

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)										
		Year 1		Year 2		Year 3		Year 4		
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8	
Course Structure Session 2020/2021	HK01 CIVIL ENGINEERING									
	UNIVERSITI CORE (PROMOTION) OF KNOWLEDGE (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations UCXXX02 (Choose 1 UC Only) (4 Credit Hours)	UW00302 Fundamentals Of Entrepreneurial Acculturation (2 Credit Hours)						
	UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English For Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB02002 English For Employment (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB00502 English For Research Purposes (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)					
	UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)								
	PROGRAMME CORE (107 Credit Hours)	KA13503 Calculus 1 KA10102 Civil Engineering Material KA10302 Civil Engineering Drawing	KA13603 Calculus 2 KA13803 Engineering Programming KA10603 Applied Mechanics	KA20102 Engineering Statistics KA20502 Differential Equation KA20703 Fluid Mechanics	KA20403 Engineering Survey KA20602 Numerical Analysis KA20801 Survey Camp KA21002 Electrical Technology	KA33903 Hydraulics KA31303 Geotechnical Engineering 2 KA31503 Theory of Structure 2	KA34602 Project Management KA30005 Industrial Training KA34802 Traffic Engineering	KA40002 Final Year Project 1 KA44703 Ethics and Law for Engineers KA40503 Environmental Engineering	KA40004 Final Year Project 2 KA45803 Integrated Design Project 2	

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		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 3	Semester 4	Semester 5	Semester 6
Course Structure Session 2020/2021	HK01 CIVIL ENGINEERING								
		KA10502 Engineering Geology (9 Credit Hours)	KA10802 Construction Technology (11 Credit Hours)	KA20903 Mechanics of Solids KA21102 Contract And Estimation KA23702 Concrete Technology (14 Credit Hours)	KA24003 Theory of Structure 1 KA21603 Geotechnical Engineering 1 KA21801 Concrete and Material Lab KA24201 Structure Lab (16 Credit Hours)	KA34101 Fluid and Hydraulics Lab KA34303 Reinforced Concrete Design KA34503 Highway Engineering (16 Credit Hours)	KA35003 Hydrology & Water Resources KA30603 Steel and Timber Design KA35201 Geotechnical Lab KA35401 Highway and Traffic Lab KA35603 Foundation Design (14 Credit Hours)	KA44901 Environmental Lab KA45102 Integrated Design Project 1 (11 Credit Hours)	KA46003 Management and Accounting for Engineers (10 Credit Hours)
	MINOR / ELECTIVES (9 Credit Hours)							KA4xx03 Elective I (3 Credit Hours)	KA4xx03 Elective II KA4xx03 Elective III (6 Credit Hours)
TOTAL CREDIT HOURS (135 Credit Hours)	16	17	18	18	16	20	14	16	

STUDENT CREDIT HOURS

Core University (Upgrade Knowledge) + Core University (Language) + Core University (Co-Curriculum) + Core Program + Core Program (Elective)
 : 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + 107 Credit Hours + 9 Credit Hours = 135 Credit Hours

ELEKTIF		
I	II	III
<p>KA42403 Advanced Structural Design</p> <p>KA41503 Advanced Geotechnical Engineering</p> <p>KA42203 Water and Wastewater Engineering</p> <p>KA43203 Transportation Engineering</p> <p>KA43003 Advanced Project Management</p> <p>KA42003 Advanced Concrete Technology</p> <p>KA45303 Building Pathology</p>	<p>KA46203 Bridge Engineering</p> <p>KA46403 Soil Stabilisation and Ground Improvement</p> <p>KA43403 Advanced Environment Engineering</p> <p>KA46803 Advanced Highway Engineering</p> <p>KA47003 Introduction to GIS</p> <p>KA47203 Finite Element Method</p> <p>KA47403 Sustainability and Green Technology</p>	<p>KA47603 Tunnel Engineering</p> <p>KA47803 Earthquake Engineering</p> <p>KA48003 Solid Waste Management</p> <p>KA48203 Advanced Traffic Engineering</p> <p>KA48403 Marine and Coastal Engineering</p> <p>KA48603 Integrated Water Resource Management</p>

