

PROGRAMME STRUCTURE: BACHELOR OF ELECTRICAL ENGINEERING

CURRICULUM STRUCTURE

**SESSION 2020/2021
(SEPTEMBER INTAKE)**

Course	Content	Credit Hours
University Courses	<ul style="list-style-type: none"> • Philosophy and Current Issues*/ Basic Malay Language** 	2
	<ul style="list-style-type: none"> • Appreciation of Ethics and Civilizations 	2
	<ul style="list-style-type: none"> • Basic Entrepreneurship Culture 	2
	<ul style="list-style-type: none"> • English for Communication Programme 	6
	<ul style="list-style-type: none"> • Information Literacy 	2
	<ul style="list-style-type: none"> • Social Engagement 	2
	<ul style="list-style-type: none"> • Co-Curriculum 	2
	<ul style="list-style-type: none"> • Other Faculty Elective Courses 	2
	Sub-Total Credit Hours	20
Faculty Courses	<ul style="list-style-type: none"> • Faculty Core Courses 	22
	<ul style="list-style-type: none"> • Faculty Elective Course 	2
		Sub-Total Credit Hours
Programme Courses	<ul style="list-style-type: none"> • Programme Core Courses 	84
	<ul style="list-style-type: none"> • Programme Elective Courses 	9
		Sub-Total Credit Hours
TOTAL CREDIT HOURS		137

Note:

* Only applicable to local students.

** Only applicable to International students

ACADEMIC PLANNER

BACHELOR OF ELECTRICAL ENGINEERING SESSION 2020/2021

YEAR 1						
CODE	COURSE	S1	S2	SS	TOTAL	PRE-REQUISITE
UNIVERSITY COURSES						
GIG1012	Philosophy and Current Issues*/	2				
GLT1017	Basic Malay Language**					
GIG1013	Appreciation of Ethics and Civilizations		2			
GIG1004	Information Literacy		2			
GLT10xx	English Communication Programme I	3				
Sub-total		5	4	0	9	
FACULTY CORE COURSES						
KIX 1001	Engineering Mathematics I	3				
KIX 1002	Engineering Mathematics II		3			
Sub-total		3	3	0		
PROGRAMME CORE COURSES						
KIE1001	Laboratory 1	1				
KIE1002	Laboratory 2		1			
KIE1003	Digital System	3				
KIE1004	Programming I	3				
KIE1005	Circuit Analysis I	3				
KIE1006	Electronic Physics		3			
KIE1007	Electronic Circuit I		3			
KIE2006	Signal and System		3			
Sub-total		10	10	0	20	
Total		17	18	0	35	

YEAR 2						
CODE	COURSE	S1	S2	SS	TOTAL	PRE-REQUISITE
UNIVERSITY COURSES						
GIG1003	Basic of Entrepreneurship Culture	2				
GLT10XX	English Communication Programme II	3				
GIG1005	Social Engagement		2			
Sub-total		5	2	0	7	
FACULTY CORE COURSES						
KIX1003	Thinking and Communication Skills		2			
KIX2002	Engineering Economic Analysis		3			
Sub-total		0	5	0	5	
PROGRAMME CORE COURSES						
KIE2001	Laboratory 3	1				
KIE2002	Laboratory 4		1			
KIE1008	Programming II	3				
KIE2003	Probability and Random Signal	3				
KIE2004	Electronic Circuit II	3				
KIE2005	Circuit Analysis II	3				
KIE2007	Basic Electromagnetics		3			
KIE2008	Communication System		3			
KIE2009	Machines and Drives		3			
Sub-total		13	10		23	
Total		18	17	0	35	

YEAR 3						
CODE	COURSE	S1	S2	SS	TOTAL	PRE-REQUISITE
UNIVERSITY COURSES						
	Co-curriculum		2			
	Other Faculty Elective Course	2				
	Sub-total	2	2	0	4	
FACULTY CORE COURSES						
KIX2004	Engineering Project Management	3				
KIX2001	Integrated Design I	2				
KIX3001	Integrated Design II		4			
KIX2003	Law and Ethics in Engineering		2			
FACULTY ELECTIVE COURSES						
KIX3004	Python Programming	2				
	Sub-total	7	6	0	13	
DEPARTMENTAL COURSES						
KIE3001	Laboratory 5	1				
KIE3002	Laboratory 6		1			
KIE3003	Industrial Training			5		
KIE3004	Applied Electromagnetics	3				
KIE3005	Numerical Analysis	3				
KIE3006	Control System	3				
KIE3008	Power Electronics		3			
KIE3009	Energy Conversion and High Voltage Transmission		3			
KIE3010	Instrumentation		3			
	Sub-total	10	10	5	25	
	Total	19	18	5	42	

YEAR 4						
CODE	COURSE	S1	S2	SS	TOTAL	PRE-REQUISITE
PROGRAMME CORE COURSES						
KIE3007	Digital Signal Processing	3				
KIE4001	Lab 7	1				
KIE4002	Final Year Project	3	3			
KIE4004	Power System	3				
KIE4005	Power Quality		3			
	Elective Courses	4	5			
Sub-total		14	11	0	25	
Total		14	11	0	25	
TOTAL CREDIT					137	

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*Five 2-credit electives are introduced to provide space for “majoring” (instead of just three 3-credit electives)

*Four majors are introduced, as follows:

(Power and Energy)

KIE4010 Electrical Energy Conversion Technologies (B)

KIE4011 Renewable Energy Technologies (B)

KIE4012 Nanotechnology for Sustainable Energy (D)

KIE4013 High Voltage Engineering (D)

KIE4027 Electrical Power Utilization (D)

(Communications)

KIE4014 Wireless Communications (B)

KIE4015 Optical Communications (B)

KIE4026 Data Communication Networks (B)

KIE4016 Antenna and Propagation (D)

KIE4017 Optical Waveguides (D)

(Electronics)

KIE4018 VLSI Design (B)

KIE4019 Analog VLSI Circuit Design (B)

KIE4020 Microwave Electronics and Systems (D)

KIE4021 Analog Electronics Design (D)

(Industrial Automation)

KIE4022 Embedded Systems (B)

KIE4023 Digital Control System (B)

KIE4024 Optimization (D)

KIE4025 Pattern Recognition (D)