

B.Tech. (Electronics and Communication Engineering) – 2018 batch

PROGRAMME STRUCTURE

S. No.	Category	Credits
1	Humanities and Social Sciences including Management courses	12
2	Basic Science Courses	26
3	Engineering Science courses including workshop, drawing, basics of electrical/mechanical/computer etc.	23.5
4	Professional Core Courses	51.5
5	Project work, seminar and internship in industry or appropriate work place/ academic and research institutions in India/abroad	14
6	Professional Elective courses relevant to chosen specialization/branch	18
7	Open Courses – Electives from other technical and /or emerging Courses	15
8	Mandatory Courses [Environmental Studies, Induction Program, Indian Constitution, Value Education, etc.]	(non-credit)
	Total	160

COURSE COMPONENTS

Table 1

Sl. No.	Course Code	Humanities and Social Sciences including Management courses (HSMC)– 12 credits	Credits (L:T:P:C)
		Name of the Course	
1	18EN1001	English	2:0:0:2
2	18EN1002	English Language Lab	0:0:2:1
3	18MS2001	Professional Ethics	3:0:0:3
4	18MS2003	Entrepreneurship and IPR	3:0:0:3
5	18MS2002	Industrial Management	3:0:0:3
		Total credits	12

Table 2

Sl. No.	Course Code	Basic Science courses (BSC)– 26 credits	Credits (L:T:P:C)
		Name of the Course	
1	18PH1005	Engineering Physics - Semiconductors, Optics and Quantum Mechanics	3:1:0:4
2	18PH1006	Engineering Physics - Semiconductors, Optics and Quantum Mechanics Lab	0:0:3:1.5
3	18CH1003	Engineering Chemistry	3:1:0:4
4	18CH1002	Applied Chemistry Laboratory	0:0:3:1.5
5	18MA1003	Calculus and Differential Equations	3:1:0:4
6	18MA1007	Linear Algebra, Transforms and Numerical Methods	3:1:0:4
7	18MA2006	Probability and Stochastic Processes	3:1:0:4
8	18BM2018	Bio Electronics	3:0:0:3
		Total credits	26

Table 3

Sl. No.	Course Code	Engineering Science courses (ESC)– 24 credits	Credits (L:T:P:C)
		Name of the Course	
1	18EC1001	CAD tools for Electronics Engineers	0:0:2:1
2	18ME1001	Engineering Drawing	0:0:4:2

3	18EE1003	Basic Electrical and Electronics Engineering	3:1:0:4
4	18EE1004	Basic Electrical and Electronics Engineering Laboratory	0:0:2:1
5	18CS1004	Programming for Problem Solving	3:0:0:3
6	18CS1002	Programming for Problem Solving Lab	0:0:3:1.5
7	18EC2022	Object Oriented concepts using C++	3:0:0:3
8	18EC1002	PCB Design and Fabrication Laboratory	0:0:2:1
9	18EC2023	Electromagnetic Waves & Wave guides	2:1:0:3
10	18EE2002	Network Theory	3:0:0:3
11	18EI2004	Electronic Measurement Laboratory	0:0:2:1
		Total credits	23.5

Table 4

Sl. No.	Course Code	Professional core course (PCC)– 51 credits	Credits (L:T:P:C)
		Name of the Course	
1	18EC2001	Electronic Devices	3:0:0:3
2	18EC2002	Electronic Devices Laboratory	0:0:2:1
3	18EC2003	Digital System Design	2:1:0:3
4	18EC2004	Digital System Design Laboratory	0:0:2:1
5	18EC2005	Signals and Systems	2:1:0:3
6	18EC2006	Analog and Digital Communication	3:0:0:3
7	18EC2007	Analog and Digital Communication Laboratory	0:0:2:1
8	18EC2008	Analog Circuits	3:0:0:3
9	18EC2009	Analog Circuits Laboratory	0:0:3:1.5
10	18EC2010	Microcontrollers	3:0:0:3
11	18EC2011	Microcontrollers Laboratory	0:0:2:1
12	18EC2012	Linear Integrated Circuits	3:0:0:3
13	18EC2013	Electromagnetic Waves Laboratory	0:0:2:1
14	18EC2014	Computer Architecture	3:0:0:3
15	18EC2015	Digital Signal Processing	3:0:0:3
16	18EC2016	Digital Signal Processing Laboratory	0:0:2:1
17	18EI2002	Control Systems	3:0:0:3
18	18EC2017	Computer Network	3:0:0:3
19	18EC2018	Computer Network Laboratory	0:0:2:1
20	18EC2019	Digital IC Design	3:0:0:3
21	18EC2020	Antennas and Propagation	3:0:0:3
22	18EC2021	Microwave and Optical Communication	3:0:0:3
23	MP2953 / ISP2993	Mini Project / Internship	0:0:2:1
		Total Credits	51.5
	18EC2999	Project	14

