academic session. In 1996, the Mechanical and Manufacturing Engineering programme was introduced, followed by offering of Electronics and Computer programme starting May 2000 to fulfill the demand and development in the engineering fields. Chemical Engineering programme was offered in 2009 academic session and Electrical and Electronics Engineering programme in 2014.

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 SOFTSKILLS AND BASIC VOLUNTEERISM

PPD1041 Softskills and Basic Volunteerism is a compulsory course for all UNIMAS students which aims to promote volunteerism and enhance softskills 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 – 2	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
MUET BAND 1 – 3	PBI1102 Academic English I PBI1072 English for Professional Communication
MUET BAND 4 – 6	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 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 DEAN.

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, the following general regulation must be complied:

- 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 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 different programme.

PROGRAMME ACCUMULATED CREDIT

All students must undertake the following remedial courses:

- Credited Co-Curriculum Course (For 2019/2020 intake and below)
- Soft Skill 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 programmes at Faculty of Engineering:

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 his/her 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

DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC STAFF



Head of Department
Assoc. Prof. Dr Mohammad Ibrahim Safawi bin Mohd Zain
mzmibrahim@unimas.my
ext : 3337



Programme Coordinator
Master of Engineering in Civil Engineering
Ir. Dr Ting Sim Nee
snting@unimas.my
ext : 3293



Programme Coordinator
Bachelor of Civil Engineering with Honours
Dr Zamri Bin Bujang
bzamri@unimas.my
ext : 3267

Lecturers



Prof. Dr Ng Chee Khoon
ckng@unims.my
ext : 3288



Prof. Dr Wan Hashim bin Wan Ibrahim
wiwhashim@unimas.y
ext : 1222



Prof. Ir. Dr Hjh Siti Noor Linda bt Taib
tlinda@unimas.my
ext : 3325



Prof. Dr Mohammad Abdul Mannan
mannan@unimas.my
ext : 3223



Ir. Dr Abdul Razak Bin Abdul Karim
akarazak@unimas.my
ext : 3320



Dr Idawati Binti Ismail
iidawati@unimas.my
ext : 1836



Ir. Dr Leonard Lim Lik Pueh
lpleonard@unimas.my
ext : 2624



Ir. Dr Norazzlina Binti M.Sa'don
msazzlin@unimas.my
ext : 3320



Assoc. Prof. Dr Ahmad Kueh Beng Hong
kbahmad@unimas.my
ext : 4583



Dr Mohamad Raduan Bin Kabit
kraduan@unimas.my
ext : 2664



Dr Raudhah Binti Ahmadi
araudhah@unimas.my
ext : 4535



Dr Charles Bong Hin Joo
bhcharles@unimas.my
ext : 2290



Dr Gaddafi Bin Ismaili
igaddafi@unimas.my
ext : 2693



Dr Rosmina Binti Ahmad Bustami
abrosmi@unimas.my
ext : 3267



Dr Azida Binti Rashidi
razida@unimas.my
ext : 3308



Dr Alsidqi Hasan
halsidqi@unimas.my
ext : 3231



Dr Fauzan Bin Sahdi
sfauzan@unimas.my
ext :



Ron Aldrino Chan@ Ron Buki
acron@unimas.my
ext : 3423



Larry Silas Tirau
stlarry@unimas.my
ext : 3423



Rohaida Binti Affandi
arohaida@unimas.my
ext : 3270



Dr Jethro Henry Adam
hajethro@unimas.my
ext : 3224



Assoc. Prof. Ir. Dr Darrien Mah Yau Seng
ysmah@unimas.my
ext : 1039



Dr Lee Yee Yong
yylee@unimas.my
ext : 3316



Assoc. Prof. Dr Norsuzailina Binti Mohamed Sutan
msnorsuzailina@unimas.my
ext : 3232



Ahmad Kamal Bin Abdul Aziz
aakamal@unimas.my
ext : 3284



Dr Abdul Azim Bin Abdullah
aaazim@unimas.my
ext : 2681



Dr Dygku Salma binti Awg Ismail
aidsalma@unimas.my
ext : 3280



Dr Norazlina Binti Bateni
bnorazlina@unimas.my
ext : 2654



Dr Nor Azalina Binti Rosli
rnazalina@unimas.my
ext :



Dr Inawati Binti Othman
oinawati@unimas.my
ext : 2607



Ir. Yunika Kirana binti Abdul Khalik
akykirana@unimas.my
ext : 4525



Ir Dr Muhammad Syukri bin Abdullah
amsimran@unimas.my
ext: 3318



Ir Jude Ting Mui Heng
tmhjude@unimas.my
ext:

