

ELECTRICAL AND ELECTRONICS ENGINEERING
B. TECH (PART TIME) DEGREE COURSE

2013 SCHEME (RESTRUCTURED)

UNIVERSITY OF KERALA
THIRUVANANTHAPURAM

SCHEME -2013
PART TIME B.TECH (RESTRUCTURED)
ELECTRICAL AND ELECTRONICS ENGINEERING (E)

I 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	13.304	Analog Electronics (E)	4	2	2	0	50	3	100	150
P 13.103	13.305	DC Machines and Transformers (E)	4	2	2	0	50	3	100	150
P 13.104	13.306	Hydraulic Machines and Heat Engines (E)	4	2	2	0	50	3	100	150
P 13.105	13.108	Fundamentals of Electrical Engineering (E)	6	4	2	0	50	3	100	150
Total			22	13	9	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 (E)	4	3	1	-	50	3	100	150
P 13.202	13.402	Digital Electronics and Logic Design (E)	3	2	1	-	50	3	100	150
P 13.203	13.403	Engineering Electromagnetics (E)	3	2	1	-	50	3	100	150
P 13.204	13.404	Electrical Measurements and Measuring Instruments (E)	4	3	1	-	50	3	100	150
P 13.205	13.407	Electrical Machines Lab I (E)	4	0	0	4	50	3	100	150
P 13.206	13.408	Digital Circuits Lab (E)	4	0	0	4	50	3	100	150
Total			22	10	4	8	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 (E)	4	3	1	-	50	3	100	150
P 13.302	13.502	Synchronous Machines(E)	4	2	2	0	50	3	100	150
P 13.303	13.302	Humanities (BEFMRSU)	3	2	1	0	50	3	100	150
P 13.304	13.303	Networks and Systems (E)	4	2	2	0	50	3	100	150
P 13.305	13.307	Electronic Circuits Lab (E)	3	0	0	3	50	3	100	150
P 13.306	13.308	Hydraulic Machines and Heat Engines Lab (E)	3	0	0	3	50	3	100	150
Total			21	9	6	6	300		600	900

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	13.602	Induction Machines and Special Machines(E)	3	2	1	0	50	3	100	150
P 13.402	13.603	Microprocessors & Applications (E)	4	2	2	0	50	3	100	150
P 13.403	13.604	Numerical Techniques & Computer Programming(E)	3	2	1	0	50	3	100	150
P 13.404	13.405	Power Electronics (E)	4	2	2	-	50	3	100	150
P 13.405	13.406	Power Generation, Transmission and Distribution (E)	3	2	1		50	3	100	150
P 13.406	13.607	Microprocessor Lab (E)	2	0	0	2	25	2	50	75
P 13.407	13.608	Software Lab(E)	2	0	0	2	25	2	50	75
Total			21	10	7	4	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	Switchgear and Protection(E)	3	2	1	0	50	3	100	150
P 13.502	13.504	Control Systems(E)	4	2	2	0	50	3	100	150
P 13.503	13.505	Electronic Instrumentation(E)	3	2	1	0	50	3	100	150
P 13.504	13.506	ELECTIVE I	3	2	1	0	50	3	100	150
P 13.505	13.704	Communication Systems (E)	3	2	1	0	50	3	100	150
P 13.506	13.705	Industrial Engineering & Management (E)	3	3	0	0	50	3	100	150
P 13.507	13.508	Measurements & Instrumentation Lab(E)	4	0	0	4	50	3	100	150
Total			23	13	6	4	350		700	1050