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Course Structure Session 2020/2021	HK02 ELECTRICAL & ELECTRONIC ENGINEERING								
	UNIVERSITI CORE (PROMOTIONAL) OF KNOWLEDGE (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations (2 Credit Hours)	UW00302 Fundamentals of Entrepreneurial Acculturation (2 Credit Hours)	UCXXX02 (Choose 1 UC Only) (2 Credit Hours)				
	UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English for Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB02002 English for Employment (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB00502 English for Research Purposes (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)				
	UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)							

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)									
		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
HK02 ELECTRICAL & ELECTRONIC ENGINEERING									
Course Structure Session 2020/2021	PROGRAMME CORE (104 Credit Hours)	KE17103 Multivariable Calculus KE17303 Electrical and Electronics Systems KE17503 Engineering Programming (9 Credit Hours)	KE17203 Differential Equations KE17403 Electric Circuit Analysis KE17603 Logic Design KE17803 Material Science and Electronic Devices KE18401 Engineering Laboratory I (13 Credit Hours)	KE27103 Complex Analysis KE27303 Analog Electronics KE27503 Microelectronics KE27703 Engineering Thermodynamics KE28301 Engineering Laboratory II (13 Credit Hours)	KE27203 Computer Architecture and Microprocessors KE27403 Probability and Random Variables KE27603 Electromagnetics KE27803 Applied Mechanics KE28401 Engineering Laboratory III (13 Credit Hours)	KE37103 Signals and Systems KE37303 Electrical Machines KE37503 Power Systems Analysis KE37703 Engineers in Society KE38301 Engineering Laboratory IV KE38303 Electrical and Electronic Design (16 Credit Hours)	KE30005 (LI) Industrial Training KE37203 Measurement and Instrumentation KE37403 Control Systems KE37603 Communication Systems KE38401 Engineering Laboratory V KE38603 Design Project (18 Credit Hours)	KE47103 Digital Signal Processing KE47303 Power Electronics and Drives KE47503 High Voltage Engineering KE48301 Engineering Laboratory VI KE40002 Final Year Project I (12 Credit Hours)	KE47203 Electrical Energy Utilization KE47403 Management and Finance For Engineers KE40004 Final Year Project II (10 Credit Hours)
	MINOR / ELECTIVES (12 Credit Hours)							KE39X03 i-Elective (3 Credit Hours)	KA4XX03 Elective I (3 Credit Hours)

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)								
	Year 1		Year 2		Year 3		Year 4	
	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
TOTAL CREDIT HOURS (135 Credit Hours)	16	17	17	17	16	21	15	16

***Notes:**

Language Requirements for Student MUET Band 1 and 2 & For Student MUET Band 3,4,5 & 6. Please Refer to PPIB Guidebook.

STUDENT CREDIT HOURS

Core University (Upgrade Knowledge) + Core University (Language) + Core University (Co-Curriculum) + Core Program + Elective Program
 : 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + **104** Credit Hours + **12** Credit Hours = **135 Credit Hour**

i-ELECTIVE				
KE39103 Engineering Services			KE39203 Industrial Automation	
ELECTIVE I, II & III				
Specialization	Offered Elective Subjects			
1	KE41103 Robotics	KE41203 State Space Analysis and Control	KE41503 Digital Control Systems and SCADA	KE41603 Machine Intelligence
2	KE42003 Image Processing	KE42303 Advanced Digital Signal Processing	KE42503 Pattern Recognition	KE42603 Video Coding and Transmission
3	KE43003 Nanoelectronics	KE43103 VLSI Technology	KE43303 Digital Integrated Circuit System Design	KE43503 Photonics and Optical Systems
4	KE44103 Wireless Communications	KE44503 Digital Communications	KE44603 Antenna and Applications	KE44703 Satellite Communications
5	KE45003 Industrial Drives	KE45303 Electrical Machines Design	KE45503 Substation Engineering	KE45603 Power System Stability and Protection
6	KE49003 Hybrid Systems	KE49103 Alternative Energy Sources	KE49203 Solar Engineering	KE49303 Advanced Energy Material

