

ELECTRONICS and COMMUNICATION ENGINEERING
B. TECH (PART TIME) DEGREE COURSE

2013 SCHEME (RESTRUCTURED)

UNIVERSITY OF KERALA
THIRUVANANTHAPURAM

SCHEME -2013
PART TIME B.TECH (RESTRUCTURED)
ELECTRONICS and COMMUNICATION ENGINEERING (T)

First Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.101	13.301	Engineering Mathematics-II (ABCEFHMNPRSTU)	4	3	1	-	50	3	100	150
P 13.102	13.303	Network Analysis (AT)	4	3	1	-	50	3	100	150
P 13.103	13.305	Electronic Circuits (T)	4	3	1	-	50	3	100	150
P 13.104	13.306	Digital Electronics (T)	4	3	1		50	3	100	150
P 13.105	13.109	Semiconductor Devices (AT)	6	4	2	-	50	3	100	150
Total			22	16	6	0	250		500	750

Second Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.201	13.401	Engineering Mathematics III -Probability & Random Processes (AT)	4	3	1	-	50	3	100	150
P 13.202	13.403	Computer Organisation & Architecture (AT)	3	2	1	-	50	3	100	150
P 13.203	13.404	Digital Signal Processing (AT)	4	3	1	-	50	3	100	150
P 13.204	13.405	Computer Programming (T)	4	2	-	2	50	3	100	150
P 13.205	13.406	Analog Integrated Circuits (T)	3	2	1		50	3	100	150
P 13.206	13.302	Signals and Systems(AT)	4	3	1	-	50	3	100	150
Total			22	15	5	2	300		600	900

Third Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.301	13.501	Engineering Mathematics IV - Complex Analysis & Linear Algebra (ABHT)	4	3	1	-	50	3	100	150
P 13.302	13.502	Engineering Management for Electronics Engineers (AT)	3	2	1	-	50	3	100	150
P 13.303	13.505	Applied Electromagnetic Theory (T)	4	3	1	-	50	3	100	150
P 13.304	13.402	Humanities (ACHPT)	3	3	-	-	50	3	100	150
P 13.305	13.304	Analog Communications (T)	3	2	1	-	50	3	100	150
P 13.306	13.307	Electronic Devices Lab (AT)	3	-	-	3	50	3	100	150
P 13.307	13.308	Electronic Circuits Lab (T)	3	-	-	3	50	3	100	150
Total			23	13	4	6	350		700	1050

Fourth Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.401	13.601	Image Processing (AT)	3	2	1	-	50	3	100	150
P 13.402	13.602	VLSI Design (T)	4	3	1	-	50	3	100	150
P 13.403	13.603	Control Systems (T)	4	3	1	-	50	3	100	150
P 13.404	13.605	Antenna & Wave Propagation (T)	3	2	1	-	50	3	100	150
P 13.405	13.407	Digital Integrated Circuits Lab (T)	4	-	-	4	50	3	100	150
P 13.406	13.408	Analog Integrated Circuits Lab (T)	4	-	-	4	50	3	100	150
Total			22	10	4	8	300		600	900

Fifth Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.501	13.503	Microprocessors & Microcontrollers (AT)	4	3	1	-	50	3	100	150
P 13.502	13.504	Electronic Measurements & Instrumentation (T)	3	2	1	-	50	3	100	150
P 13.503	13.506	Elective I	3	2	1		50	3	100	150
P 13.505	13.702	Optical Fiber Communications (T)	4	3	1	-	50	3	100	150
P 13.506	13.507	Communication Engineering Lab (T)	4	-	-	4	50	3	100	150
P 13.507	13.508	Digital Signal Processing Lab (T)	4	-	-	4	50	3	100	150
Total			22	10	4	8	300		600	900

Sixth Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.601	13.604	Digital Communications (T)	4	3	1	-	50	3	100	150
P 13.602	13.801	Electrical Drives & Control (T)	4	3	1	-	50	3	100	150
P 13.603	13.802	Entertainment Electronics Technology (T)	4	3	1	-	50	3	100	150
P 13.604	13.606	Elective II	3	2	1		50	3	100	150
P 13.605	13.607	Microcontroller Lab (T)	4	-	-	4	50	3	100	150
P 13.606	13.608	Electronic Product Design & Mini Project (AT)	4	1	-	3	50	3	100	150
Total			23	12	4	7	300		600	900

