

Bachelor of Electrical Engineering Technology with Honours (BEEY)
UPU Code: UC6522002

Programme Name :	Bachelor of Electrical Engineering Technology with Honours
UPU Code :	CY30
Short Code :	BEEY
Duration :	Full Time : (Minimum 4 years and Maximum 6 years)
Department :	Department of Electrical Engineering Technology (JTKE)
Entry Requirement :	See >> Admission

PROGRAMME EDUCATIONAL OBJECTIVES (PEO)

Program Educational Objectives (PEO) is specific goals describing expected achievements of graduates in their career and professional life after graduation. Below are the PEO for Faculty of Engineering Technology.

PEO1	To produce engineering technologists who are creative and innovative to practice in electrical/ electronic/computer engineering technology fields.
PEO2	To produce engineering technologists who are able to engage with continuous professional development and constantly adapt to evolving technologies.
PEO3	To produce engineering technologists who are able to practice professional ethics and leadership to meet the needs of the society

PROGRAM OUTCOME (PO)

Upon completion of this program, graduate should be able to:

PO1	Ability to apply knowledge of mathematics, science, engineering fundamentals and engineering specialisation principles to defined and applied engineering procedures, processes, systems or methodologies in the field of electrical engineering technology (industrial automation & robotics / industrial power).
PO2	Ability to solve broadly-defined engineering problems systematically to reach substantiated conclusions, using tools and techniques appropriate to electrical engineering technology (industrial automation & robotics / industrial power).
PO3	Ability to design solutions for broadly-defined engineering technology problems, and to design systems, components or processes to meet specified needs with appropriate consideration for public health and safety, as well as cultural, societal, environmental and sustainability concerns.
PO4	Ability to plan and conduct experimental investigations of broadly-defined problems, using data from relevant sources.
PO5	Ability to select and apply appropriate techniques, resources and modern engineering tools, with an understanding of their limitations.
PO6	Ability to function effectively as individuals, and as members or leaders in diverse technical teams.
PO7	Ability to communicate effectively with the engineering community and society at large.
PO8	Ability to demonstrate an awareness of and consideration for societal, health, safety, legal and cultural issues and their consequent responsibilities.
PO9	Ability to demonstrate an understanding of professional ethics, responsibilities and norms of engineering technology practices.

PO10	Ability to demonstrate an awareness of management, business practices and entrepreneurship.
PO11	Ability to demonstrate an understanding of the impact of engineering practices, taking into account the need for sustainable development.
PO12	Ability to recognise the need for professional development and to engage in independent and lifelong learning.

CAREER PROSPECT

Electrical Engineering Technology

- Electrical engineers find career opportunities with utilities companies, various manufacturing companies, consulting services and government sectors. The graduates will be suite to the electrical operation, maintenance, testing, development new product, designing, service engineer and many more.

	CODE	SUBJECT	CATEGORY	CREDIT	PRE-REQUISITE
SEMESTER 1	BEEU 1013	Matematik Teknikal <i>Technical Mathematics</i>	P	3	
	BEEE 1013	Fizik Teknikal <i>Technical Physics</i>	P	3	
	BEEY 1303	Pengukuran dan Sistem Instrumentasi <i>Measurement and Instrumentation System</i>	K	3	
	BEEA 1313	Rekabentuk Terbantu Komputer <i>Computer Aided Design</i>	K	3	
	BEEI 1303	Pengenalan Litar Elektrik <i>Electrical Circuit Fundamental</i>	K	3	
	BIPW 1132	Falsafah dan Isu Semasa <i>Philosophy and Current Issue</i>	W	2	
	BKKX XXX1	Kokurikulum I <i>Cocurriculum I</i>	W	1	
TOTAL CREDITS THIS SEMESTER				18	
SEMESTER 2	BEEU 1023	Kalkulus untuk Teknologi <i>Calculus for Technology</i>	P	3	
	BEEY 1313	Bengkel Elektronik <i>Electronics Workshop</i>	K	3	
	BEEI 1323	Elektrik & Kemagnetan <i>Electrics & Magnetism</i>	K	3	
	BEEY 1323	Elektronik & Sistem Digital <i>Digital Electronics & System</i>	K	3	
	**BEEI 1333	Litar Elektrik Lanjutan <i>Advanced Electrical Circuit</i>	K	3	BEEI 1303
	BKKX XXX1	Kokurikulum II <i>Cocurriculum II</i>	W	1	
	BLLW 1442	Bahasa Inggeris untuk Akademik <i>English for Academic Purposes</i>	W	2	
BLLW 1172	Bahasa Melayu Komunikasi I (untuk pelajar antarabangsa) <i>Malay Language for Communication I</i> (for international students)	W	2		