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

	Year 1		Year 2		Year 3		Year 4	
	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8

HK03 CHEMICAL ENGINEERING

Course Structure Session 2020/2021

UNIVERSITI CORE (PROMOTIONAL) OF KNOWLEDGE (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations UCXXX02 (Choose 1 UC Only) (4 Credit Hours)	UW00302 Fundamentals Of Entrepreneurial Acculturation (2 Credit Hours)					
UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English For Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB02002 English For Employment (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB00502 English For Research Purposes (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)				
UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)							
PROGRAMME CORE (107 Credit Hours)	KC04403 Calculus KC06603 Engineering Problem solving and programming KC12101 Physical Chemistry Lab	KC05503 Multivariable Calculus KC12201 Organic and Analytical Chemistry Lab KC12403 Organic Chemistry	KC22303 Differential Equations KC22503 Chemical Process Principles KC22703 Engineering Thermodynamics	KC22002 Electrical Technology KC22202 Process Equipment Design KC22203 Material Technology KC22403 Heat Transfer	KC32103 Applied Statistics for Chemical Engineers KC32303 Bioprocess Principles KC32503 Mass Transfer and Separation Processes	KC30005 Industrial Training KC32403 Process Dynamics and Control KC32603 Process Simulation and Integration	KC08803 Ethics and Law for Engineers KC40003 Research Project I KC42103 Plant Design Project I	KC09903 Management And Accounting For Engineers KC40004 Research Project II KC42202 Plant Operation and Maintenance

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)									
		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Course Structure Session 2020/2021	HK03 CHEMICAL ENGINEERING								
		KC12302 Physical Chemistry (9 Credit Hours)	KC12603 Chemical and Bioprocess Technology (10 Credit Hours)	KC22903 Fluid Mechanics (12 Credit Hours)	KC22603 Chemical Engineering Thermodynamics KC22802 Chemical and Applied Engineering Lab (15 Credit Hours)	KC32703 Measurement and Instrumentation Technology KC32903 Safety and Loss Prevention KC33103 Project Management and Process Economics (18 Credit Hours)	KC32803 Environmental Engineering KC33002 Process Design KC33202 Process Engineering Lab KC33403 Chemical Reaction Engineering (21 Credit Hours)	(9 Credit Hours)	KC42404 Plant Design Project II (13 Credit Hours)
	MINOR / ELECTIVES (9 Credit Hours)							KC4xxx3 Elective I KC4xxx3 Elective II (6 Credit Hours)	KC4xxx3 Elective III (3 Credit Hours)
TOTAL CREDIT HOURS (135 Credit Hours)	16	16	16	17	18	21	15	16	

***Notes:**

Language Requirements For Student MUET Band 1 and 2 & For Student MUET Band 3,4,5 & 6. Please refer to PPIB Guidebook.

University Core (Knowledge Upgrading) + University Core (Language) + University Core (Co-curriculum) + Program Core + Program Core (Elective)
: 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + 107 Credit Hours + 9 Credit Hours = **135 Credit Hours**

Elective Scheme: Choose from the following list. All subjects are stand-alone and maybe offered in any elective of I, II or III.

