Programme Structure
Bachelor of Engineering (Hons) Electronics Engineering
(EE241/CEE241)

	Code	Course	Course Type	Pre-requisite	SLT HOURS	
					Engineering Courses	General Education Course
1	HEP1	Co-Curriculum I	Core			40
	MAT435	Calculus for Engineers	Core			120
	ELE411	Circuit Analysis I	Core		120	
	EEE410	Electrical Engineering Laboratory I	Core		60	
	ELE424	Analog Electronics I	Core		120	
	ECE421	Digital System Fundamentals	Core		120	
2	HEP2	Co-Curriculum II	Core			40
	CTU552	Philosophy and Current Issues	Core			80
	ESE461	Signals and Systems	Core		120	
	ELE413	Circuit Analysis II	Core	ELE411	120	
	ECM412	Communication Engineering Fundamentals	Core		120	
	ELE426	Analog Electronics II	Core	ELE424	120	
	EEE420	Electrical Engineering Laboratory II	Core		60	
3	HEP3	Co-Curriculum III	Core			40
	ELC590	English for Oral Presentations	Core			80
	MAT455	Further Calculus for Engineers	Core	MAT435		120
	ECE431	Computer Programming	Core		140	
	ESE439	Instrumentation and Control Systems	Core	ESE461	120	
	EPO460	Power Engineering	Core		120	
	EEE430	Electrical Engineering Laboratory III	Core		60	
4	APB1	Third Language I	Core			80
	MAT575	Introduction to Numerical Analysis	Core	MAT455		120
	CTU554	Values and Civilization II	Core			80
	ECE521	Microprocessor System	Core	ECE421	140	
	ELE541	Semiconductor Devices	Core		120	
	ECM420	Electromagnetic Theory	Core	MAT435	120	
5	APB2	Third Language II	Core			80
	STA408	Statistics for Science and Engineering	Core			120
	ECE532	Data Structures and Algorithm	Core	ECE431	120	

	Code	Course	Course Type	Pre-requisite	SLT HOURS	
					Engineering Courses	General Education Course
	ESE562	Signals and Systems: Analysis and Applications	Core		120	
	ELE526	Applied Electronic Circuits	Core	ELE424	120	
		Entrance Elective	Elective		120	
6	APB3	Third Language III	Core			80
	ELC640	English for Job Applications	Core			80
	ELE551	Embedded System Design and Interfacing	Core		140	
	ECE551	Multimedia Systems and Applications	Core		140	
		Elective I	Elective		120	
		Elective II	Elective		120	
7	EEE610	Engineer in Society	Core		140	
	EEE620	Industrial Training	Core		160	
	ELE606	Electronic Engineering Project I	Core		100	
	ELE506	Electronics System Design	Core		140	
		Core Elective	Elective		120	
		Elective III	Elective		120	
8	ENT600	Technology Entrepreneurship	Core			120
	EET699	English Exit Test	Core			0
	ELE607	Electronic Engineering Project II	Core	ELE606	220	
	ELE672	Industrial Topics	Core		100	
		Elective IV	Elective		120	
		Elective V	Elective		120	
Total SLT Hours					4120	1280
Total SLT Credits					103	32
SLT Credits for programme					135	

List of Elective Courses According to the Areas of Specialisation

Areas	Code	Course	Semester
Microelectronic Design and Device Technology	ELE554	IC Design and Fabrication	5
	ESE563	Digital Signal Processing	6
	ELE643	Semiconductor Manufacturing Technology	6
	ELE664	Sensors and Transducers	6
	ELE629	Analog Integrated Circuits	6
	ELE654	Digital Design and Computer Architecture	7
	ELE644	Photovoltaic Systems	7
	ELE645	Integrated Circuit Testing Technology	7
	ELE649	Photonic Devices and System	7
	ELE675	Special Topic I in Microelectronics	8
	ELE653	VLSI System Design	8
	ELE647	Nanotechnology	8
	ELE665	Automotive Electronics	8
	ELE651	Engineering System Design	8
	ELE649	Photonics Devices & System	8
	ELE645	Integrated Circuit Testing Technology	8
Embedded Systems	ELE554	IC Design and Fabrication	5
	ESE563	Digital Signal Processing	6
	ELE629	Analog Integrated Circuits	6
	ESE644	Programmable Logic Controller and Automation	6
	ELE664	Sensors and Transducers	6
	ECE633	Operating Systems	6
	ELE667	Audio Systems	6
	ELE654	Digital Design and Computer Architecture	7
	ELE645	Integrated Circuit Testing Technology	7
	ELE644	Photovoltaic System	7
	ELE675	Special Topic I in Microelectronics	8
	ELE653	VLSI System Design	8
	ELE647	Nanotechnology	8
	ELE665	Automotive Electronics	8
	ELE651	Engineering System Design	8
		Any electives from a determined mixture of semesters and areas of specialization that students have not taken	8

