

PROGRAMME STRUCTURE

BACHELOR OF ELECTRICAL ENGINEERING

FIRST INTAKE: OCTOBER 2025/2026

COURSES COMPONENT	CONTENT	CREDIT
University	GIG1012: Philosophy and Current Issues (Local) GLT1049: Bahasa Melayu Komunikasi (International)	2
	GIG1013: Appreciation of Ethics and Civilization 2	2
	GIG1003: Basic Entrepreneurship Enculturation	2
	English – GLT 1. English I 2. English II	4
	Student Holistic Empowerment (SHE) – 4 Courses Cluster:	8
	Cluster 1 Thinking Matters: Mind and Intellect	
	Cluster 2 Emotional, Physical, and Spiritual Intelligence: Mind, Body & Soul [GQX0056 KIAR is a compulsory course]	
	Cluster 3 Technology/Artificial Intelligence and Data Analytics: i-Techie	
	Cluster 4 Global Issues and Community Sustainability: Making the World a Better Place	
	Co-curriculum	2
Sub-total Credit		20
Core	Faculty Core Courses	12
	Department Core Courses	91
Sub-total Credit		103
Elective	Department Elective Courses	14
	Specialization Courses	-
Sub-total Credit		14
TOTAL CREDIT		137

YEAR	SEMESTER	COURSE COMPONENT	CODE	MODULE		CREDIT	TOTAL SEMESTER CREDIT
ONE (1)	01	UNIVERSITY: FIS/PEP/APK	GIG1003	ASAS PEMBUDAYAAN KEUSAHAWANAN	BASIC ENTREPRENEURSHIP ENCULTURATION	2	16
		FACULTY CORE	KIX1001	MATEMATIK KEJURUTERAAN 1	ENGINEERING MATHEMATICS 1	3	
		DEPARTMENT CORE	KIE1003	SISTEM DIGIT	DIGITAL SYSTEM	3	
		DEPARTMENT CORE	KIE1004	PENGATURCARAAN I	PROGRAMMING I	3	
		DEPARTMENT CORE	KIE1005	ANALISA LITAR I	CIRCUIT ANALYSIS I	3	
		DEPARTMENT CORE	SHE	SHE (KLUSTER 1)	SHE (CLUSTER 1)	2	
	02	UNIVERSITY: FIS/PEP/APK	GIG1012 / GLT1049	FALSAFAH DAN ISU SEMASA (WARGANEGARA) BAHASA MELAYU ASAS (PELAJAR ANTARABANGSA SAHAJA)	PHILOSOPHY AND CURRENT ISSUES (MALAYSIAN) BASIC MALAY LANGUAGE (INTERNATIONAL)	2	17
		FACULTY CORE	KIX1002	MATEMATIK KEJURUTERAAN 2	ENGINEERING MATHEMATICS 2	3	
		DEPARTMENT CORE	KIE1001	MAKMAL 1	LAB 1	1	
		DEPARTMENT CORE	KIE1006	FIZIK ELEKTRONIK	ELECTRONIC PHYSICS	3	
		DEPARTMENT CORE	KIE1007	LITAR ELEKTRONIK I	ELECTRONIC CIRCUITS I	3	
		DEPARTMENT CORE	KIE2006	ISYARAT DAN SISTEM	SIGNALS AND SYSTEMS	3	
		UNIVERSITY: SHE	SHE	SHE (KLUSTER 3)	SHE (CLUSTER 3)	2	
TWO (2)	03	UNIVERSITY: LANGUAGE	GLTXXXX	KURSUS BAHASA INGGERIS I	ENGLISH I	2	17
		UNIVERSITY: FIS/PEP/APK	GIG1013	PENGHAYATAN ETIKA DAN PERADABAN	APPRECIATION OF ETHICS AND CIVILISATIONS	2	
		DEPARTMENT CORE	KIE1002	MAKMAL 2	LAB 2	1	
		DEPARTMENT CORE	KIE1008	PENGATURCARAAN II	PROGRAMMING II	3	
		DEPARTMENT CORE	KIE2004	LITAR ELEKTRONIK II	ELECTRONIC CIRCUIT II	3	
		DEPARTMENT CORE	KIE2007	ELEKTROMAGNET ASAS	BASIC ELECTROMAGNETICS	3	
		DEPARTMENT CORE	KIE2011	REKABENTUK DIGIT	DIGITAL DESIGN	3	
	04	UNIVERSITY: KO-KU	CC0	KO-KURIKULUM	CO-CURRICULUM	2	19
		UNIVERSITY: LANGUAGE	GLTXXXX	KURSUS BAHASA INGGERIS II	ENGLISH II	2	
		FACULTY CORE	KIX2006	EKONOMI KEJURUTERAAN DAN PENGURUSAN PROJEK	ENGINEERING ECONOMICS AND PROJECT MANAGEMENT	3	
		DEPARTMENT CORE	KIE2001	MAKMAL 3	LAB 3	1	
		DEPARTMENT CORE	KIE2008	SISTEM KOMUNIKASI	COMMUNICATION SYSTEMS	3	
		DEPARTMENT CORE	KIE2009	MESIN DAN PEMACU	MACHINES AND DRIVES	3	
		DEPARTMENT CORE	KIE2010	PEMROSES MIKRO DAN PENGAWAL MIKRO	MICROPROCESSORS AND MICROCONTROLLERS	3	
		UNIVERSITY: SHE	SHE	SHE KIAR (KLUSTER 2) GQX0056	SHE KIAR (CLUSTER 2) GQX0056	2	

