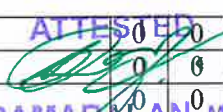


B.E. – Electronics and Communication Engineering
Total Credits to be earned for the award of the Degree: 188
Total Credits to be earned by lateral entry students: 144
Full Time Curriculum and Syllabus

SEMESTER I										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CIA	ES	Total		
Theory Course										
1701EN101	Technical English	3	0	0	3	100	-	100	HSS	
1701MA101	Engineering Mathematics – I	3	2	0	4	40	60	100	BS	
1701PH101	Applied Physics for Engineers	3	0	0	3	40	60	100	BS	
1701CH104	Applied Chemistry	3	0	0	3	40	60	100	BS	
1701GE101	Basic Electrical and Instrumentation Engineering	3	0	0	3	40	60	100	ES	
1701GEX03	Programming in C	3	0	0	3	40	60	100	ES	
1701GEX02	Engineering Graphics	2	2	0	3	50	50	100	ES	
Laboratory Course										
1701HS151	Physics and Chemistry Laboratory – I	0	0	2	1	50	50	100	BS	
1701GEX51	Programming in C Laboratory	0	0	2	1	50	50	100	ES	
Total		20	4	4	24	450	450	900	-	

SEMESTER II										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CIA	ES	Total		
Theory Course										
1701LE201	Communicative English	3	0	0	3	100	-	100	HSS	
1701MA201	Engineering Mathematics – II	3	2	0	4	40	60	100	BS	
1701PH202	Semiconductor Physics and Devices	3	0	0	3	40	60	100	BS	
1701CH201	Environmental Studies	3	0	0	3	40	60	100	HSS	
1701GE201	Basic Civil and Mechanical Engineering	3	0	0	3	40	60	100	ES	
1701EC201	Circuit Theory	3	2	0	4	40	60	100	ES	
Laboratory Course										
1701GEX53	Workshop Practice	0	0	2	1	50	50	100	ES	
1701HS251	Physics and Chemistry Laboratory – II	0	0	2	1	50	50	100	BS	
1701GEX52	Communication Skills Laboratory	0	0	2	1	50	50	100	BS	
Total		18	4	6	23	450	450	900	-	

SEMESTER III										
Course Code	Course Name	L	T	P	C	Maximum Marks			Category	
						CIA	ES	Total		
Theory Course										
1701MA302	Engineering Mathematics – III	3	2	0	4	40	60	100	BS	
1702CS306	Data Structures and C++	3	0	0	3	40	60	100	ES	
1702EC301	Network Analysis and Synthesis	3	2	0	4	40	60	100	ES	
1702EC302	Engineering Electromagnetics	3	0	0	3	40	60	100	ES	
1702EC303	Digital Circuits and Systems	3	0	0	3	40	60	100	PC	
1702EC304	Electronics Circuits	3	0	0	3	40	60	100	PC	
Laboratory Course										
1702EC351	Digital Electronics Laboratory	0	0	4	2	50	50	100	PC	
1702EC352	Electronic Circuits Laboratory	0	0	4	2	50	50	100	PC	
1702CS353	Data Structures Laboratory	0	0	2	1	50	50	100	ES	



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1704GE351	Life Skills: Soft Skills	0	0	2	1	100	-	100	EEC
1704EC046	Introduction to HDL	1	0	0	1	40	60	100	OCC
Total		19	4	12	27	530	570	1100	
SEMESTER IV									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CIA	ES	Total	
Theory Course									
1701MA402	Probability and Random Processes	3	2	0	4	40	60	100	BS
1702EC401	Signals and Systems	3	2	0	4	40	60	100	PC
1702EC402	Analog Integrated Circuits	3	0	0	3	40	60	100	PC
1702EC403	Microprocessors and Microcontrollers	3	0	0	3	40	60	100	PC
1702EC404	Transmission Lines and Waveguides	3	0	0	3	40	60	100	PC
1702EC405	Control Systems	3	0	0	3	40	60	100	PC
1701CH201	Environmental Studies*	3	0	0	3	40	60	100	HSS
Laboratory Course									
1702EC451	Analog Integrated Circuits Laboratory	0	0	4	2	50	50	100	PC
1702EC452	Microprocessors and Microcontrollers Laboratory	0	0	4	2	50	50	100	PC
1704GE451	Life Skills: Verbal Ability	0	0	2	1	100	-	100	EEC
1704EC050	Application of Neural Network and Fuzzy Logic	1	0	0	1	40	60	100	OCC
Total		19	4	10	26	480/	520/	1000/	
		/2			/2	520	580	1100	
		2*			9*	*	*	*	

