

UNIVERSITY OF KERALA
SCHEME -2013
ELECTRONICS and COMMUNICATION ENGINEERING (T)

Combined I and II Semesters

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				
13.101	Engineering Mathematics - I (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.102	Engineering Physics (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.103	Engineering Chemistry (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.104	Engineering Graphics (ABCEFHMNPRSTU)	6	1	-	2	50	3	100	150
13.105	Engineering Mechanics (ABCEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.106	Basic Civil Engineering (ABEFHMNPRSTU)	6	2	1	-	50	3	100	150
13.107	Basic Mechanical Engineering (ACEFRT)	6	2	1	-	50	3	100	150
13.108	Basic Electrical Engineering (ABCHMNPSTU)	6	2	1	-	50	3	100	150
13.109	Semiconductor Devices (AT)	6	2	1	-	50	3	100	150
13.110	Mechanical Engineering Workshop (ABCEFHMNPRSTU)	2	-	-	1	25	3	50	75
13.111	Electrical & Electronics Engineering Workshop (ABCEFHMNPRSTU)	2	-	-	1	25	3	50	75
Total		58	17	8	4	500		1000	1500

Third Semester

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				
13.301	Engineering Mathematics-II (ABCEFHMNPRSTU)	4	3	1	-	50	3	100	150
13.302	Signals & Systems (AT)	4	3	1	-	50	3	100	150
13.303	Network Analysis (AT)	4	3	1	-	50	3	100	150
13.304	Analog Communications (T)	3	2	1	-	50	3	100	150
13.305	Electronic Circuits (T)	4	3	1	-	50	3	100	150
13.306	Digital Electronics (T)	4	3	1	-	50	3	100	150
13.307	Electronic Devices Lab (AT)	3	-	-	3	50	3	100	150
13.308	Electronic Circuits Lab (T)	3	-	-	3	50	3	100	150
Total		29	17	6	6	400		800	1200

Fourth Semester

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				
13.401	Engineering Mathematics III -Probability & Random Processes (AT)	4	3	1	-	50	3	100	150
13.402	Humanities (ACHPT)	3	3	-	-	50	3	100	150
13.403	Computer Organisation & Architecture (AT)	3	2	1	-	50	3	100	150
13.404	Digital Signal Processing (AT)	4	3	1	-	50	3	100	150
13.405	Computer Programming (T)	4	2	-	2	50	3	100	150
13.406	Analog Integrated Circuits (T)	3	2	1		50	3	100	150
13.407	Digital Integrated Circuits Lab (T)	4	-	-	4	50	3	100	150
13.408	Analog Integrated Circuits Lab (T)	4	-	-	4	50	3	100	150
Total		29	15	4	10	400		800	1200

Fifth Semester

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				
13.501	Engineering Mathematics IV - Complex Analysis & Linear Algebra (ABHT)	4	3	1	-	50	3	100	150
13.502	Engineering Management for Electronics Engineers (AT)	3	2	1	-	50	3	100	150
13.503	Microprocessors & Microcontrollers (AT)	4	3	1	-	50	3	100	150
13.504	Electronic Measurements & Instrumentation (T)	3	2	1	-	50	3	100	150
13.505	Applied Electromagnetic Theory (T)	4	3	1	-	50	3	100	150
13.506	Elective I	3	2	1		50	3	100	150
13.507	Communication Engineering Lab (T)	4	-	-	4	50	3	100	150
13.508	Digital Signal Processing Lab (T)	4	-	-	4	50	3	100	150
Total		29	15	6	8	400		800	1200

