

IK Gujral Punjab Technical University, Kapurthala

Study Scheme 2018

B.Tech. in Electronics & Communication Engineering

Semester-3

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEC-301-18	Electronic Devices	3	0	0	3	3	40	60	100
2	BTEC-311-18	Electronics Devices Lab	0	0	2	2	1	30	20	50
3	BTEC-302-18	Digital System Design	3	0	0	3	3	40	60	100
4	BTEC-312-18	Digital System Design Lab	0	0	2	2	1	30	20	50
5	BTEC-303-18	Signals and Systems	3	0	0	3	3	40	60	100
6	BTEC-304-18	Network Theory	3	0	0	3	3	40	60	100
7	BTCE-301-18	Environmental Sciences	3	0	0	3	0	40	60	100
8	BTHU*	Constitution of India	3	0	0	3	0	40	60	100
9	BTEC-321-18	4-Week Institutional Training	0	0	0	0	4	60	40	100
Total			18	0	4	22	18	360	440	800

Semester-4

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
3	BTEC-401-18	Analog Circuits	3	0	0	3	3	40	60	100
4	BTEC-411-18	Analog Circuits Lab	0	0	2	2	1	30	20	50
5	BTEC-402-18	Microprocessors and Microcontrollers	3	0	0	3	3	40	60	100
6	BTEC-412-18	Microprocessors and Microcontrollers Lab	0	0	2	2	1	30	20	50
7	BTCS*	Data Structures	3	0	0	3	3	40	60	100
8	BTCS*	Data Structures Lab	0	0	2	2	1	30	20	50
1	BTEC-404-18	Electromagnetic Waves	3	0	0	3	3	40	60	100
9	BTHU*	Human Resource Management	3	0	0	3	3	40	60	100
10	BTEC-415-18	Professional Skills-I	0	0	2	2	1	30	20	50
Total			15	0	8	23	19	320	380	700

Semester-5

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEC-501-18	Analog and Digital Communication	3	0	0	3	3	40	60	100
2	BTEC-511-18	Analog and Digital Communication Lab	0	0	2	2	1	30	20	50
4	BTEC-502-18	Digital Signal Processing	3	0	0	3	3	40	60	100
5	BTEC-512-18	Digital Signal Processing Lab	0	0	2	2	1	30	20	50
6	BTEC-503-18	Antenna & Microwave Engineering	3	0	0	3	3	40	60	100
7	BTEC-513-18	Antenna & Microwave Engineering Lab	0	0	2	2	1	30	20	50
3	BTEE*	Control System Engineering	3	0	0	3	3	40	60	100
8	BTEC-PE1-18	Program Elective-I	3	0	0	3	3	40	60	100
9	BTEC-OE1-18	Open Elective-I	3	0	0	3	3	40	60	100
10	BTEC-515-18	Professional Skills-II	0	0	2	2	1	30	20	50
11	BTEC-521-18	4-Week Industrial Training-I	0	0	0	0	4	60	40	100
Total			18	0	8	26	26	420	480	900

Semester-6

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEC-602-18	Computer Networks	3	0	0	3	3	40	60	100
2	BTEC-612-18	Computer Networks Lab	0	0	4	4	2	30	20	50
3	BTEC-502-18	Wireless Communication	3	0	0	3	3	40	60	100
4	BTEC-613-18	Electronic Design Automation Lab	0	0	4	4	2	60	40	100
5	BTEC-604-18	Optical Fibers & Communication	3	0	0	3	3	40	60	100
6	BTEC-615-18	Professional Skills-III	0	0	2	2	1	30	20	50
7	BTEC-PE2-18	Program Elective-II	3	0	0	3	3	40	60	100
8	BTEC-OE2-18	Open Elective-II	3	0	0	3	3	40	60	100
Total			15	0	10	25	20	320	380	700

Semester-7

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEC-PE3-18	Program Elective-III	3	0	0	3	3	40	60	100
2	BTEC-PE4-18	Program Elective-IV	3	0	0	3	3	40	60	100
3	BTEC-PE5-18	Program Elective-V	3	0	0	3	3	40	60	100
4	BTEC-OE3-18	Open Elective-III	3	0	0	3	3	40	60	100
5	BTEC-731-18	Project Stage-I	0	0	8	8	4	120	80	200
6	BTHU*	Project Management and Finance	3	0	0	3	3	40	60	100
7	BTEC-721-18	4-Week Industrial Training-II	0	0	8	8	4	60	40	100
Total			15	0	16	31	23	380	420	800