TOTAL CREDITS THIS SEMESTER		
LOCAL STUDENTS	18	
INTERNATIONAL STUDENTS	20	

	CODE	SUBJECT	CATEGORY	CREDIT	PRE-REQUISITE
SEMESTER 3	BEEU 2033	Kalkulus Lanjutan untuk Teknologi <i>Advanced Calculus for Technology</i>	P	3	
	BEEY 2333	Pemasangan Elektrik I <i>Electrical Installation I</i>	K	3	
	BEEY 2343	Peranti Elektronik <i>Electronic Devices</i>	K	3	
	BEEY 2353	Teknologi Elektrik <i>Electrical Technology</i>	K	3	
	BEEA 1343	Pengaturcaraan Komputer <i>Computer Programming</i>	K	3	
	BEEY 2361	Kerjaya Teknologi Kejuruteraan Elektrik <i>Electrical Engineering Technology Career</i>	K	1	
	BLLW 12X2	Bahasa Ketiga <i>Third Language</i>	W	2	
TOTAL CREDITS THIS SEMESTER				18	
SEMESTER 4	BEEU 2043	Kaedah Statistik <i>Statistical Methods</i>	P	3	
	BEEA 2374	Sistem Terbenam <i>Embedded Systems</i>	K	4	
	BEEY 2373	Pemasangan Elektrik II <i>Electrical Installation II</i>	K	3	
	BEEA 2383	Pengenalan Sistem Kawalan <i>Control System Fundamental</i>	K	3	
	BEEA 2353	Elektronik Analog <i>Analog Electronics</i>	K	3	
	BLLW 2152	Penulisan Akademik <i>Academic Writing</i>	W	2	
	***BIPW XXX2	Elektif Umum <i>General Elective</i>	E	2	
	#BEEEX 3100	Kursus Persediaan Pensijilan Profesional <i>Professional Certificate Preparation Course</i>			
TOTAL CREDITS THIS SEMESTER				20	

	CODE	SUBJECT	CATEGORY	CREDIT	PRE-REQUISITE
SEMESTER 5	BEEI 2373	Mesin Elektrik <i>Electrical Machines</i>	K	3	
	BEEY 3383	Peranti Elektronik Kuasa <i>Power Electronics Devices</i>	K	3	
	BEEI 2383	Teknologi Sistem Kuasa <i>Power System Technology</i>	K	3	
	BEEU 3803	Rekabentuk Projek Berintegrasi <i>Integrated Design Project</i>	K	3	
	BLHW 2772	Penghayatan Etika dan Peradaban (untuk pelajar tempatan) <i>Appreciation of Ethics and Civilisations</i> (for local students)	W	2	
	BLHW 2752	Kebudayaan Malaysia (untuk pelajar antarabangsa) <i>Malaysian Culture</i> (for international students)	W	2	
	*BEEY 38X3	Elektif I <i>Elective I</i>	E	3	
*BEEY 3823	Elektif II <i>Elective II</i>	E	3		
TOTAL CREDITS THIS SEMESTER				20	
SEMESTER 6	BEEU 3764	Projek Sarjana Muda I <i>Bachelor Degree Project I</i>	K	4	
	BEEY 4393	Sistem Elektronik Kuasa <i>Power Electronics Systems</i>	K	3	
	BEEY 3404	Automasi Industri <i>Industrial Automation</i>	K	4	
	BIPW 3112	Pemikiran Kritis dan Kreatif (untuk pelajar tempatan) <i>Critical and Creative Thinking</i> (for local students)	W	2	
	BLLW 3162	Bahasa Inggeris untuk Interaksi Profesional <i>English for Professional Interaction</i>	W	2	
	*BEEY 38X3	Elektif III <i>Elective III</i>	E	3	
TOTAL CREDITS THIS SEMESTER					
LOCAL STUDENTS				18	
INTERNATIONAL STUDENTS				16	