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	13.601	Advanced Control Systems (E)	4	2	2	0	50	3	100	150
P 13.602	13.605	Power System Analysis and Stability(E)	4	2	2	0	50	3	100	150
P 13.603	13.606	ELECTIVE II	3	2	1		50	3	100	150
P 13.604	13.802	Electrical Machine Design (E)	4	2	2	0	50	3	100	150
P 13.605	13.507	Power Electronics Lab(E)	4	0	0	4	50	3	100	150
P 13.606	13.609	Systems & Control Lab(E)	4	0	0	4	50	3	100	150
Total			23	8	7	8	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	Embedded Systems (E)	3	2	1	0	50	3	100	150
P 13.702	13.702	Digital Signal Processing (E)	3	2	1	0	50	3	100	150
P 13.703	13.703	Power Semiconductor Drives (E)	3	2	1	0	50	3	100	150
P 13.704	13.706	ELECTIVE III	3	2	1	0	50	3	100	150
P 13.705	13.707	Seminar	2	0	0	2	50		0	50
P 13.706	13.708	Electrical Machines Lab II (E)	4	0	0	4	50	3	100	150
P 13.707	13.709	Power Systems Lab (E)	4	0	0	4	50	3	100	150
P 13.708	13.710	Industrial Visit & Project Preliminary Work	1	0	0	1	50		0	50
Total			23	8	4	11	400		600	1000

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	13.801	Electrical System Design (E)	4	2	2	0	50	3	100	150
P 13.802	13.803	Electrical Drawing (E)	4	0	0	4	50	3	100	150
P 13.803	13.804	Electric Power Utilisation & Electrical Safety (E)	4	3	1	0	50	3	100	150
P 13.804	13.805	ELECTIVE IV	4	2	2	0	50	3	100	150
P 13.805	13.806	ELECTIVE V	4	2	2	0	50	3	100	150
P 13.806	13.807	Project & Viva Voce (E)	5	0	0	5	200		100	300
Total			25	9	7	9	450		600	1050

Elective I

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.504.1	13.506.1	Engineering Material Science (E)
P 13.504.2	13.506.2	Operations Research (E)
P 13.504.3	13.506.3	Sustainable Development (E)
P 13.504.4	13.506.4	New and renewable Energy Sources (E)
P 13.504.5	13.506.5	Disaster Management (E)
P 13.504.6	13.506.6	Computer Organisation (E)
P 13.504.7	13.506.7	Professional Communication (E)

Elective II

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.603.1	13.606.1	Biomedical Instrumentation (E)
P 13.603.2	13.606.2	Optical Instrumentation (E)
P 13.603.3	13.606.3	Switch Mode Power Converters (E)
P 13.603.4	13.606.4	Finite Element Methods (E)
P 13.603.5	13.606.5	Soft Computing (E)
P 13.603.6	13.606.6	Software Engineering (E)

Elective III

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.704.1	13.706.1	Object Oriented Programming (E)
P 13.704.2	13.706.2	Modern Operating Systems (E)
P 13.704.3	13.706.3	Computer Aided Power System Analysis (E)
P 13.704.4	13.706.4	Power Quality (E)
P 13.704.5	13.706.5	Design of Digital Control Systems (E)
P 13.704.6	13.706.6	High Voltage Engineering (E)
P 13.704.7	13.706.7	Nano Technology (E)

Elective IV

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.804.1	13.805.1	Power System Instrumentation (E)
P 13.804.2	13.805.2	Computer Networks (E)
P 13.804.3	13.805.3	Analysis of Electrical Machinery (E)
P 13.804.4	13.805.4	Robotics (E)
P 13.804.5	13.805.5	Non-linear Systems (E)
P 13.804.6	13.805.6	Wavelets and Applications (E)

ElectiveV

PT B. Tech Course No	Equivalent B. Tech Course No	Name of subject
P 13.805.1	13.806.1	Energy Conservation and Management (E)
P 13.805.2	13.806.2	HVDC and FACTS (E)
P 13.805.3	13.806.3	Power Electronic Applications in Power Systems (E)
P 13.805.4	13.806.4	Philosophy of Science and Technology (E)
P 13.805.5	13.806.5	Digital Image Processing (E)
P 13.805.6	13.806.6	Electric and Hybrid Vehicles (E)
P 13.805.7	13.806.7	Industrial automation (E)