ELECTIVE		
KC44103 Bioprocess Engineering	KC44903 Sustainable and Renewable Energy	KC46203 Phytochemical Processing
KC44203 Food Process Engineering	KC45103 Particle Technology	KC46403 Bioengineering
KC44303 Air Pollution	KC45403 Advanced Process Control	KC46603 Enzyme Engineering
KC44403 Waste Treatment and Processing	KC45603 Advanced Heat Transfer	KC46803 Nuclear Technology
KC44503 Chemical Product Design	KC45803 Advanced Process Simulation	KC47003 Water Pollution and Wastewater Treatment
KC44703 Oil and Gas	KC46003 Membrane Engineering	KC47203 Petroleum Downstream Processing

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

	Year 1	Year 2	Year 3	Year 4
	Semester 1	Semester 2	Semester 3	Semester 4
	Semester 5	Semester 6	Semester 7	Semester 8

HK08 MECHANICAL ENGINEERING

Course Structure Session 2020/2021

UNIVERSITI CORE (PROMOTIONAL OF KNOWLEDGE) (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations UCXXX02 (Choose 1 UC Only) (4 Credit Hours)	UW00302 Fundamentals Of Entrepreneurial Acculturation (2 Credit Hours)					
UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English For Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB02002 English For Employment (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB00502 English For Research Purposes (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)				
UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)							
PROGRAMME CORE (104 Credit Hours)	KM10303 Calculus I KM10501 Engineering Workshop KM10903 Statics KM11103 Computer Aided Design	KM10403 Calculus II KM10203 Engineering Materials KM10603 Strength of Materials KM11003 Dynamics	KM20303 Fluid Mechanics I KM20503 Differential Equations KM20701 Lab I KM21102 Engineering Thermodynamics	KM20203 Mechanics of Machines KM20603 Numerical Methods KM20801 Lab II KM21003 Fluid Mechanics II	KM30303 Machines and Power KM30502 Engineering Statistics KM30903 Mechanical Design KM31101 Lab III	KM30005 Industrial Training KM30603 Mechanical Vibrations KM31003 Integrated Design Project KM31401 Lab IV	KM00303 Ethics and Law for Engineers KM40002 Project I KM42703 Manufacturing Engineering and Technology	KM00403 Management And Accounting for Engineers KM40004 Project II KM44203 Heat Transfer

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Course Structure Session 2020/2021	HK08 KEJURUTERAAN MEKANIKAL								
		(10 Credit Hours)	(12 Credit Hours)	KM21303 Engineering Programming KM21502 Electrical Technology	KM21603 Applied Thermodynamics	KM31503 Measurements And Instrumentation KM31703 Control Engineering	KM32003 Finite Element Method KM32203 Computer Aided Engineering KM32403 Microprocessors And Electronics	KM42901 Lab V	
	MINOR / ELECTIVES (12 Credit Hours)			(14 Credit Hours)	(13 Credit Hours)	(15 Credit Hours)	(21 Credit Hours)	(9 Credit Hours)	(10 Credit Hours)
								KM4xx03 Elective I KM4xx03 Elective II (6 Credit Hours)	KM4xx03 Elective III KM4xx03 Elective IV (6 Credit Hours)
TOTAL CREDIT HOURS (135 Credit Hours)	17	18	18	15	15	21	15	16	

***Notes:**

: Language Requirements For Student MUET Band 1 and 2 & For Student MUET Band 3,4,5 & 6. Please Refer to PPIB Guidebook.

STUDENT CREDIT HOURS

: Core University (Upgrade Knowledge) + Core University (Language) + Core University (Co-Curriculum) + Core Program + Core Program (Elective)

: 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + 104 Credit Hours + 12 Credit Hours : **135 Credit Hours**