SEMESTER-WISE CURRICULUM

Semester 1

Course Code	Name of the Course	L	T	P	Credits
18CH1003	Engineering Chemistry	3	1	0	4
18CH1002	Applied Chemistry Laboratory	0	0	3	1.5
18MA1003	Calculus and Differential Equations	3	1	0	4
18EE1003	Basics of Electrical and Electronics Engineering	3	1	0	4
18EE1004	Electrical and Electronics Laboratory	0	0	2	1
18EC1001	CAD tools for Electronics Engineers	0	0	2	1
	Mandatory course – 1				
	Total Credits				15.5

Semester 2

Course Code	Name of the Course	L	T	P	Credits
18PH1005	Engineering Physics - Semiconductors, Optics and Quantum Mechanics	3	1	0	4
18PH1006	Engineering Physics - Semiconductors, Optics and Quantum Mechanics Lab	0	0	3	1.5
18MA1007	Linear Algebra, Transforms and Numerical Methods	3	1	0	4
18CS1001	Programming for Problem Solving	3	0	0	3
18CS1002	Programming for Problem Solving Lab	0	0	3	1.5
18ME1001	Engineering Drawing	0	0	4	2
18EN1001	English	2	0	0	2
18EC1002	PCB Design and Fabrication Laboratory	0	0	2	1
18EN1002	English Language Lab	0	0	2	1
	Mandatory course – 2				
	Total Credits				20

Semester 3

Course Code	Name of the Course	L	T	P	Credits
18EC2001	Electronic Devices	3	0	0	3
18EC2002	Electronic Devices Laboratory	0	0	2	1
18EC2003	Digital System Design	2	1	0	3
18EC2004	Digital System Design Laboratory	0	0	2	1
18EC2005	Signals and Systems	2	1	0	3
18EE2002	Network Theory	3	0	0	3
18MA2006	Probability and Stochastic Process	3	1	0	4
18EC2023	Electromagnetic waves and waveguides	2	1	0	3
	Total Credits				21
18CH2001	Environmental Studies	3	0	0	(non-credit)

Semester 4

Course Code	Name of the Course	L	T	P	Credits
18EC2006	Analog and Digital Communication	3	0	0	3
18EC2007	Analog and Digital Communication Laboratory	0	0	2	1
18EC2008	Analog Circuits	2	1	0	3
18EI2004	Electronic Measurement Laboratory	0	0	2	1
18EC2014	Computer Architecture	3	0	0	3
18EC2022	Object Oriented programming in C++	3	0	0	3
18BM2018	Bioelectronics	3	0	0	3
18MS2002	Industrial Management	3	0	0	3
	Total Credits				20
18MS2014	Constitution of India	2	0	0	(non-credit)

Semester 5

Course Code	Name of the Course	L	T	P	Credits
18EC2012	Linear Integrated Circuits	3	0	0	3
18EC2009	Analog Circuits Laboratory	0	0	3	1.5
18EC2010	Microcontroller	3	0	0	3
18EC2011	Microcontroller Laboratory	0	0	2	1
18EC2019	Digital IC Design	3	0	0	3
18EC2015	Digital Signal Processing	3	0	0	3
18EC2016	Digital Signal Processing Laboratory	0	0	2	1

	Program Elective – 1	3	0	0	3
	Open Elective-1	3	0	0	3
	Total Credits				21.5

Semester 6

Course Code	Name of the Course	L	T	P	Credits
18EI2002	Control Systems	3	0	0	3
18EC2017	Computer Network	3	0	0	3
18EC2018	Computer Network Laboratory	0	0	2	1
MP2951	Mini Project	0	0	4	2
	Program Elective – 2	3	0	0	3
	OE-2	3	0	0	3
	Slot for HS 9	3	0	0	3
18EC2020	Antennas and Propagation	3	0	0	3
	Total Credits				21

Semester 7

Course Code	Name of the Course	L	T	P	Credits
	Program Elective -3	3	0	0	3
	Program Elective -4	3	0	0	3
	Program Elective -5	3	0	0	3
	OE-3	3	0	0	3
18EC2998	Project – Phase I	0	0	10	5
18MS2003	Entrepreneurship and IPR	3	0	0	3
18EC2013	Electromagnetic Waves Laboratory	0	0	2	1
18EC2021	Microwave and optical communication	3	0	0	3
	Total Credits				24

Semester 8

Course Code	Name of the Course	L	T	P	Credits
	Program Elective -6	3	0	0	3
	OE-4	3	0	0	3
	OE-5	3	0	0	3
18EC2999	Project – Phase II	0	0	18	9
	Total Credits				18