TECHNICAL SUPPORT STAFF



Saiful Bin Edi
esaiful@unimas.my
ext : 3441



Rozaini Bin Ahmad
arozaini@unimas.my
ext : 3419



Mohd Sapian Bin Mohd Kassim
mkmsapian@unimas.my
ext : 3452



Mohammad Ar-Rasyidin Bin Marudin
mmarrasyidin@unimas.my
ext : 3441



Nur Shafini Binti Hamdan
hnsfafini@unimas.my
ext : 3448/3411



Shafrizza Binti Rosli
rshafrizza@unimas.my
ext : 3441



Mohd Zaidi Bin Serah
smzaidi@unimas.my
ext : 3441



Mohd Ismail Hairul bin Abdul Latif
amihairul@unimas.my
ext : 3250



Spencer anak Jackie
jspencer@unimas.my
ext : 3432

1.0 PROGRAMME ESTABLISHMENT

Knowledge in Civil Engineering is important in developing highly competent and technically sound engineers in planning, design, construction and operation of building structures, bridges, wharves, dams, power stations, highways, railways, airports, water distribution system, solid waste, wastewater, and flood mitigation and erosion. The main objective of Civil Engineering programme is to meet the nation's aspiration of having educated, trained and specialized engineers capable of integrating various Civil Engineering fields aligned with the current rapid economic and industrial development growth. The programme is also aimed at generating highly competent, responsible, forward looking and professionals in the engineering field.

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 (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 CONCEPT OF PROGRAMME

The programme offers Civil Engineering modules in the following fields:

(i) Geotechnical Engineering

Geotechnical engineers are responsible to identify the earth subsurface structures, in which are the foundations to construction of engineering structures such as buildings, retaining walls, underground pipelines, tunnels and dams. Design of these structures depend largely on the strength and geologic properties of soil layers, as well as other factors related to safety and economy.

(ii) Construction Engineering

Construction engineers oversee an engineering project from planning stage until completion stage of the project. It is their responsibility to ensure the project is conducted as per planned and within the allocated time and budget, and conformed to given specifications. They manage the workloads and work schedules to ensure that the project runs smoothly and financially sound. They have to be responsive to ever changing natures of the construction processes as the project progresses to make sure the resources and workforce and utilized efficiently.

(iii) Structural Engineering

Structural engineers are responsible to design structures such as bridges, buildings and power stations. They utilize materials like steel, timber and concrete and work with architects in ensuring the beautiful structures inspired by architects are securely built for occupation.

(iv) Water Resources Engineering

Water resources engineers analyze the availability and reliability of water sources and design reservoirs, distribution system, dams, water engineering structures, pump stations and other projects related to river and coastal engineering.

(v) Transportation Engineering

Transportation engineering is the application of technology and scientific principles to the planning, functional design, operation and management of facilities for any mode of transportation in order to provide safe, efficient, rapid, comfortable, convenient, economical and environmentally compatible for the movement of people and goods.

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 1-3 or IELTS 5.5)		2 credits
	PBI1072 English for Academic Purposes (MUET 4-6 or IELTS 6)		
	PBI1112 Preparatory English 1*		
	MPU3192 Appreciation of Ethics and Civilization MPU3142 Malay Language for Communication 2 (non-Malaysian)		2 credits
	PPD1041 Softskills 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 1-3 or IELTS 5.5)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4-6 or IELTS 6)		
	PBI1122 Preparatory English 2*		
	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
	PBI1102 Academic English 1 (MUET 1-3 or IELTS 5.5) *		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 credit
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 01 – University Elective Course 1		3 credits
	MPU3182 Philosophy and Current Issues		2 credits
	PBI1072 English for Professional Communication (MUET 1-3 or IELTS 5.5)		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 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

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	Requisite: KNS3243&KNS3753	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 (144*)

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
 KNS4763 Pavement Design, Construction and Maintenance
 KNS4773 Introduction to Earthquake Engineering
 KNS4783 Engineering Contract Management
 KNS4803 Water Futures

DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING

ACADEMIC STAFF



Head of Department
Assoc. Prof. Ir. Ts. Dr Kismet Anak Hong Ping
hpkismet@unimas.my
ext : 2692



Programme Coordinator
Master of Engineering in Communication Systems
Dr Dyg Norkhairuninisa Binti Abang Zaidel
azdnorkhairunnisa@unimas.my
ext : 2634



Programme Coordinator
Bachelor of Electrical and Electronics with Honours
Ir. Dr Hazrul Bin Mohamed Basri
mbhazrul@unimas.my
ext : 2657

Lecturers



Prof. Ir. Ts. Dr Al-Khalid Bin Haji Othman
okhalid@unimas.my
ext :



Prof. Dr Musse Mohamud Ahmed
mamusse@unimas.my
ext : 2679



Prof. Dr Wan Azlan Bin Wan Zainal Abidin
wzaazlan@unimas.my
ext : 1057



Assoc. Prof. Dr Ahmed Mohamed Ahmed Haidar
ahahmed@unimas.my
ext : 2663



Assoc. Prof. Ts. Dr Siti Kudnie Sahari
sskudnie@unimas.my
ext : 2609



Assoc. Prof. Ir. Dr David Bong Boon Liang
bbl david@unimas.my
ext : 3313



Assoc. Prof. Dr Norhuzaimin Bin Julai
jnorhuza@unimas.my
ext : 3326



Assoc. Prof. Dr Tay Kai Meng
kmtay@unimas.my
ext : 3297



Assoc. Prof. Sakena Binti Abdul Jabar
ajsakena@unimas.my
ext : 3291



Assoc. Prof. Ts. Dr Rohana Binti Sapawi
srohana@unimas.my
ext : 2417



Ts. Dr Abdul Rahman Bin Kram
karahman@unimas.my
ext : 2641



Ts. Dr Yonis. M. Yonis Buswig
byonis@unimas.my
ext : 2627



Dr Nordiana Binti Rajae
rnordiana@unimas.my
ext : 3395/3324



Dr Kuryati Binti Kipli
kkuryati@unimas.my
ext : 3285



Ir. Dr Martin Anyi
amartin@unimas.my
ext :