Elective Groups	ELECTIVE I and II	ELECTIVE III and IV
Manufacturing	KM42103 Industrial Automation KM43903 Industrial Engineering KM44103 Machining Processes KM44703 Sensor and Vision System KM44903 Mechatronics	KM40603 Finite Differential Method KM43803 Computer Aided Manufacturing KM40403 Operational Research KM45003 Maintenance & Monitoring of Machines KM44403 Advanced Manufacturing
Materials	KM41103 Tribology KM44303 Composite Materials KM45103 Advanced Strength of Materials	KM42203 Surface Engineering KM44003 Failure Mechanism KM44603 Advanced Materials KM44803 Carbon Materials Technology
Thermal Fluid	KM44503 Renewable Energy KM43703 Computational Fluid Dynamics KM42303 Acoustic KM45303 Refrigeration and Air Conditioning	KM41603 Numerical Method in Heat Engineering KM41003 Internal Combustion Engines KM41803 Aerodynamics

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

	Year 1	Year 2		Year 3		Year 4		
	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8

HK20 ELECTRONIC (COMPUTER) ENGINEERING

Course Structure Session 2020/2021	UNIVERSITI CORE (PROMOTIONAL) OF KNOWLEDGE (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations UCXXX02 (Choose 1 UC Only) (4 Credit Hours)	UW00302 Fundamentals Of Entrepreneurial Acculturation (2 Credit Hours)					
	UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English For Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB02002 English For Employment (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)	UB00502 English For Research Purposes (For Student MUET Band 3,4,5 & 6) (2 Credit Hours)				
	UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)							
	PROGRAMME CORE (107 Credit Hours)	KS04403 Calculus I KS06603 Engineering Programming KS10503 Electric Circuit Analysis	KS05503 Calculus II KS12003 Analog Electronics KS14003 Discrete Mathematics	KS08803 Ethics and Law for Engineers KS21303 Differential Equations and Linear Algebra KS20503 Logic Design	KS09903 Management And Accounting for Engineers KS21403 Software Engineering KS21803 Probability and Random Process	KS30903 Measurement And Instrumentation KS31303 Signals and Systems KS31503 Microelectronics	KS30005 Industrial Training (LI) KS30403 Control Systems KS31403 Digital Signal Processing	KS40002 Project I KS41103 Computer Networks KS42903 Power Systems for Electronic Engineers	KS40004 Project II KS40803 Operating System KS42803 Image Processing

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)								
	Year 1		Year 2		Year 3		Year 4	
	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Course Structure Session 2019/2020	HK20 ELECTRONIC (COMPUTER) ENGINEERING							
	KS10701 Engineering Workshop (10 Credit Hours)	KS16001 Laboratory I (10 Credit Hours)	KS20703 Data Structures and Algorithms KS21501 Laboratory II (13 Credit Hours)	KS22402 Engineering Physics KS22603 Computational Methods KS22802 Design Project I (16 Credit Hours)	KS32303 Microprocessor KS32503 Embedded Systems KS32702 Design Project II (17 Credit Hours)	KS31603 Communication System Engineering KS32203 Electromagnetics KS32403 Computer Architecture KS32602 Design Project III (22 Credit Hours)	KS41701 Laboratory III (9 Credit Hours)	(10 Credit Hours)
	MINOR / ELECTIVES (9 Credit Hours)						KS4XX03 Elective I (3 Credit Hours)	KS4XX03 Elective II KS4XX03 Elective III (6 Credit Hours)
TOTAL CREDIT HOURS (135 Credit Hours)	17	16	17	18	17	22	12	16

***Notes:**

Language Requirements For Student MUET Band 1 and 2 & For Student MUET Band 3,4,5 & 6. Please Refer to PPIB Guidebook.