	CODE	SUBJECT	CATEGORY	CREDIT	PRE-REQUISITE
SEMESTER 7	BEEU 4053	Etika Kejuruteraan & KKPP <i>Engineering Ethics & OSHE</i>	P	3	
	**BEEU 4774	Projek Sarjana Muda II <i>Bachelor Degree Project II</i>	K	4	BEEU 3764
	BEEY 4413	Kecekapan Tenaga <i>Energy Efficiency</i>	K	3	
	BEEI 3403	Reka Bentuk Sistem Pengagihan Kuasa <i>Power Distribution System Design</i>	K	3	
	BTMW 4012	Keusahawanan Teknologi <i>Technology Entrepreneurship</i>	W	2	
	*BEEEX 4XX3	Elektif IV <i>Elective IV</i>	E	3	
TOTAL CREDITS THIS SEMESTER				18	
SEMESTER 8	BEEU 4786	Latihan Industri <i>Industrial Training</i>	K	6	
	BEEU 4796	Laporan Latihan Industri <i>Industrial Training Report</i>	K	6	
TOTAL CREDITS THIS SEMESTER				12	
TOTAL CREDITS				142	

** Pre-requisite subject

* For Elective I, students may choose any ONE (1) subject from the list below:

CODE	SUBJECT NAME
BEEY 3803	Sistem Tenaga Diperbaharui <i>Renewable Energy System</i>
BEEY 3813	Pengenalan kepada Sistem Pengangkutan Elektrik <i>Introduction To Electric Transportation System</i>

* For Elective II, students must choose below subject:

CODE	SUBJECT NAME
BEEY 3823	Teknologi Penyimpanan Tenaga <i>Energy Storage Technology</i>

* For Elective III, students may choose any ONE (1) subject from the list below:

CODE	SUBJECT NAME
BEEY 3833	Polisi Tenaga <i>Energy Policy</i>
BEEY 3843	Rekabentuk Sistem PV <i>PV System Design</i>
BEEY 3853	Aplikasi Elektronik Kuasa <i>Power Electronics Application</i>
BEEY 3863	Pemacu Motor dan Sistem Tarikan <i>Motor Drive and Traction System</i>

* For Elective IV, students may choose any ONE (1) subject from the list below:

CODE	SUBJECT NAME
BEEY 4873	Trend Teknologi dalam Industri <i>Technology Trend in Industry</i>
BEEI 4843	Keserasian Elektromagnetik Sistem Kuasa <i>Power System Electromagnetic Compatibility</i>
BEEY 4903	Sistem Pemacu Moden <i>Modern Drive System</i>
BEEY 4913	Kenderaan Elektrik Hibrid <i>Hybrid Electric Vehicle</i>

*** For General elective, students may choose any ONE (1) subject from the list below:

CODE	SUBJECT NAME
BIPW 1142	Falsafah Sains Dan Teknologi <i>Philosophy of Science and Technology</i>
BIPW 4112	Komunikasi Organisasi <i>Organizational Communication</i>
BIPW 1152	Psikologi Industri dan Organisasi <i>Industrial Psychology and Organisation</i>
BIPW 4122	Kemahiran Perundingan <i>Negotiation Skills</i>
BIPW 2142	Sosiologi Industri <i>Industrial Sociology</i>

For Professional Certificate Preparation Course:

CODE	CERTIFICATE NAME
BEET 3100	Cisco Certified Network Associate Routing & Switching (Preparation)
BEEC 2210	IoT Fundamentals: Connecting Things Professional Certification
BEEC 2220	IoT Fundamentals: Big Data & Analytics Professional Certification
BEEE 3210	Programmable Logic Controller (PLC) Level 1 and Level 2
BEEE 4210	SMCT MT1 – Practical Mechatronics 1

Number of credit hours regarding to course category is represented in the table below.

W = university compulsory subjects

P = program core subjects

K = course core subjects

E = elective subjects

Programme P	P	18
Course K	K	80
University Compulsory	W	18
Industrial Training	K	12
Elective	E	14
		142