*- Only for Lateral Entry Students

SEMESTER V									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CIA	ES	Total	
Theory Course									
1702EC501	Analog Communication	3	0	0	3	40	60	100	PC
1702EC502	Antenna and Wave Propagation	3	0	0	3	40	60	100	PC
1702EC503	Digital Signal Processing	3	2	0	4	40	60	100	PC
1702EC504	Computer Networks	3	0	0	3	40	60	100	PC
	Professional Elective – I (1703EC004 – Bio Medical Engineering)	3	0	0	3	40	60	100	PE
	Professional Elective – II (1703EC008 – Measurement and Instrumentation)	3	0	0	3	40	60	100	PE
Laboratory Course									
1702EC551	Analog Communication Laboratory	0	0	4	2	50	50	100	PC
1702EC552	Digital Signal Processing Laboratory	0	0	4	2	50	50	100	PC
1704EC553	Technical Seminar	0	0	2	1	100	-	100	EEC
1704GE551	Life Skills: Aptitude – I	0	0	2	1	100	-	100	EEC
Total		18	2	12	25	540	460	1000	

SEMESTER VI									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1701MGX01	Professional Ethics	3	0	0	3	40	60	100	HSS
1702EC601	VLSI Design	3	0	0	3	40	60	100	PC
1702EC602	Digital Communication	3	0	0	3	40	60	100	PC
1702EC603	Wireless Networks and Standards	3	0	0	3	40	60	100	PC
	Professional Elective – III (1703EC014- Internet of Things)	3	0	0	3	40	60	100	PE
	Professional (Open) Elective – IV (1703CS037-Web Technology, 1703ME011 – Java Programming, 1703ME011)	3	0	0	3	40	60	100	POE

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	Industrial Robotics, 1703CE032 – Global Warming and Climate Change)								
Laboratory Course									
1702EC651	VLSI Design Laboratory	0	0	2	1	50	50	100	PC
1702EC652	Communication and Networks Laboratory	0	0	2	1	50	50	100	PC
1704EC653	Industrial Visits & Presentation	0	0	0	1	100	-	100	EEC
1704GE651	Life Skills: Aptitude – II	0	0	2	1	100	-	100	EEC
Total		17	0	6	22	540	460	1000	

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SEMESTER VII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
1702EC701	Microwave Engineering	3	0	0	3	40	60	100	PC
1702EC702	Optical Communication	3	0	0	3	40	60	100	PC
1702EC703	Wireless Communication	3	0	0	3	40	60	100	PC
1702EC704	Image Processing	3	0	0	3	40	60	100	PC
	Professional Elective – V (1703MG002 – Total Quality Management)	3	0	0	3	40	60	100	PE
	Professional (Open) Elective – VI (1703ED001 – Startup Entrepreneurship)	3	0	0	3	40	60	100	PE
Laboratory Course									
1702EC751	Microwave and Optical Communication Laboratory	0	0	2	1	50	50	100	PC
1704EC752	Mini Project	0	0	2	1	100	-	100	EEC
1704EC753	In-plant Training/ Internship Presentation	0	0	0	1	100	-	100	EEC
1704GE751	Life Skills : Competitive Exams Preparation	2	0	0	2	100	-	100	EEC
Total		20	0	4	23	590	410	1000	

SEMESTER VIII									
Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
Theory Course									
	Professional Elective –VII	3	-	-	3	40	60	100	PE
	Professional Elective –VIII	3	-	-	3	40	60	100	PE
	Professional Elective - IX	3	-	-	3	40	60	100	PE
Laboratory Course									
1704EC851	Project Work	-	-	18	9	50	50	100	EEC
Total		9	-	18	18	170	230	400	

List of Electives for / offered by B.E. – Electronics and Communication Engineering

Course Code	Course Name	L	T	P	C	Maximum Marks			Category
						CA	ES	Total	
PROFESSIONAL ELECTIVES – I									
1703EC001	Nano Electronics	3	0	0	3	40	60	100	PE
1703EC002	Automotive Electronics	3	0	0	3	40	60	100	PE
1703EC003	Micro Electronics	3	0	0	3	40	60	100	PE
1703EC004	Biomedical Engineering	3	0	0	3	40	60	100	PE
1703EC005	Robotic Vision	3	0	0	3	40	60	100	PE


