

B.Tech (Electronics and Communications Engineering) - 2019 Batch
(Revised Course Components & Curriculum)

PROGRAM STRUCTURE

Sl. No	Category	Credits Break-up
1.	Humanities and Social Sciences including Management Courses	12
2.	Basic Science Courses	21
3.	Engineering Science courses including workshop, drawing, basics of electrical /mechanical/computer etc	27
4.	Professional Core Courses	53
5.	Professional Elective courses relevant to chosen specialization/branch	18
6.	Open Courses – Electives from other technical and /or emerging courses	15
7.	Project work, seminar and internship in industry or elsewhere	14
8.	Mandatory Courses [Environmental Sciences, Induction Program, Indian Constitution, Essence of Indian Traditional Knowledge	Non-credit
Total		160

B.Tech. (Electronics and Communications Engineering) – 2019 batch
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)– 21 credits	Credits (L:T:P:C)
		Name of the Course	
1	19PH1003	Engineering Physics	2:0:0:2
2	19PH1004	Engineering Physics Lab	0:0:2:1
3	19CH1005	Chemistry for Electronics and Communication Engineering	2:0:0:2
4	19CH1007	Applied Chemistry Laboratory	0:0:2:1
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	21

Table 3

Sl. No.	Course Code	Engineering Science Courses (ESC)– 27 credits	Credits (L:T:P:C)
		Name of the Course	
1	18EC1001	CAD tools for Electronics Engineers	0:0:2:1
2	18ME1002	Engineering Graphics	0:0:2:1
3	19EC1001	Fundamentals of Electrical and Electronics Engineering	3:1:0:4
4	19EC1002	Fundamentals of 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
12	19EC2001	Electronics For Intelligent Machines	2:0:0:2
13	19EC2002	Electronics For Intelligent Machines Laboratory	0:0:3:1.5
14	ITP2921/ MP2921	Industrial Training/ Mini Project I	0:0:2:1
		Total credits	27

Table 4

Sl. No.	Course Code	Professional Core Course (PCC)– 53 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	0:0:2:1
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	19EC2003	Microwave and Optical Communication Lab	0:0:2:1
24	MP2911/ ISP2911	Mini Project II/Internship	0:0:4:2
		Total Credits	53
25	18EC2998	Project – Phase I	0:0:10:5
26	18EC2999	Project – Phase II	0:0:18:9

SEMESTER-WISE CURRICULUM

Semester 1

Course Code	Name of the Course	L	T	P	Credits
19PH1003	Engineering Physics	2	0	0	2
19PH1004	Engineering Physics Lab	0	0	2	1
19EC1001	Fundamentals of Electrical and Electronics Engineering	3	1	0	4
19EC1002	Fundamentals of Electrical and Electronics Engineering Laboratory	0	0	2	1

18MA1003	Calculus and Differential Equations	3	1	0	4
18EC1001	CAD tools for Electronics Engineers	0	0	2	1
18ME1002	Engineering Graphics	0	0	2	1
18CH2001	Mandatory course – I Environmental Studies	3	0	0	0
Total Credits					14

Semester 2

Course Code	Name of the Course	L	T	P	Credits
18EN1001	English	2	0	0	2
18EN1002	English Language Lab	0	0	2	1
19CH1005	Chemistry for Electronics and Communication Engineering	2	0	0	2
19CH1007	Applied Chemistry Laboratory	0	0	2	1
18MA1007	Linear Algebra, Transforms and Numerical Methods	3	1	0	4
18CS1004	Programming for Problem Solving	3	0	0	3
18CS1002	Programming for Problem Solving Lab	0	0	3	1.5
18EC1002	PCB Design and Fabrication Laboratory	0	0	2	1
19EC2001	Electronics For Intelligent Machines	2	0	0	2
19EC2002	Electronics For Intelligent Machines Laboratory	0	0	3	1.5
18MS2014	Mandatory Course-II Constitution of India	2	0	0	0
Total Credits					19

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
18BM2018	Bioelectronics	3	0	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
ITP2921/ MP2921	Industrial Training/ Mini Project I	0	0	2	1
Total Credits					22
			Mandatory course		No 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
18EC2005	Signals and Systems	2	1	0	3
18MS2002	Industrial Management	3	0	0	3
Total Credits					20
			Mandatory course		No credit

Semester 5

Course Code	Name of the Course	L	T	P	Credits
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18EC2012	Linear Integrated Circuits	3	0	0	3
18EC2009	Analog Circuits Laboratory	0	0	2	1
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
	Mandatory course	No credit			

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
MP2911/ ISP2911	Mini Project II / Internship	0	0	4	2
	Program Elective – 2	3	0	0	3
	Open Elective-2	3	0	0	3
18MS2001	Professional Ethics	3	0	0	3
18EC2020	Antennas and propagation	3	0	0	3
	Total Credits				21
	Mandatory course	No credit			

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
	Open Elective -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
19EC2003	Microwave and Optical Communication Lab	0	0	2	1
	Total Credits				25

Semester 8

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