Areas	Code	Course	Semester
	ELE645	Integrated Circuit Testing Technology	8
Automation and Robotics	ESE542	Control Systems Design	5
	ESE563	Digital Signal Processing	6
	ESE644	Programmable Logic Controller and Automation	6
	ESE643	Modern Control Systems	6
	ESE689	Practical Robotics	6
	ESE690	Special Topic I in System Engineering	6
	ECE522	Computer Organization	7
	ESE652	Process Control	7
	ESE693	Quality Control Management	7
	ESE624	Medical Instrumentation	8
	ESE694	Electronics Manufacturing	8
	ESE691	Special Topic II in System Engineering	8
	ESE683	Automation and Robotics	8
	ESE623	Computer Control Instrumentation	8
	ESE692	Automation and Quality Control in Manufacturing	8
Biomedical Instrumentation	ESE542	Control Systems Design	5
	ESE563	Digital Signal Processing	6
	ESE644	Programmable Logic Controller and Automation	6
	ESE643	Modern Control Systems	6
	ESE689	Practical Robotics	6
	ESE690	Special Topic I in System Engineering	6
	ECE522	Computer Organization	7
	ESE652	Process Control	7
	ESE624	Medical Instrumentation	8
	ESE694	Electronics Manufacturing	8
	ESE691	Special Topic II in System Engineering	8
	ESE683	Automation and Robotics	8
	ESE623	Computer Control Instrumentation	8
	ESE692	Automation and Quality Control in Manufacturing	8
Satellites Communication	ECM510	Microwave Engineering	5
	ESE563	Digital Signal Processing	6
	ECM512	Digital Communication	6
	ECM513	Data Communication	6
	ECE522	Computer Organization	7

Areas	Code	Course	Semester
	ECM617	Radio Frequency System Design	7
	ECM521	Antennas and Propagation	7
	ECM613	Special Topic I in Communication Engineering	8
	ECM616	Emerging Technology	8
	ECM530	Mobile Communication Theory	8
	ECM618	Microwave Integrated Circuit Technology	8
	ECM614	Special Topic II in Communication Engineering	8
	ECM620	Satellite Communication Systems	8
	ECM631	Emerging Technologies in Radio Communication	8
	ECM633	Electromagnetic Simulation	8
	ECM614	Special Topic II in Communication Engineering	8
Advanced Computing & Communication	ECE522	Computer Organization	5
	ESE563	Digital Signal Processing	6
	ECE541	Data Network I	6
	ECE633	Operating Systems	6
	ECE625	Parallel Computer Architecture	7
	ECE641	Data Network II	7
	ECE626	Microcontroller System Design	7
	ECE662	Fuzzy Logic	8
	ECE648	Special Topics in Computer Networking	8
	ECE684	Digital Image Processing	8
	ECE643	Fundamentals of Network Security	8
	ECE610	Special Topic in Computer Engineering	8
	ECE653	Advance Internet Programming	8
	ELE553	Integrated Circuit Design	8
	ELE647	Nanotechnology	8
	ELE665	Automotive Electronics	8
	ELE651	Engineering System Design	8
	ESE624	Medical Instrumentation	8
	ESE696	Electronics Manufacturing	8
	ESE683	Automation and Robotics	8
	ESE623	Computer Control Instrumentation	8
	ESE692	Automation and Quality Control in Manufacturing	8