STUDENT CREDIT HOURS

Core University (Upgrade Knowledge) + Core University (Language) + Core University(Co-Curriculum) + Core Program + Core Program (Elective)
: 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + 107 Credit Hours + 9 Credit Hours = **135 Credit Hours**

ELECTIVE		
I-III	I-III	I-III
KS41903 Wireless Communications	KS41203 Antenna and Propagation	KS41803 Information Theory and Coding
KS42303 Machine and Drives	KS42203 Power Electronics	KS42403 Renewable Energy
KS42503 Artificial Intelligence	KS41603 Pattern Recognition	KS42003 Advanced Signal Processing
KS42703 Mobile Applications Design	KS42603 Database Systems	KS41403 Computer Security

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

Year 1		Year 2		Year 3		Year 4	
Semester 1	Semester 2	Semester 3	Semester 4	Semester 6	Semester 6	Semester 7	Semester 8

HK88 OIL AND GAS ENGINEERING

Course Structure Session 2020/2021

UNIVERSITI CORE (PROMOTIONAL KNOWLEDGE) (8 Credit Hours)	UW00202 Islam and Asian Civilisation (2 Credit Hours)	UW00102 Ethnic Relations UCXXX02 (Choose 1 UC Only) (4 Credit Hours)	UW00302 Fundamentals Of Entrepreneurial Acculturation (2 Credit Hours)					
UNIVERSITY CORE LANGUAGE (8 Credit Hours)	UB06002 English For Creative Communication (2 Credit Hours)	UB00402 Academic Reading and Writing (2 Credit Hours)	UB02002 English For Employment (2 Credit Hours)	UB00502 English For Research Purposes (2 Credit Hours)				
UNIVERSITY CORE CO-CURRICULUM (3 Credit Hours)	EXXXX3 Co-Curriculum (3 Credit Hours)							
PROGRAMME CORE (107 Credit Hours)	KG04403 Calculus KG12501 Engineering Workshop KG12903 Applied Mechanics KG12303 Introduction to Oil and Gas Engineering	KG05503 Multivariable Calculus KG06603 Engineering Programming KG12403 Engineering Thermodynamics KG12603 Reservoir Rock and Fluid Properties	KG22903 Fluid Mechanics KG22303 Differential Equations KG22501 Laboratory I KG22101 Laboratory II KG22301 Geology Field Work	KG22203 Materials of Engineering KG22403 Geophysics KG22801 Laboratory III KG22401 Laboratory IV KG22802 Electrical Technology	KG08803 Ethics and Law for Engineers KG32101 Laboratory V KG32103 Drilling Engineering KG32503 Engineering Statistics KG32703 Reservoir Simulation	KG09903 Management & Accounting for Engineers KG32203 Production Engineering KG32403 Well Completion KG32603 Safety in Oil and Gas Engineering	KG01202 Project I KG42102 Field Development Project I KG42703 Transport and Storage KG42303 Gas Engineering	KG01204 Project II KG42404 Field Development Project II

4 YEARS PROGRAMME COURSE STRUCTURE (8 SEMESTERS)

		Year 1		Year 2		Year 3		Year 4	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6	Semester 7	Semester 8
Course Structure Session 2019/2020	HK88 OIL AND GAS ENGINEERING								
				KG22503 Geoscience	KG22603 Reservoir Engineering KG22803 Engineering Design	KG32903 Process control and instrument -ation	KG32803 Formation Evaluation and Well Testing KG30005 Industrial Training	KG42503 Petroleum Economy	
		(10 Credit Hours)	(12 Credit Hours)	(12 Credit Hours)	(16 Credit Hours)	(16 Credit Hours)	(20 Credit Hours)	(13 Credit Hours)	(8 Credit Hours)
	MINOR / ELECTIVES (9 Credit Hours)							KG4xxx3 Elective I (3 Credit Hours)	KG4xxx3 Elective II KG4xxx3 Elective III (6 Credit Hours)
	TOTAL CREDIT HOURS (135 Credit Hours)	17	18	16	18	16	20	16	14

***Notes:**

English courses shown are language requirements for students with MUET Band 1 and 2. Please refer to PPIB Guidebook.