Sixth Semester

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				
13.601	Image Processing (AT)	3	2	1	-	50	3	100	150
13.602	VLSI Design (T)	4	3	1	-	50	3	100	150
13.603	Control Systems (T)	4	3	1	-	50	3	100	150
13.604	Digital Communications (T)	4	3	1	-	50	3	100	150
13.605	Antenna & Wave Propagation (T)	3	2	1	-	50	3	100	150
13.606	Elective II	3	2	1		50	3	100	150
13.607	Microcontroller Lab (T)	4	-	-	4	50	3	100	150
13.608	Electronic Product Design & Mini Project (AT)	4	1	-	3	50	3	100	150
Total		29	16	6	7	400		800	1200

Seventh Semester

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				
13.701	Nanoelectronics (AT)	3	2	1	-	50	3	100	150
13.702	Optical Fiber Communications (T)	4	3	1	-	50	3	100	150
13.703	Microwave & Radar Engineering (T)	4	3	1	-	50	3	100	150
13.704	Information Theory & Coding (T)	4	3	1	-	50	3	100	150
13.705	Elective III	3	2	1	-	50	3	100	150
13.706	Elective IV	3	2	1	-	50	3	100	150
13.707	Microwave & Optical Communications Lab (T)	3	-	-	3	50	3	100	150
13.708	Modeling & Simulation of Communication Systems Lab (T)	3	-	-	3	50	3	100	150
13.709	Seminar (AT)	1	-	-	1	50	-	-	50
13.710	Project Design (AT)	1	-	-	1	50	-	-	50
Total		29	15	6	8	500		800	1300

Eighth Semester

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				
13.801	Electrical Drives & Control (T)	4	3	1	-	50	3	100	150
13.802	Entertainment Electronics Technology (T)	4	3	1	-	50	3	100	150
13.803	Computer Communications (T)	4	3	1	-	50	3	100	150
13.804	Wireless Communications (T)	4	3	1	-	50	3	100	150
13.805	Elective V	4	3	1	-	50	3	100	150
13.806	Elective VI	4	3	1	-	50	3	100	150
13.807	Project & Viva – Voce (AT)	5	-	-	5	200	-	100	300
Total		29	18	6	5	500		700	1200

13. 506 Elective I

13.506.1	Professional Communications (AT)
13.506.2	Fuzzy Systems & Applications (AT)
13.506.3	Artificial Neural Networks (AT)
13.506.4	Bioinformatics (AT)
13.506.5	Mechatronics (AT)
13.506.6	Digital Systems Design with VHDL (T)
13.506.7	Electromagnetic Compatibility (T)

13.606 Elective II

13.606.1	Speech Processing (AT)
13.606.2	Adaptive Signal Processing (AT)
13.606.3	DSP Systems & Architecture (AT)
13.606.4	Professional Ethics (AT)
13.606.5	Wavelets & Applications (AT)
13.606.6	High Speed Semiconductor Devices (T)
13.606.7	Mixed Signal Circuits Design (T)

13.706 Elective III

13.705.1	Pattern Recognition (AT)
13.705.2	MOS Device Modeling (T)
13.705.3	Real Time Operating Systems (T)
13.705.4	Optoelectronic Devices (T)
13.705.5	Computer Vision (T)
13.705.6	CDMA Systems (T)

13.706 Elective IV

13.706.1	Intellectual Property Rights (AT)
13.706.2	MEMS (AT)
13.706.3	Embedded Systems (AT)
13.706.4	Low Power VLSI Design (T)
13.706.5	Antenna Design (T)
13.706.6	Cryptography (T)

13.805 Elective V

13.805.1	Entrepreneurship (AT)
13.805.2	Discrete Control & Navigation Systems (T)
13.805.3	Optical Integrated Circuits (T)
13.805.4	Nano Devices & Circuits (T)
13.805.5	Artificial Intelligence & Robotics (T)
13.805.6	Microwave Devices & Circuits (T)

13.806 Elective VI

13.806.1	Management Information Systems (AT)
13.806.2	Biomedical Engineering (T)
13.806.3	Information Security (T)
13.806.4	Digital Instrumentation (T)
13.806.5	Nanophotonics (T)
13.806.6	Satellite Communications (T)