PROFESSIONAL ELECTIVES – II									
1703EC006	Computer Architecture and Organization	3	0	0	3	40	60	100	PE
1703EC007	Advanced Microcontrollers	3	0	0	3	40	60	100	PE
1703EC008	Measurement and Instrumentation	3	0	0	3	40	60	100	PE
1703EC009	Virtual Instrumentation	3	0	0	3	40	60	100	PE
1703EC010	Operating Systems	3	0	0	3	40	60	100	PE
PROFESSIONAL ELECTIVES – III (OPEN ELECTIVES)									
1703EC011	Information Theory and Coding	3	0	0	3	40	60	100	PE
1703EC012	Digital Control Engineering	3	0	0	3	40	60	100	PE
1703EC013	Network Security	3	0	0	3	40	60	100	PE
1703EC014	Internet of Things	3	0	0	3	40	60	100	PE
1703EC015	Soft Computing	3	0	0	3	40	60	100	PE
PROFESSIONAL ELECTIVES – IV									
1703EC016	Cloud Computing	3	0	0	3	40	60	100	OE
1703EC017	Real Time Operating Systems	3	0	0	3	40	60	100	OE
1703EC018	Big Data Analytics	3	0	0	3	40	60	100	OE
1703EC019	Introduction to Web Technology	3	0	0	3	40	60	100	OE
1703EC020	Grid Computing	3	0	0	3	40	60	100	OE
PROFESSIONAL ELECTIVES – V (OPEN ELECTIVES)									
1703MG001	Principles of Management	3	0	0	3	40	60	100	OE
1703MG002	Disaster Management	3	0	0	3	40	60	100	OE
1703MG005	Total Quality Management	3	0	0	3	40	60	100	OE
1703MG006	Industrial Economics	3	0	0	3	40	60	100	OE
1703MG007	Foundation Skills in Integrated Product Development	3	0	0	3	40	60	100	OE
PROFESSIONAL ELECTIVES – VI									
1703EC021	Advanced Digital Signal Processing	3	0	0	3	40	60	100	PE
1703EC022	Embedded System	3	0	2	4	40	60	100	PE
1703EC023	Pattern Recognition and Machine Learning	3	0	0	3	40	60	100	PE
1703EC024	Speech Processing	3	0	0	3	40	60	100	PE
1703EC025	VLSI Signal Processing	3	0	0	3	40	60	100	PE
1703EC026	RF System Design	3	0	0	3	40	60	100	PE
PROFESSIONAL ELECTIVES – VII									
1703EC027	Multimedia Communication	3	0	0	3	40	60	100	PE
1703EC028	Wireless Sensor Networks	3	0	0	3	40	60	100	PE
1703EC029	Radar and Navigation Aids	3	0	0	3	40	60	100	PE
1703EC030	Microwave Integrated Circuits	3	0	0	3	40	60	100	PE
1703EC031	Satellite Communication	3	0	0	3	40	60	100	PE
PROFESSIONAL ELECTIVES – VIII									
1703EC032	System-on Chip Design	3	0	0	3	40	60	100	PE
1703EC033	Network on Chip Design	3	0	0	3	40	60	100	PE
1703EC034	Low Power VLSI Design	3	0	0	3	40	60	100	PE
1703EC035	Analog IC Design	3	0	0	3	40	60	100	PE
1703EC036	Mixed Signal CMOS Design	3	0	0	3	40	60	100	PE
PROFESSIONAL ELECTIVES – IX									
1703EC037	Electromagnetic Interference and Compatibility	3	0	0	3	40	60	100	PE
1703EC038	Digital System Design and Testing	3	0	0	3	40	60	100	PE
1703EC039	Optical Networks	3	0	0	3	40	60	100	PE
1703EC040	RF MEMS	3	0	0	3	40	60	100	PE
1703EC041	Digital Switching and Transmission	3	0	0	3	40	60	100	PE
1703EC042	ARM Processors	3	0	0	3	40	60	100	PE
1703EC043	Mobile Computing	3	0	0	3	40	60	100	PE
ONE CREDIT COURSES									
1704EC044	Programmable Logic Controllers (PLC) Programming	1	0	0	1	40	60	100	EEC
1704EC045	Advanced Verification Methodologies	1	0	0	1	40	60	100	EEC
1704EC046	Introduction to HDL	1	0	0	1	40	60	100	EEC

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1704EC047	Embedded Systems Design Using MSP430	1	0	0	1	40	60	100	EEC
1704EC048	Arduino Microcontroller	1	0	0	1	40	60	100	EEC
1704EC049	Software defined radio	1	0	0	1	40	60	100	EEC
1704EC050	Applications of Neural Network and Fuzzy Logic	1	0	0	1	40	60	100	EEC
1704EC051	Real Time Data Acquisition And Signal Processing Using Labview	1	0	0	1	40	60	100	EEC
1704EC052	Python Programming	1	0	0	1	40	60	100	EEC
1704EC053	Microwave/RF circuit design Including 3D EM Modeling	1	0	0	1	40	60	100	EEC

PC – PROFESSIONAL CORE

PE – PROFESSIONAL ELECTIVE

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