COURSE STRUCTURE
AND
DETAILED SYLLABUS

R-18

ELECTORNICS AND COMMUNICATION ENGINEERING

For

B.TECH. FOUR YEAR DEGREE COURSE

(Applicable for the batches admitted for the Academic Year 2018-19)

(I-IV Year Syllabus)

RAJIV GANDHI UNIVERSITYR OF KNOWLEDGE TECHNOLOGIES

Basar, Nirmal, Telangana State – 504107, India.

COURSE STRUCTURE: <u>ELECTORNICS AND COMMUNICATION ENGINEERING</u>

I SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	MA1101	Mathematics – I (Matrix theory and Calculus)	BSC	3	1	0	4	4
2	CY1001	Chemistry	BSC	3	1	0	4	4
3	CY1601	Chemistry Lab	BSC	0	0	3	3	1.5
4	ME1001	Engineering workshop	ESC	2	0	0	2	2
5	ME1601	Engineering workshop Lab	ESC	0	0	2	2	1
6	HS1101	Communication Skills-I	HSMC	2	0	0	2	0
7	CS1001	Programming for Problem Solving	ESC	3	0	0	3	3
8	CS1601	Programming for Problem Solving Lab	ESC	0	0	4	4	2
Total				13	2	9	24	17.5
Induction Program (Non-credit)- Syllabus as per AICTE guide lines								

II SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per			Total	Credits
				L	T	P		
1	EE1002	Basic Electrical Engineering	ESC	3	1	0	4	4
2	EE1602	Basic Electrical Engineering lab	ESC	0	0	2	2	1
3	MA1201	Mathematics – II (Differential equations, Vector calculus)	BSC	3	1	0	4	4
4	PH1001	Physics	BSC	3	1	0	4	4
5	PH1601	Physics Lab	BSC	0	0	3	3	1.5
6	CE1001	Engineering Graphics	ESC	1	0	4	5	3
7	HS1001	English	HSMC	2	0	0	2	2
8	HS1601	English Language Lab	HSMC	0	0	2	2	1
9	BM0005	Constitution of India	MC	2	0	0	2	0
10	HS1201	Communication Skills – II	HSMC	2	0	0	2	0
Total				16	3	11	30	20.5

III SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	EC2101	Digital Electronic Circuits	PCC	3	0	0	3	3
2	EC2701	Digital Electronic Circuits lab	PCC	0	0	2	2	1
3	EC2102	Electronic Devices and Circuits	PCC	3	1	0	4	4
4	EC2702	Electronic Devices and Circuits lab	PCC	0	0	2	2	1
5	EC2103	Signals and Systems	PCC	3	1	0	4	4
6	EC2901	Electronics mini Project-I	PJT	0	0	2	2	1
7	MA2101	Mathematics-III (Linear algebra, Complex analysis)	BSC	3	1	0	4	4
8	HS2101	Essence of Indian Traditional Knowledge	MC	2	0	0	2	0
9	BS2101	Environmental Science	MC	3	0	0	3	0
Total				16	3	6	26	18

IV SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	EC2201	Analog Circuits	PCC	3	0	0	3	3
2	EC2801	Analog Circuits lab	PCC	0	0	2	2	1
3	EC2202	Control systems	PCC	3	0	0	3	3
4	EC2203	Electromagnetic Waves	PCC	3	0	0	3	3
5	EC2204	Probability Theory and Stochastic Processes	PCC	3	1	0	4	4
6	CS2205	Object Oriented Programming	ESC	3	0	0	3	3
7	CS2804	Object Oriented Programming lab	ESC	0	0	2	2	1
8	EC2902	Electronics mini Project-II	PJT	0	0	2	2	1
9	BM0007	Managerial Economics and Financial analysis	HSMC	3	0	0	3	3
Total				18	1	6	25	22

V SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	EC3101	Analog and Digital Communications	PCC	3	0	0	3	3
2	EC3701	Analog and Digital Communications lab	PCC	0	0	2	2	1
3	EC3102	Computer Architecture	PCC	3	0	0	3	3
4	EC3103	Digital Signal Processing	PCC	3	0	0	3	3
5	EC3702	Digital Signal Processing lab	PCC	0	0	2	2	1
6	EC3104	RF and Microwave Engineering	PCC	3	0	0	3	3
7	EC3703	RF and Microwave Eng. Lab	PCC	0	0	2	2	1
8	EC3105	VLSI Engineering	PCC	3	0	0	3	3
9		Open Elective-1 (Preferably Numerical Methods)		3	0	0	3	3
10	ECSEM	Technical Seminar (on recent trends)	PJT	0	0	2	2	1
Total				18	0	8	26	22

VI SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	EC3201	Digital System Design	PEC	3	0	0	3	3
2	EC3801	Digital Systems Design and VLSI Lab	PCC	0	0	2	2	1
3	EC3202	Micro-Controllers and Interfacing	PCC	3	0	0	3	3
4	EC3802	Micro-Controllers lab	PCC	0	0	2	2	1
5	EC_	Pattern Recognition	PEC	3	0	0	3	3
6	CS3203	Operating Systems	ESC	3	0	0	3	3
7	BM0003	Operations Research (Management Dept)	HSMC	3	0	0	3	3
8	ECP01	Mini Project	PJT	0	0	4	4	2
9	ECCV-I	Comprehensive Viva-I						0
10	ECP02	Summer Internship						1
Total				15	0	8	23	20

VII SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact hours	Credits
				L	T	P		
1	EC_	Signal Processing stream elective	PEC	3	0	0	3	3
2	EC_	Communications stream elective	PEC	3	0	0	3	3
3	EC_	Embedded systems stream elective	PEC	3	0	0	3	3
4	ECP03	Project Stage-I	PJT	0	0	6	6	3
5	BM0010	Professional Law and Ethics	HSMC	3	0	0	3	3
6	CS4101	Computer Networks	ESC	3	0	0	3	3
7	CS4701	Computer Networks lab	ESC	0	0	2	2	1
Total				15	0	8	23	19

VIII SEMESTER

Sl. No.	Course Code	Course Title	Course Category	Hours per week			Total contact	Credits
				L	T	P		
1	EC_	Program Elective-4 (Preferably course on Antennas)	PEC	3	0	0	3	3
2	EC_	Open Elective-3	PEC	3	0	0	3	3
3		Open Elective-4		3	0	0	3	3
4		Open Elective-5		3	0	0	3	3
5	ECP04	Project Stage-II	PJT			16	16	8
6	ECCV-II	Comprehensive viva-II						0
Total				12	0	16	28	20