Dr Annie Anak Joseph
jannie@unimas.my
ext : 4526



Ts. Dr Dayang Azra Binti Awg Mat
amdazra@unimas.my
ext : 3309/3386



Dr Dyg Nur Salmi Dharmiza Binti Awg Salleh
asdndharmiza@unimas.my
ext : 3319



Ir. Ts. Dr Then Yi Lung
ylthen@unimas.my
ext:



Ir. Dr Abadi Bin Chanik
caabadi@unimas.my
ext:



Ts. Dr Ade Syaheda Wani Binti Marzuki
maswani@unimas.my
ext : 2414



Ts. Dr Kho Lee Chin
lckho@unimas.my
ext : 4541



Ir. Dr Kasumawati Binti Lias
ikasumawati@unimas.my
ext : 2658



Ts. Dr Yannuar Zulardiansyah Arief
ayzulardiansyah@unimas.my
ext : 2622



Dr Ngu Sze Song
ssngu@unimas.my
ext : 3304



Dr Nurdiani Binti Zamhari
znurdiani@unimas.my
ext : 3350



Ts. Dr Mohd Faizrizwan Bin Mohd Sabri
msmfaizrizwan@unimas.my
ext : 2074



Dr Tengku Mohd Affendi Bin Zulcaffle
ztmafendi@unimas.my
ext : 4527



Ts. Dr Maimun Binti Huja Husin
hhmainun@unimas.my
ext : 2672



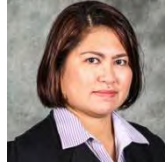
Ng Liang Yew
ngliangy@unimas.my
ext : 3269



Ts. Shamsiah Binti Suhaili
sushamsiah@unimas.my
ext : 2667



Hazmi Hijazi Bin Abdul Halim
ahhhijazi@unimas.my
ext : 3298



Shirley Anak Rufus
rshirley@unimas.my



Asrani Bin Lit
lasrani@unimas.my
ext :



Mohd Hafiez Izzwan Bin Saad
smhizzwan@unimas.my



Abdul Hafiz Bin Abdul Karim
akahafiz@unimas.my



Sharifah Masniah Binti Wan Masra
wmmasniah@unimas.my



Azfar Satari Bin Abdullah
aasatari@unimas.my



Nurul 'Izzati Binti Hashim
hnizzati@unimas.my



Nazreen Binti Junaidi
jnazreen@unimas.my



Ts. Mohd Ridhuan bin Mohd Sharip
msmridhuan@unimas.my



Ir. Rudyanto Bin Philman Jong
jprudiyanto@unimas.my



Nur Alia Athirah Bint Hj Mohtadzar
mnaathirah@unimas.my

TECHNICAL SUPPORT STAFF



Wan Mohd Hamizah Bin Wan Rosli
wrvhamizah@unimas.my
ext : 3386



Awgku Mohd Azmirul Bin Awgku Omar
aoamazmirul@unimas.my
ext : 3383



Nawawi Bin Muhamad
mnawawi@unimas.my
ext : 3374



Dayang Rohhayati Binti Abang Ahamd
aadrohhayati@unimas.my
ext : 3380/3399



Yusmizan bin Hanin @ Bunian
byusmizan@unimas.my
ext : 3323



Johari Bin Abdul Karim
akjohari@unimas.my
ext : 3362



Iskendasah Bin Minggu
miskendasah@unimas.my
ext : 3402



Mahathir Bin Bujang
bmahathir@unimas.my
ext : 3352



Abg Mohd Firdaus Bin Abg Abd Hamid
aamfirdaus@unimas.my
ext : 3376



Wan Mohd Haekal Bin Wan Herdwat
hmhaekal@unimas.my
ext : 3367



Zuraidah Binti Ibrahim
izuraidah@unimas.my
ext : 3399/3380



Nasri Bin Eli
enasri@unimas.my
ext : 3362



Azizan Bin Segri
sazizan@unimas.my
ext : 3391

1.0 PROGRAMME ESTABLISHMENT

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 and skills at their respective career in globally competitive environment
PEO 2	Uphold the 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 to the solution of complex Electrical & Electronics Engineering problems (WK1-WK4)
PLO 2	Identify, formulate, conduct research literature and analyse complex Electrical & Electronics Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences (WK1-WK4)
PLO 3	Design solutions for complex Electrical & Electronics 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 Electrical & Electronics 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 Electrical & Electronics 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 Electrical & Electronics Engineering practice and solutions to complex Electrical & Electronics Engineering problems (WK7)
PLO 7	Understand and evaluate the sustainability and impact of professional Electrical & Electronics Engineering work in the solutions of complex engineering problems in societal and environmental contexts. (WK7)
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7)
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 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 environments and to cultivate entrepreneurship skills