*Industrial Training course required registration in Semester II and training is done in Semester III

STUDENT CREDIT HOURS

: Core University (Upgrade Knowledge) + Core University (Language) + Core University (Co-Curriculum) + Core Program + Core Program (Elective)

: 8 Credit Hours + 8 Credit Hours + 3 Credit Hours + 107 Credit Hours + 9 Credit Hours : **135 Credit hours**

	ELEKTIF I	ELEKTIF II	ELEKTIF III
Option 1	KG41103 Enhanced/ Improved Oil Recovery	KG42203 Deep Water Engineering	KG43203 Renewable Energy
Option 2	KG41303 Gas Transmission and Distribution system	KG42403 Gas Storage and Reticulation System	KG43403 Electric Drive in Oil and Gas Industry
Option 3	KG41503 Energy Management	KG42603 Reservoir Geomechanics	KG43603 Combustion Technology
Option 4	KG41703 Processing and Liquefaction	KG42803 Offshore Structural Engineering	KG43803 Corrosion Engineering

COURSE STRUCTURE						
H2451 DIPLOMA IN PROCESS ENGINEERING (OIL AND GAS OPERATIONS)						
	Year 1		Year 2		Year 3	
	Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
Course Structure Session 2020/2021	H2451 DIPLOMA IN PROCESS ENGINEERING (OIL AND GAS OPERATIONS)					
	UNIVERSITY CORE (PROMOTIONAL) OF KNOWLEDGE	UW00602 Malaysian Studies (2 Credit Hours)				
	UNIVERSITY CORE LANGUAGE	UB10402 English for General Communication (2 Credit Hours)	UB10502 English for Professional Communication (2 Credit Hours)	UB20102 English for Technical Communication (2 Credit Hours)		
	UNIVERSITY CORE CO-CURRICULUM		EXXX2 Co-Curriculum (2 Credit Hours)			
	PROGRAMME CORE	KR04403 Engineering Mathematics 1 KR10101 Workshop Technology KR10303 Hydrocarbon Chemistry KR10503 Fluid Mechanics KR10703 Introduction to Oil and Gas Engineering	KR05503 Engineering Mathematics 2 KR10203 Engineering Science KR10401 Laboratory 1 KR10603 Thermodynamics KR10803 Material Science and Engineering	KR20102 Fundamentals of Electrical Engineering KR20303 Engineering Drawing KR20501 Laboratory 2 KR20703 Acts, Regulations and Codes of Practices KR20903 Material and Energy Balances	KR20202 Health, Safety and Environment KR20403 Work Ethics KR20601 Laboratory 3 KR20803 Process Utility and Facilities KR21003 Process Control and Instrumentation KR21203 Separation Process	KR30104 Final Year Project KR30303 Project Management and Entrepreneurship KR30501 Laboratory 4 KR30703 Oil and Gas Transportation and Storage KR30903 Operation and Maintenance Management

H2451 DIPLOMA IN PROCESS ENGINEERING (OIL AND GAS OPERATIONS)							
		Year 1		Year 2		Year 3	
		Semester 1	Semester 2	Semester 3	Semester 4	Semester 5	Semester 6
	H2451 DIPLOMA IN PROCESS ENGINEERING (OIL AND GAS OPERATIONS)						
				KR21103 Petroleum Geology	KR21403 Oil and Gas Production Operations		
		(13 Credit Hours)	(13 Credit Hours)	(15 Credit Hours)	(18 Credit Hours)	(14 Credit Hours)	(5 Credit Hours)
	MINOR / ELECTIVES					KR3XXX2 (2 credit hours)	
TOTAL (90 CREDIT HOURS)		17	17	17	18	16	5

STUDENT CREDIT HOURS

Core University (Upgrade Knowledge) + Core University (Language) + Core University (Co-Curriculum) + Core Program + Core Program (Elective): 2 Credit Hours + 6 Credit Hours + 2 Credit Hours + 78 Credit Hours + 2 Credit Hours = **90 Credit Hours**

ELECTIVE		
KR33112 Environmental Technology in the Oil and Gas Industry	KR33312 Enhanced Oil Recovery	KR33512 Gas Reticulation and Storage