Semester-8

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEC-PE6-18	Program Elective-VI	3	0	0	3	3	40	60	100
2	BTEC-PE7-18	Program Elective-VII	3	0	0	3	3	40	60	100
3	BTEC-OE4-18	Open Elective-IV	3	0	0	3	3	40	60	100
4	BTEC-OE5-18	Open Elective-V	3	0	0	3	3	40	60	100
5	BTEC-831-18	Project Stage-II	0	0	12	12	6	200	150	350
6	BTEC-841-18	Seminar	0	0	2	2	1	100	0	100
7		Essence of Indian Traditional Knowledge	2	0	0	2	0	40	60	100
Total			14	0	14	28	19	500	450	950
Grand Total			119	5	82	206	165	2810	3190	6000

* The Course Code will be provided by the subject concerned Departments

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Elective Courses

Course Code	Programme Elective-1 (Sem-5)
BTEC-901	Web Technologies
BTEC-902	Random Variables & Stochastic Processes
BTEC-903	Embedded C Programming
BTEC-904	Consumer Electronics
BTEC-905	Digital Image Processing
BTEC-906	Natural Language Processing
Course Code	Programme Elective-2 (Sem-5)
BTEC-907	Python Programming
BTEC-908	Information Theory and Coding
BTEC-909	MOS Circuit Design
BTEC-910	Display Technologies
BTEC-911	Digital Signal Processors
BTEC-912	Fuzzy Logic & Systems
Course Code	Programme Elective-3 (Sem-7)
BTEC-913	Relational Database Management

Open Elective Courses

Course Code	Open Elective-1
	Money & Banking
	Robotics
	Technical English for Engineers
	Consumer Behaviour
	Cyber Law and Ethics
	Industrial Economics
Course Code	Open Elective-2
	Organizational Behavior & Management
	PLC & SCADA
	Effective Technical Communication
	Business Ethics
	Disaster Management
	Total Quality Management
Course Code	Open Elective-3
	Network Securities

BTEC-914	Advance Optical Comm. Systems
BTEC-915	Principles of VLSI Design
BTEC-916	Linear Integrated Circuits
BTEC-917	Audio & Speech Processing
BTEC-918	Neural Networks
Course Code	Programme Elective-4 (Sem-7)
BTEC-919	Object Oriented Programming with Java
BTEC-920	Radar & Sonar Engineering
BTEC-921	Introduction to MEMS
BTEC-922	Power Electronics
BTEC-923	Computer Vision
BTEC-924	Evolutionary Algorithms
Course Code	Programme Elective-5 (Sem-7)
BTEC-925	Android App Development
BTEC-926	Wireless Sensor Networks
BTEC-927	Digital & Analog VLSI Design
BTEC-928	Sensors & Transducers
BTEC-929	Computer Architecture
BTEC-930	Machine Learning
Course Code	Programme Elective-6 (Sem-8)
BTEC-931	Software Engineering
BTEC-932	Mobile Computing & Adhoc Networks

	Probability and Stochastics
	Indian Culture & Heritage
	Marketing Management
	Soft Skills and Interpersonal Communication
	Operational Research
Course Code	Open Elective-4
	Machine Learning
	Vedic Languages & literature
	Emotional Intelligence
	Business Intelligence
	Economic Policies in India
	Project Management
Course Code	Open Elective-5
	Innovation & Entrepreneurship
	International Business
	Social Psychology
	Knowledge Management
	Intellectual Property Rights
	Reliability Engineering

BTEC-933	Internet of Things
BTEC-934	IC Fabrication Technologies
BTEC-935	Operating System
BTEC-936	Soft Computing Techniques
Course Code	Programme Elective-7 (Sem-8)
BTEC-937	Network Communication Protocols
BTEC-938	Satellite Communication
BTEC-939	Mechatronics
BTEC-940	Electronic System Design
BTEC-941	Bio-Medical Instrumentation
BTEC-942	Artificial Intelligence