4.0 CONCEPT OF 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 center 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 1-3 or IELTS 5.5)		2 credits
	PBI1072 English for Academic Purposes (MUET 4-6 or IELTS 6)		
	PBI1112 Preparatory English 1*		
	PBM2072 Bahasa Melayu PBM2082 Bahasa Melayu Komunikasi Lanjutan (non-Malaysian)		2 credits
	PPD1041 Softskills 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 1-3 or IELTS 5.5)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4-6 or IELTS 6)		
	PBI1122 Preparatory English 2*		
	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 Civilization		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
	KNR2753 Computer Systems Architecture		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 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 *		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 *		2 credits *

YEAR 3 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

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 ENGINEERING

ACADEMIC STAFF



Head of Department
Dr Noor Hisyam Bin Noor Mohamed
nmnhisyam@unimas.my
ext : 3340



Programme Coordinator
Master of Engineering in Mechanical Engineering
Assoc. Prof. Ir. Dr Mohd Danial Bin Ibrahim
imdaniel@unimas.my
ext : 3265



Programme Coordinator
Bachelor of Mechanical Engineering with Honours
Dr Mohd Syahmi Bin Jamaludin
jmsyahmi@unimas.my
ext : 3321

LECTURERS



Prof. Ir. Dr Andrew Ragai
Henry Rigit
arigit@unimas.my
ext : 3220



Prof. Dr Sinin Bin Hamdan
hsinin@unimas.my
ext : 3225



Prof. Dr M. Shahidul Islam
mislam@unimas.my
ext : 3282



Assoc. Prof. Dr Abdullah Bin
Hj Yassin
yabdullah@unimas.my
ext : 2697



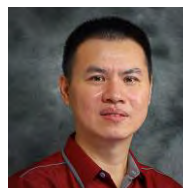
Dr Mahshuri Yusof
ymahshuri@unimas.my
ext : 3289



Assoc. Prof. Ir. Dr Syed
Tarmizi Bin Syed Shazali
starmizi@unimas.my
ext : 3296



Ir. Dr Khairul Fikri Bin
Tamrin
tkfikri@unimas.my
ext : 2290



Ir. Dr David Chua Sing Ngie
csdavid@unimas.my
ext : 4519



Dr Aidil Azli Bin Alias
aaazli@unimas.my
ext : 2419



Dr Abg Mohammad Nizam Bin Abang Kamaruddin
akamnizam@unimas.my
ext : 3254/3212



Dr Nur Tahirah Binti Razali
rntahirah@unimas.my
ext : 2410



Dr Ana Sakura Binti Zainal Abidin
zaasakura@unimas.my
ext : 3306



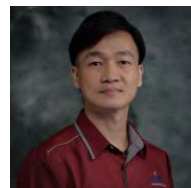
Assoc. Prof. Dr Shahrol Bin Mohamaddan
mshahrol@unimas.my
ext :



Dr Magdalene Andrew Munot
ammagdal@unimas.my
ext : 3300



Dr Lidyana Binti Roslan
rlidyana@unimas.my
ext : 1010/3254



Dr Nicholas Kuan Hoo Tien
khtnicholas@unimas.my
ext : 3290



Dr Marini Binti Sawawi
smarini@unimas.my
ext : 3303



Dr Shirley Johnathan Tanjong
jtshirley@unimas.my
ext : 2620



Dr Ervina Binti Junaidi
jervina@unimas.my
ext : 3332



Dr Mohamad Iskandar Bin Jobli
jmiskandar@unimas.my
ext : 3202



Haji Rasli Bin Muslimen
mrasli@unimas.my
ext : 3305



Siti Nor Ain Binti Musa
msnain@unimas.my
ext : 3496/3310



Dr Ahmad Adzlan Fadzli Bin Khairi
kaafadzli@unimas.my
ext :



Dr Muhamad Fadzli Bin Ashari amfadzli@unimas.my
ext :



Dr Annisa binti Jamali
jannisa@unimas.my
ext: 4516



Abg Mohd Aizuddin Bin Abg Mohd Mohtar
amaizuddin@unimas.my
ext :



Hishammudin Afifi Bin Huspi
hhafifi@unimas.my
ext : 3295



Ts. Mohd Azrin Bin Mohd Said
msmazrin@unimas.my
(Cuti Belajar)



Mohamad Syazwan Zafwan Bin Mohamad Suffian
msmsyazwan@unimas.my
(Cuti Belajar)