THREE (3)	05	FACULTY CORE	KIX2005	UNDANG-UNDANG, ETIKA DAN KEMAMPAKAN UNTUK JURUTERA	LAW, ETHICS AND SUSTAINABILITY FOR ENGINEERS	3	19
		DEPARTMENT CORE	KIE2002	MAKMAL 4	LAB 4	1	
		DEPARTMENT CORE	KIE3004	ELEKTROMAGNET GUNAAN	APPLIED ELECTROMAGNETICS	3	
		DEPARTMENT CORE	KIE3005	ANALISA BERANGKA	NUMERICAL ANALYSIS	3	
		DEPARTMENT CORE	KIE3006	SISTEM KAWALAN	CONTROL SYSTEM	3	
		DEPARTMENT CORE	KIE3007	PEMROSESAN ISYARAT DIGIT	DIGITAL SIGNAL PROCESSING	3	
		DEPARTMENT CORE	KIE3012	PROJEK REKABENTUK BERSEPADU (P)	INTEGRATED DESIGN PROJECT (P)	3	
	06	DEPARTMENT CORE	KIE3001	MAKMAL 5	LAB 5	1	18
		DEPARTMENT CORE	KIE3008	ELEKTRONIK KUASA	POWER ELECTRONICS	3	
		DEPARTMENT CORE	KIE3009	PENUKARAN TENAGA DAN PENGHANTARAN VOLTAN TINGGI	ENERGY CONVERSION AND HIGH VOLTAGE	3	
		DEPARTMENT CORE	KIE3010	INSTRUMENTASI	INSTRUMENTATION	3	
		DEPARTMENT CORE	KIE3011	KOMUNIKASI DIGIT	DIGITAL COMMUNICATIONS	3	
		DEPARTMENT CORE	KIE3012	PROJEK REKABENTUK BERSEPADU (P)	INTEGRATED DESIGN PROJECT (P)	3	
UNIVERSITY: SHE		SHE	SHE (KLUSTER 4)	SHE (CLUSTER 4)	2		
SPECIAL SEMESTER	SS	DEPARTMENT CORE	KIE3003	LATIHAN INDUSTRI	INDUSTRIAL TRAINING	5	5
FOUR (4)	07	DEPARTMENT CORE	KIE4002	PROJEK TAHUN AKHIR (P)	FINAL YEAR PROJECT (P)	3	15
		DEPARTMENT CORE	KIE4004	SISTEM KUASA	POWER SYSTEM (P)	3	
		DEPARTMENT CORE	KIE4028	PENGUNAAN TENAGA ELEKTRIK	ELECTRICAL ENERGY UTILIZATION	3	
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 1	PROGRAM ELECTIVE COURSE 1	2	
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 2	PROGRAM ELECTIVE COURSE 2	2	
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 3	PROGRAM ELECTIVE COURSE 3	2	
	08	DEPARTMENT CORE	KIE4002	PROJEK TAHUN AKHIR (P)	FINAL YEAR PROJECT (P)	3	11
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 4	PROGRAM ELECTIVE COURSE 4	2	
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 5	PROGRAM ELECTIVE COURSE 5	2	
		DEPARTMENT ELECTIVE	KIEXXX	KURSUS ELEKTIF PROGRAM 6	PROGRAM ELECTIVE COURSES 6	2	
DEPARTMENT ELECTIVE		KIEXXX	KURSUS ELEKTIF PROGRAM 7	PROGRAM ELECTIVE COURSE 7	2		
TOTAL CREDITS FOR THE PROGRAMME							137

DEPARTMENT ELECTIVE COURSES

CODE	COURSE	CREDIT	PRE-REQUISITE
Sustainable Energy Technologies			
KIE4010	Electrical Energy Conversion Technologies	2	
KIE4011	Renewable Energy Technologies	2	
KIE4012	Nanotechnology for Sustainable Energy	2	
KIE4013	High Voltage Engineering	2	
KIE4029	Electrical Power Quality	2	
KIE4030	Power System Economics	2	
Information Communication Technologies			
KIE4014	Wireless Communication	2	
KIE4015	Optical Communication	2	
KIE4016	Antenna and Propagation	2	
KIE4017	Optical Waveguides	2	
KIE4026	Data Communication Networks	2	
Integrated Micro/Nano Electronics			
KIE4018	VLSI Design	2	
KIE4019	Analog VLSI Circuit Design	2	
KIE4020	Microwave Electronics and Systems	2	
KIE4021	Analog Electronics Design	2	
Cyberphysical Systems			
KIE4022	Embedded Systems	2	
KIE4023	Digital Control System	2	KIE3006
KIE4024	Optimization Methods	2	
KIE4031	Machine Learning	2	
KIE4032	Human-Computer Interaction	2	
KIE4033	Data Analytics	2	
KIE4034	Satellite Communications	2	