Seventh Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.701	13.701	Nanoelectronics (AT)	3	2	1	-	50	3	100	150
P 13.702	13.703	Microwave & Radar Engineering (T)	4	3	1	-	50	3	100	150
P 13.703	13.704	Information Theory & Coding (T)	4	3	1	-	50	3	100	150
P 13.704	13.705	Elective III	3	2	1	-	50	3	100	150
P 13.705	13.706	Elective IV	3	2	1	-	50	3	100	150
P 13.706	13.707	Microwave & Optical Communications Lab (T)	3	-	-	3	50	3	100	150
P 13.707	13.708	Modeling & Simulation of Communication Systems Lab (T)	3	-	-	3	50	3	100	150
P 13.708	13.710	Project Design (AT)	1	-	-	1	50	-	-	50
Total			24	12	5	7	400		700	1100

Eighth Semester

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject	Credits	Weekly load, hours			C A Marks	Exam Duration Hrs	U E Max Marks	Total Marks
				L	T	D/P				
P 13.801	13.803	Computer Communications (T)	4	3	1	-	50	3	100	150
P 13.802	13.804	Wireless Communications (T)	4	3	1	-	50	3	100	150
P 13.803	13.805	Elective V	4	3	1	-	50	3	100	150
P 13.804	13.806	Elective VI	4	3	1	-	50	3	100	150
P 13.805	13.709	Seminar (AT)	1	-	-	1	50	-	-	50
P 13.806	13.807	Project & Viva – Voce (AT)	5	-	-	5	200	-	100	300
Total			22	12	4	6	450		500	950

Elective I

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.503.1	13.506.1	Professional Communications (AT)
P 13.503.2	13.506.2	Fuzzy Systems & Applications (AT)
P 13.503.3	13.506.3	Artificial Neural Networks (AT)
P 13.503.4	13.506.4	Bioinformatics (AT)
P 13.503.5	13.506.5	Mechatronics (AT)
P 13.503.6	13.506.6	Digital Systems Design with VHDL (T)
P 13.503.7	13.506.7	Electromagnetic Compatibility (T)

Elective II

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.604.1	13.606.1	Speech Processing (AT)
P 13.604.2	13.606.2	Adaptive Signal Processing (AT)
P 13.604.3	13.606.3	DSP Systems & Architecture (AT)
P 13.604.4	13.606.4	Professional Ethics (AT)
P 13.604.5	13.606.5	Wavelets & Applications (AT)
P 13.604.6	13.606.6	High Speed Semiconductor Devices (T)
P 13.604.7	13.606.7	Mixed Signal Circuits Design (T)

Elective III

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.704.1	13.705.1	Pattern Recognition (AT)
P 13.704.2	13.705.2	MOS Device Modeling (T)
P 13.704.3	13.705.3	Real Time Operating Systems (T)
P 13.704.4	13.705.4	Optoelectronic Devices (T)
P 13.704.5	13.705.5	Computer Vision (T)
P 13.704.6	13.705.6	CDMA Systems (T)

Elective IV

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.705.1	13.706.1	Intellectual Property Rights (AT)
P 13.705.2	13.706.2	MEMS (AT)
P 13.705.3	13.706.3	Embedded Systems (AT)
P 13.705.4	13.706.4	Low Power VLSI Design (T)
P 13.705.5	13.706.5	Antenna Design (T)
P 13.705.6	13.706.6	Cryptography (T)

Elective V

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.803.1	13.805.1	Entrepreneurship (AT)
P 13.803.2	13.805.2	Discrete Control & Navigation Systems (T)
P 13.803.3	13.805.3	Optical Integrated Circuits (T)
P 13.803.4	13.805.4	Nano Devices & Circuits (T)
P 13.803.5	13.805.5	Artificial Intelligence & Robotics (T)
P 13.803.6	13.805.6	Microwave Devices & Circuits (T)

Elective VI

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.804.1	13.806.1	Management Information Systems (AT)
P 13.804.2	13.806.2	Biomedical Engineering (T)
P 13.804.3	13.806.3	Information Security (T)
P 13.804.4	13.806.4	Digital Instrumentation (T)
P 13.804.5	13.806.5	Nanophotonics (T)
P 13.804.6	13.806.6	Satellite Communications (T)