TECHNICAL SUPPORT STAFF



Zaidi Bin Suhai
szaidi@unimas.my
ext : 3217/3219



Ireman Bin Bolhassan
bireman@unimas.my
ext : 3219/3201



Hasmiza Binti Kontet
khasmiza@unimas.my
ext : 3214



Siti Fazilah Binti Mohammad
msfazilah@unimas.my
ext : 3214



Rhyier Juen@ Mohd Rhyier Juen Abdullah
jrhyier@unimas.my
ext : 3253



Sabariman Bin Bakar
bsabariman@unimas.my
ext : 3219



Mohd Fairudi Bin Mohd Jamil
mjmfairudi@unimas.my
ext : 3219



Azaman Bin Jajol
jazaman@unimas.my
ext : 3219



Lawrence Macwell Sinin
slmacwell@unimas.my
ext : 3387

1.0 PROGRAMME ESTABLISHMENT

Work force in the field of Mechanical and Manufacturing 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 designs, 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 and Manufacturing 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 specialisation to the solution of complex Mechanical and Manufacturing Engineering problems. (WK1-WK4)
PLO 2	Identify, formulate and analyse complex Mechanical and Manufacturing Engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences. (WK1-WK4)
PLO 3	Design solutions for complex Mechanical and Manufacturing 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 and Manufacturing 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 and Manufacturing 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 and Manufacturing Engineering practice and solutions to complex Mechanical and Manufacturing Engineering problems. (WK7)
PLO 7	Understand and evaluate the sustainability and impact of professional Mechanical and Manufacturing Engineering work in the solutions of complex Mechanical and Manufacturing Engineering problems in societal and environmental contexts. (WK7)
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of Mechanical and Manufacturing Engineering practice. (WK7)
PLO 9	Communicate effectively on complex Mechanical and Manufacturing 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 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.

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 1-3 or IELTS 5.5)		2 credits
	PBI1092 Academic English 2 (MUET 4-6 or IELTS 6)		
	PBI1112 Preparatory English 1*		
	MPU3192 Appreciation of Ethics and Civilization 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 1-3 or IELTS 5.5)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4-6 or IELTS 6)		
	PBI1122 Preparatory English 2*		
	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
	KNJ3531 Engineering Laboratory 4	Requisite: KNJ2103	1 credit
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 02 – University Elective Course 2		3 credits
	PBI1102 Academic English I *		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
MPU, GENERIC, REMEDIAL, ELECTIVE	KEU 03 – University Elective Course 3		3 credits
	PBI1072 English for Professional Communication *		2 credits *

YEAR 3 SEMESTER INTERSESSION

CORE	KNF3065 Industrial Training		5 credits
MPU, GENERIC, REMEDIAL, ELECTIVE			

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			

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 Modeling 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

ACADEMIC STAFF



Head Of Department
Dr Ibrahim Yakub
yibrahim@unimas.my
ext : 4584



Programme Coordinator
Master of Engineering (Energy and Environment)
Assoc. Prof. Ir. Dr Ivy Tan Ai Wei
awitan@unimas.my
ext : 3312



Programme Coordinator
Bachelor of Chemical Engineering with Honours
Ts Dr Josephine Lai Chang Hui
lchjosephine@unimas.my
ext: 2639



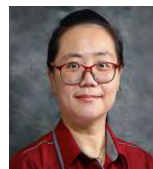
Prof. Dr Mohammad Omar Abdullah
amomar@unimas.my
ext: 3349



Assoc. Prof. Dr Shanti Faridah Salleh
sshanti@unimas.my
ext: 2683



Dr Nazeri Bin Abdul Rahman
arnazeri@unimas.my
ext : 3332



Assoc. Prof. Ir. Dr Lim Soh Fong
sflim@unimas.my
ext : 3209



Ts Dr Md Rezaur Rahman
rmrezaur@unimas.my
ext : 3302



Assoc. Prof. Dr Rubiyah Bains
ruby@unimas.my
ext: 3464



Dr Hafizah Binti Abdul Halim Yun
ahyhafizah@unimas.my
ext : 3680/2682



Noraziah Binti Abdul Wahab
anoraziah@unimas.my
ext : 2895



Nur Amalina Shairah Binti Abdul Samat
asnamalina@unimas.my
ext : 3273



Dr Norfamila Binti Che Mat
cmnorfamila@unimas.my
ext : 2696



Mohd Farid Bin Atan
amfarid@unimas.my
ext : 3462



Dr Dayang Salyani Binti Abang Mahmod
amdsalyani@unimas.my
ext : 3275



Dr Yiin Chung Long
clyiin@unimas.my
ext : 3268



Sherena Binti Sar-ee
ssherena@unimas.my
ext : 3279



Khairul Anwar Bin Mohd Said
mskanwar@unimas.my
ext : 3318



Norlisa Binti Mili
mnorlisa@unimas.my
ext :- 3279



Nur Syuhada Binti Ahmad Zauzi
aznsyuhada@unimas.my
ext :-



Ir. Dr Mohamad Asrul Bin Mustapha
mmasrul@unimas.my
ext :-



Harunal Rejam Bin Ramji
rhrejam@unimas.my
ext : -



Mohamed Afizal bin Mohamed Amin
mamafizal@unimas.my
ext :-



Dr Nurliyana binti Abdul Raof
arnurliyana@unimas.my
ext:

Assoc. Prof. Dr Sariah Abang
asariah@unimas.my
ext:

TECHNICAL SUPPORT STAFF



Zulkifli Bin Ahmat
zulkif@unimas.my
ext : 3471



Mohd Hafiz Bin Mafadi
mmhafiz@unimas.my
ext : 3466/3467



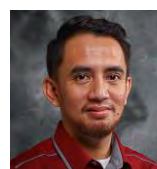
Kamri Bin Mohamad
mkamri@unimas.my
ext : 3466/3467



