

IK Gujral Punjab Technical University

Study Scheme 2018

B.Tech. in Electronics & Instrumentation 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	Electronic Devices Lab	0	0	2	2	1	30	20	50
3	BTEI-301-18	Electronic Measurements and Instrumentation	3	0	0	3	3	40	60	100
4	BTEI-311-18	Electronic Measurements and Instrumentation Lab	0	0	2	2	1	30	20	50
5	BTCS*	Object Oriented Programming	3	0	0	3	3	40	60	100
6	BTCS*	Object Oriented Programming lab	0	0	2	2	1	30	20	50
7	BTEC-304-18	Network Theory	3	0	0	3	3	40	60	100
8	BTCE-301-18	Environment Sciences	3	0	0	3	0	40	60	100
9	BTHU*	Constitution of India	3	0	0	3	0	40	60	100
10	BTEI-321-18	Institutional Training	0	0	0	0	4	60	40	100
Total			18	0	6	24	19	390	460	850

Semester-4

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEI-401-18	Transducers and Signal Conditioning	3	0	0	3	3	40	60	100
2	BTEI-411-18	Transducers and Signal Conditioning Lab	0	0	0	2	0	40	60	100
3	BTEC-402-18	Analog Electronics	3	0	0	3	3	40	60	100
4	BTEC-412-18	Analog Electronics Lab	0	0	2	2	1	30	20	50
5	BTEC-302-18	Digital System Design	3	0	0	3	3	40	60	100
6	BTEC-312-18	Digital System Design Lab	0	0	2	2	1	30	20	50
7	BTEE*	Control System Engineering	3	0	0	3	3	40	60	100
8	BTEE*	Control System Ennengineering Lab	0	0	2	2	1	30	20	50
9	BTEC-303-18	Signal and Systems	3	0	0	3	3	40	60	100
10	BTEC-404-18	Electromagnetic Waves	3	0	0	3	3	40	60	100
11	BTEI-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	BTEI-501-18	Discrete Control Systems	3	0	0	3	3	40	60	100
2	BTEI-502-18	Biomedical Instrumentation	3	0	0	3	3	40	60	100
8	BTEI-503-18	Process Control & Instrumentation	3	0	0	3	3	40	60	100
4	BTEC-402-18	Microprocessors and Microcontrollers	3	0	0	3	3	40	60	100
5	BTEC-412-18	Microprocessors and Microcontrollers Lab	0	0	2	2	1	30	20	50
6	BTOR*	Operations Research	3	0	0	3	3	40	60	100
7	BTEI-PE1-18	Programme Elective-I	3	0	0	3	3	40	60	100
3	BTEI-515-18	Professional Skills-II	0	0	2	2	1	30	20	50
9	BTEI-521-18	4-Week Industrial Training	0	0	0	0	4	60	40	100
Total			18	0	4	22	24	360	440	800

Semester-6

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEI-601-18	Instrumentation System Design	3	0	0	3	3	40	60	100
2	BTEI-611-18	Instrumentation System Design Lab	0	0	2	2	1	30	20	50
3	BTEI-602-18	Industrial Measurements	3	0	0	3	3	40	60	100
4	BTEI-603-18	Data Acquisition and Telemetry	3	0	0	3	3	40	60	100
5	BTEI-614-18	Simulation laboratory	0	0	4	4	2	60	40	100
6	BTEC-502-18	Digital Signal Processing	3	0	0	3	3	40	60	100
7	BTEC-512-18	Digital Signal Processing Lab	0	0	2	2	1	30	20	50
8	BTEI-PE2-18	Programme Elective-II	3	0	0	3	3	40	60	100
9	BTEI-PE3-18	Programme Elective-III	3	0	0	3	3	40	60	100
Total			18	0	8	26	22	360	440	800

Semester-7

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEI-701-18	Process Dynamics & Control	3	0	0	3	3	40	60	100
2	BTEI-711-18	Process Dynamics & Control Lab	0	0	2	2	1	30	20	50
3	BTEI-702-18	Analytical Instrumentation	3	0	0	3	3	40	60	100
4	BTEI-712-18	Analytical Instrumentation Lab	0	0	2	2	1	30	20	50
5	BTEI-703-18	Industrial Automation & Robotics	3	0	0	3	3	40	60	100
6	BTHU*	Entrepreneurial Development and Management	3	0	0	3	3	40	60	100
7	BTEI-721-18	4-Week Industrial Training	0	0	0	0	4	60	40	100
8	BTEI-731-18	Project Stage-I	0	0	8	8	4	100	50	150
Total			12	0	12	24	22	380	370	750

Semester-8

S. No.	Code	Course Name	L	T	P	Hrs	Credits	Int	Ext	Hrs
1	BTEI-PE4-18	Programme Elective-IV	3	0	0	3	3	40	60	100
2	BTEI-PE5-18	Programme Elective-V	3	0	0	3	3	40	60	100
3	BTEI-PE6-18	Programme Elective-VI	3	0	0	3	3	40	60	100
4	BTEI-OE1-18	Open Elective-I	3	0	0	3	3	40	60	100
5	BTEI-OE2-18	Open Elective-II	3	0	0	3	3	40	60	100
6	BTEI-831-18	Project Stage-II	0	0	6	6	3	150	100	250
7	BTEI-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			17	0	8	25	19	490	460	950
Grand Total			122	5	68	195	165	2810	3190	6000

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

IK Gujral Punjab Technical University, Kapurthala

Study Scheme 2018

B.Tech. in Electronics & Instrumentation Engineering

Elective Courses

Course Code	Programme Elective-1 (Sem-5)
BTEI-901-18	Pneumatic and Hyraulic Instrumentation
BTEI-902-18	Instrumentation System Reliability
BTEI-903-18	State Space Analysis and Digital Control
BTEI-904-18	Non Linear Control Systems
BTEI-905-18	Fiber Optics and Laser Instrumentation
Course Code	Programme Elective-2 (Sem-6)
BTEI-906-18	Industrial data Communications
BTEI-907-18	Intelligence Robotics
BTEI-908-18	Microcontroller and its Applications
BTEI-909-18	Electrical Power Systems
BTEI-910-18	Computer organization and architecture
Course Code	Programme Elective-3 (Sem-6)
BTEI-911-18	Optimal Control Systems
BTEI-912-18	Computer Control of Industrial Process

Course Code	Programme Elective-5 (Sem-8)
BTEI-921-18	Smart sensors and Sensor entworking
BTEI-922-18	Power Plant Instrumentation
BTEI-923-18	Advanced control systems
BTEI-924-18	Communication Engg
BTEI-925-18	Identification and Adaptive Control
Course Code	Programme Elective-6 (Sem-8)
BTEI-926-18	Discrete Control Systems
BTEI-927-18	Optimization techniques
BTEI-928-18	Control System Design
BTEI-929-18	Computer Networks
BTEI-930-18	Power Electronics and Drives

Open Elective Courses

Course Code	Open Elective-1 (Sem-8)
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BTEI-913-18	Distributed Control systems		International Business
BTEI-914-18	Nuclear Instrumentation		Knowledge Management
BTEI-915-18	Modeling and Simulation		Marketing Management
Course Code	Programme Elective-4 (Sem-8)		Emotional Intelligence
BTEI-916-18	Machine Vision		Open Elective-2 (Sem-8)
BTEI-917-18	Neural Networks and fuzzy Systems		Social Psychology
BTEI-918-18	Embedded systems		Management and Organizational Behaviour
BTEI-919-18	Advance measurements techniques		Effective Technical Communication
BTEI-920-18	Protection and switchgear		Consumer Behaviour