

**Course structure for 3-Year 6-Semester B.Tech. Degree in Instrumentation
Engineering
w.e.f the academic year 2014-2015**

Semester I Examination

Theoretical

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIT11	Engineering Mathematics	4	-	-	20	10	70	100	4
BIT12	Analog Electronics	4	-	-	20	10	70	100	4
BIT13	Digital Electronics	4	-	-	20	10	70	100	4
BIT14	Electrical and Electronic Measuring Instruments	4	-	-	20	10	70	100	4
BIT15	Computer Programming Languages and Numerical Methods	4	-	-	20	10	70	100	4

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP11	Engineering Drawing	-	1	4	25		50	75	3
BIP12	Material Testing and Workshop Practice	-	1	4	25		50	75	3

Semester II Examination

Theoretical

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIT21	Control Theory I	4	-	-	20	10	70	100	4
BIT22	Microprocessors and Peripheral Devices	4	-	-	20	10	70	100	4
BIT23	DC Machine and Transformers	4	-	-	20	10	70	100	4
BIT24	Network Theory and Transmission lines	4	-	-	20	10	70	100	4
BIT25	Transducers and Process Measurements	4	-	-	20	10	70	100	4

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP21	Electrical Measurements & Measuring Instruments	-	1	4	25		50	75	3
BIP22	Computer Programming Languages	-	1	4	25		50	75	3
BIP23	Analog and Digital Electronics	-	1	4	25		50	75	3

Semester III Examination

Theoretical

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIT31	Analog and Digital Communication	4	-	-	20	10	70	100	4
BIT32	Power Electronics and Power Supply	4	-	-	20	10	70	100	4

BIT33	Induction and Synchronous Machines	4	-	-	20	10	70	100	4
BIT34	Microcontroller and PLC Applications	4	-	-	20	10	70	100	4
BIT35	Power Systems	4	-	-	20	10	70	100	4

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP31	Microprocessor Programming		1	4	25		50	75	3
BIP32	Electrical Machines and Power Systems		1	4	25		50	75	3
BIP33	Control Systems		1	4	25		50	75	3

**Semester IV Examination
Theoretical**

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIT41	Process Control	4	-	-	20	10	70	100	4
BIT42	Process Measurements	4	-	-	20	10	70	100	4
BIT43	NDT, Optical & Bio-medical Instruments	4	-	-	20	10	70	100	4
BIT44	Analytical Instruments	4	-	-	20	10	70	100	4
BIT45	Transmitters, Recorders & their installation	4	-	-	20	10	70	100	4

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP41	Process Instruments	-	1	4	25		50	75	3
BIP42	Process Control	-	1	4	25		50	75	3
BIP43	Electrical Measurements	-	1	4	25		50	75	3

**Semester V Examination
Theoretical**

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIT51	Industrial Economics and Business Management	4	-	-	20	10	70	100	4

BIT52	Control theory II	4	-	-	20	10	70	100	4
BIT53	Engineering Mechanics, Materials Science and Thermal Engineering	4	-	-	20	10	70	100	4
BIT54	Process Plant Instrumentation	4	-	-	20	10	70	100	4
BIT55	Elective Paper	4	-	-	20	10	70	100	4

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP51	PLC, Microcontroller and Communication	-	1	4	25		50	75	3
BIP52	Project Phase – I	-	10	14	50		50	100	4

Semester VI Examination

PRACTICAL

PAPER NO.	SUBJECT	PERIODS per week			EVALUATION SCHEME				CREDITS
		L	T	P	TA	CT	ESE	TOTAL	
BIP61	Design	-	2	6	50		50	100	4
BIP62	Seminar	-	2	6	50		50	100	4
BIP63	Project Phase – II	-	10	14	100		100	200	8
BIP64	General Viva Voce	-	-	-	-	-	-	100	4

Elective Papers:

1. Microprocessor and microcontroller interfacing
2. Digital Signal Processing
3. Process automation , DCS and SCADA
4. Non-Conventional Energy Systems
5. High Voltage Engineering
6. Illumination Engineering
7. Sensor Technology