Dayang Fadhilatul Aishah Binti Abg Abdul Hamid
dfadhilatul@unimas.my
ext: 3483



Mohd Amirul Nizam Bin Amit
amanizam@unimas.my
ext : 3466/3467



Airul Azhar Bin Jitai
ajairul@unimas.my
ext : 3466/3467

1.0 PROGRAMME ESTABLISHMENT

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 skillful, efficient and high caliber 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 (WK7)
PLO 8	Apply ethical principles and commit to professional ethics and responsibilities and norms of engineering practice (WK7)

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 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 1-3 or IELTS 5.5)		2 credits
	PBI1072 English for Academic Purposes (MUET 4-6 or IELTS 6)		
	PBI1112 Preparatory English 1*		
	MPU3192 Appreciation of Ethics and Civilization MPU3142 Malay Language for Communication 2 (non-Malaysian)		2 credits
	PPD1041 Softskills 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 1-3 or IELTS 5.5)		2 credits
	PBI1082 English for Occupational Purposes (MUET 4-6 or IELTS 6)		
	PBI1122 Preparatory English 2*		
	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
	PBI1102 Academic English 1 (MUET 1-3 or IELTS 5.5) *		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 MPU3342 Culture and Ethnicity in Malaysia (non-Malaysian)		2 credits
	072 English for Professional Communication (MUET 1-3 or IELTS 5.5)		2 credits *

YEAR 3 SEMESTER 1

CORE	KNC3181 Chemical Engineering Laboratory 3		1 credit
	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
MPU, GENERIC, REMEDIAL, ELECTIVE			

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 (143*)

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 Civilizations (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
MPU-U4	MPU3342 Culture and Ethnicity in Malaysia (for non-Malaysian)
	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 Theater	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

FACULTY	COURSE CODE & NAME	SEMESTER OFFERED
	STU2063 Ecotourism Industry in Malaysia	SEM 1 & 2
	STU2073 Natural Resource Managements	SEM 1 & 2
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 and A-	PBI1092 Academic English 2 PBI1082 English for Occupational Purposes

ENGLISH COURSES – IELTS INTERNATIONAL STUDENTS

Band 5 and below	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
Band 5.5 – 6.5	PBI1102 Academic English I PBI1072 English for Professional Communication
Band 7 and above	PBI1092 Academic English 2 PBI1082 English for Occupational Purposes

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	Airforce Training 1	Latihan Ketenteraan Udara 1
PPB1072	Airforce Training 2	Latihan Ketenteraan Udara 2
PPB2082	Airforce Training 3	Latihan Ketenteraan Udara 3
PPB2092	Airforce Training 4	Latihan Ketenteraan Udara 4
PPB3102	Airforce Training 5	Latihan Ketenteraan Udara 5
PPB3112	Airforce 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



UNIVERSITI MALAYSIA SARAWAK PERATURAN BERPAKAIAN PELAJAR

Setiap pelajar adalah tertaklak kepada Peraturan Berpakaian Pelajar yang ditetapkan oleh Universiti ketika berada di dalam kampus.

PAKAIAN PELAJAR LELAKI

- 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 berpakaian kebangsaan masing-masing yang sesuai).
- Berambut pendek, kemas dan tidak mencecah kolar baju (Rujuk Akta Universiti dan Kolej Universiti, 1971, Perkara 26).
- Memakai pakaian sukan yang sesuai semasa berukut atau berekreasi.
- Memakai kasut yang sesuai. Pemakaian selipar dan sandal adalah dilarang.
- Tidak memakai perhiasan perempuan atau pakaian menyerupai perempuan.

CONTOH PAKAIAN PELAJAR LELAKI



PAKAIAN PELAJAR PEREMPUAN

- Setiap pelajar hendaklah berpakaian kemas dan sopan dan 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 serta tidak menunjukkan bentuk tubuh badan).
- Memakai skirt yang lebarnya hendaklah di bawah paras lutut.
- Memakai seluar yang bersesuaian dan sopan.
- Memakai alat solek, aksesori dan pewangi setera sederhana.
- Memakai kasut yang sesuai.

CONTOH PAKAIAN PELAJAR PEREMPUAN



TEMPAT PENGUATKUASAAN PERATURAN BERPAKAIAN

- Menghadiri kuliah, tutorial dan amali.
- Pusat Khidmat Maklumat Akademik (PKMA).
- Berurusan di Fakulti/Institut/Pusat/Bahagian.
- Menghadiri majlis rasmi Universiti di dalam dan di luar kampus.
- Menduduki peperiksaan.
- Menjalani latihan industri.

CONTOH RAMBUT LELAKI DAN RAMBUT WANITA



TINDAKAN TATATERTEH ATAU HUKUMAN TATATERTEH
TERUS BOLEH DIAMBIL TERHADAP PELAJAR YANG
TIDAK MEMATUHI PERATURAN DI ATAS
0. AMARAN
ii. DENDA TIDAK LEBIH DARI PADA RM500

SEMUA PELAJAR WAJIB MEMPAMERKAN KAD PELAJAR SEMASA BERADA DI DALAM KAWASAN KAMPUS

COVID-19

LANGKAH BERJAGA-JAGA

AMBIL PERHATIAN

TERHADAP LANGKAH-LANGKAH INI!

TANGAN YANG BERSIH

Belaku mencuci tangan menggunakan sabun, air mengalir dengan pembersih tangan dirasakan sihat.

BERASA KURANG SIHAT?

Jika ada gejala seperti demam, batuk dan sakit pernafasan, segeralah berjumpa dengan pakar kesihatan & dapatkan rekod perjalanan atau hubungi talian hotline COVID-19 di bawah.

BATUK / BERSIN

Senjata batuk / bersin, tutupkan mulut & hidung dengan tisu atau halangan dalam elu. Segera buanglah tisu tersebut & buanglah tangan dengan betul.

PENJARAKKAN SOSIAL

Kekalkan jarak sekurang-kurangnya 2 meter / 6 kaki dari orang lain.

HUBUNGAN DENGAN ORANG SAKIT

Elakkan berhubung rapat dengan orang yang dijangkiti demam & batuk.

MAKANAN MENTAH & BELUM MASAK

Elakkan memakan daging mentah atau yang sebarang mentah & penyediaan segera tetapi adalah diperlukan bagi mengakkan makanan tersebut olah bahan / makanan mentah.

Talian Hotline COVID-19

• **082-443 248**
(Pusat Kesiediaan & Tindak Balas Krisis, Sarawak)

Pusat Kesihatan Daerah

• 082-248 864 (PKB Kuching)	• 084-345 862 (PKB Sibul)
• 082-672 101 (PKB Samarahan)	• 084-873 302 (PKB Mukah)
• 082-872 331 (PKB Serian)	• 084-799 264 (PKB Kapit)
• 083-320 230 (PKB Sri Aman)	• 086-315 235 (PKB Bintulu)
• 083-472 388 (PKB Betong)	• 085-410 722 (PKB Miri)
• 084-652 815 (PKB Sarikei)	• 085-211 726 (PKB Limbang)

#fightCOVID19

COVID-19

PRECAUTIONS

TAKE THESE PRECAUTIONS

SERIOUSLY!

CLEAN HANDS

Frequently clean hands by using alcohol-based hand rub or soap & water.

FEELING ILL?

If you have fever, cough and difficulty breathing, seek medical care immediately & share travel history or call COVID-19 hotline below.

COUGHING / SNEEZING

When coughing / sneezing, cover mouth & nose with flexed elbow or tissue - throw tissues away immediately & wash hands thoroughly.

SOCIAL DISTANCING

Maintain a minimum distance of 2 metres / 6 feet from others.

CONTACT WITH

Avoid close contact with anyone afflicted with fever & cough.

RAW & UNCOOKED FOOD

Avoid consumption of raw & undercooked animal products, of which careful handling is needed to prevent cross-contamination with uncooked food.

COVID-19 Hotlines

• **082-443 248**
(Crisis Preparedness & Response Centre, Sarawak)

Regional Health Offices

• 082-248 864 (PKB Kuching)	• 084-345 862 (PKB Sibul)
• 082-672 101 (PKB Samarahan)	• 084-873 302 (PKB Mukah)
• 082-872 331 (PKB Serian)	• 084-799 264 (PKB Kapit)
• 083-320 230 (PKB Sri Aman)	• 086-315 235 (PKB Bintulu)
• 083-472 388 (PKB Betong)	• 085-410 722 (PKB Miri)
• 084-652 815 (PKB Sarikei)	• 085-211 726 (PKB Limbang)

#fightCOVID19

KALENDAR AKADEMIK PENGAJIAN IJAZAH SARJANA MUDA SESI 2022/2023
(*ACADEMIC CALENDAR FOR UNDERGRADUATE STUDIES SESSION 2022/2023*)

Aktiviti /Activity	SEMESTER 1	
	Tarikh	Catatan
Pendaftaran Pelajar Baharu (<i>New Student Registration</i>) <u>Online Registration</u>	29 Sep 2022 – 9 Okt 2022 (11 hari / 11 days)	8 Oktober 2022 (8 October 2022) • Hari Jadi TYT Sarawak (<i>Sarawak Governor's Birthday</i>) 9 Oktober 2022 (9 October 2022) • Hari Keputeraan Nabi Muhammad S.A.W (<i>Maulidur Rasul</i>)
Pendaftaran Kolej Kediaman Pelajar Baharu (<i>Residential College Registration</i>)	1 Okt 2022 – 2 Okt 2022 (2 hari/2 days)	
Minggu Aluan Pelajar (<i>Student's Orientation Week</i>) / Hari Bersama fakulti	3 Okt 2022– 5 Okt 2022 (3 hari/3 days)	
Pendaftaran <u>Online</u> Pelajar Semasa (<i>Returning Student's Registration</i>) <u>Online Registration</u>	4 Okt 2022– 9 Okt 2022 (6 hari/6 days)	
Pendaftaran Kolej Kediaman Pelajar Semasa (<i>Returning Student's Residential College Registration</i>)	8 Okt 2022– 10 Okt 2022 (3 hari/3 days)	
Perkuliahan (<i>Lectures</i>)	11 Okt 2022 – 27 Nov 2022 (7 minggu/7 weeks)	10 Oktober 2022 (10 October 2022) • Cuti Hari Hari Keputeraan Nabi Muhammad S.A.W (<i>Maulidur Rasul</i>) 24 Oktober 2022 (24 October 2022) • Hari Deepavali (Semenanjung Malaysia sahaja)
Cuti Pertengahan Semester 1 (<i>Mid-Semester Break</i>)	28 Nov 2022 – 4 Dis 2022 (7 hari/ 7 days)	
Perkuliahan (<i>Lectures</i>)	5 Dis 2022– 22 Jan 2023 (7 minggu/ 7 weeks)	25 & 26 Disember 2022 (25 & 26 December 2022) • Hari Krismas (<i>Christmas</i>) 1 & 2 Januari 2023 (1 & 2 January 2023) • Cuti Tahun Baharu 2020 (<i>New Year</i>)
Minggu Ulangkaji (<i>Revision Week</i>)	23 Jan 2023 – 29 Jan 2023 (7 hari/ 7 days)	22, 23 & 24 Januari 2023 (22, 23 & 24 January 2023) • Tahun Baru Cina (<i>Chinese New Year</i>)
Minggu Peperiksaan (<i>Examination Week</i>)	30 Jan 2023 – 19 Feb 2023 (3 minggu/3 weeks)	
Cuti Semester 1 (<i>Semester Break</i>)	20 Feb 2023 – 13 Mac 2023 (4 minggu /4 weeks)	

Aktiviti /Activity	SEMESTER 2	
	Tarikh	Catatan
Pendaftaran Online Pelajar Semasa <i>(Returning Student 's Registration/Online Semester Registration)</i>	14 Mac 2023 – 17 Mac 2023 <i>(4 hari/4 days)</i>	
Pendaftaran Kolej Kediaman Pelajar Semasa <i>(Returning Student 's Residential College Registration)</i>	18 Mac 2023 – 19 Mac 2023 <i>(2 hari/2 days)</i>	
Perkuliahan <i>(Lectures)</i>	20 Mac 2023 – 7 Mei 2023 <i>(7 minggu/ 7 weeks)</i>	7 April 2023 (7 April 2023) <ul style="list-style-type: none"> • Good Friday 22, 23 & 24 April 2023 (22, 23 & 24 April 2023) <ul style="list-style-type: none"> • Hari Raya Aidilfitri (<i>Eid Mubarak</i>) 1 Mei 2023 (1 May 2023) <ul style="list-style-type: none"> • Cuti Hari Pekerja (<i>Labour Day</i>) 4 Mei 2023 (4 May 2023) <ul style="list-style-type: none"> • Hari Wesak (<i>Wesak Day</i>)
Cuti Pertengahan Semester 2 <i>(Mid-Semester Break)</i>	8 Mei 2023 – 14 Mei 2023 <i>(7 hari/ 7 days)</i>	
Perkuliahan <i>(Lectures)</i>	15 Mei 2023 – 2 Jul 2023 <i>(7 minggu/ 7 weeks)</i>	1 & 2 Jun 2023 (1 & 2 June 2023) <ul style="list-style-type: none"> • Hari Gawai (<i>Gawai Day</i>) 5 Jun 2023 (5 June 2023) <ul style="list-style-type: none"> • Hari Keputeraan YDP Agong (<i>Agong's Birthday</i>) 28 Jun 2023 (28 June 2023) <ul style="list-style-type: none"> • Hari Raya Aidiladha (<i>Eid al-Adha</i>)
Minggu Ulangkaji <i>(Revision Week)</i>	3 Jul 2023 – 9 Jul 2023 <i>(7 hari/ 7 days)</i>	
Minggu Peperiksaan <i>(Examination Week)</i>	10 Jul 2023 – 30 Jul 2023 <i>(3 minggu/ 3 weeks)</i>	19 Julai 2023 (19 July 2023) <ul style="list-style-type: none"> • Awal Muharram 22 Julai 2023 (22 July 2023) <ul style="list-style-type: none"> • Hari Sarawak (<i>Sarawak Day</i>)
Cuti Panjang <i>(Long Break)</i>	31 Jul 2023 30 Sept 2023 <i>(9 minggu/ 9 weeks)</i>	

Aktiviti /Activity	ANTARSESI	
	Tarikh	Catatan
Pendaftaran Pelajar Semasa <i>(Returning Student 's Registration)</i> <u>Online Semester Registration</u>	31 Jul 2023 – 6 Ogos 2023 <i>(1 minggu/ 1 weeks)</i>	
Perkuliahan <i>(Lectures)</i>	31 Jul 2023 – 24 Sept 2023 <i>(8 minggu/ 8 weeks)</i>	

Nota: Pindaan dengan kelulusan Senat Bil 06/2022 ke-208 bertarikh 14 September 2022

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