

# U.P. TECHNICAL UNIVERSITY, LUCKNOW

## STUDY AND EVALUATION SCHEME

### YEAR III, SEMESTER-V

**B. Tech. B. Tech. (1) Instrumentation and Control Engineering (2) Applied Electronics & Instrumentation (3) Electronics & Instrumentation (4) Electronics Instrumentation & Control and (5) Instrumentation Engineering**

S. No.	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total
						SESSIONAL EXAM.			ESE	
			L	T	P	CT	TA	Total		
<b>THEORY</b>										
1.	TIC-501	Analog & Digital Communication System	3	1	0	30	20	50	100	150
2.	TIC-502	Transducers, sensors and display systems	3	1	0	30	20	50	100	150
3.	TEC-502	<u>Analog Integrated Circuits</u>	3	1	0	30	20	50	100	150
4.	TEC-503	Microprocessors and Applications	3	1	0	30	20	50	100	150
5.	TEC-504	Automatic Control System	3	1	0	30	20	50	100	150
<b>PRACTICAL/TRAINING/PROJECT</b>										
6.	TEC-551	Communication Lab - I	0	0	2	-	20	20	30	50
7.	TEC-552	Analog Integrated Circuits Lab	0	0	2	-	20	20	30	50
8.	TEC-553	Microprocessors Lab	0	0	2	-	20	20	30	50
	TEC-554	Control System Lab	0	0	2	-	20	20	30	50
8.	GP 501	General Proficiency	-	-	-	-	-	50	-	50
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1000</b>

### YEAR III, SEMESTER-VI

S. No.	Course Code	SUBJECT	PERIODS			Evaluation Scheme				Subject Total
						SESSIONAL EXAM.			ESE	
			L	T	P	CT	TA	Total		
<b>THEORY</b>										
1.	TAS-601	Industrial Management	3	1	0	30	20	50	100	150
2.	TIC-601	<u>Microcontroller &amp; Embedded Systems</u>	3	1	0	30	20	50	100	150
3.	TIC-602	Data Acquisition & Telemetry	3	1	0	30	20	50	100	150
4.	TIC-603	Process Control Engg.	3	1	0	30	20	50	100	150
5.	TEC-602	<u>Digital Signal Processing</u>	3	1	0	30	20	50	100	150
<b>PRACTICAL/TRAINING/PROJECT</b>										
6.	TIC-651	Microcontroller Lab	0	0	2	-	20	20	30	50
7.	TIC-652	Transducers Lab	0	0	2	-	20	20	30	50
8.	TIC-653	Telemetry Lab	0	0	2	-	20	20	30	50
9.	TEC-652	Digital Signal Processing Lab	0	0	2	-	20	20	30	50
10.	GP-601	General Proficiency	-	-	-	-	-	50	-	50
		<b>Total</b>	<b>15</b>	<b>5</b>	<b>8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>1000</b>

Note- 4 to 6 Weeks Industrial Interaction after VI semester exam to be evaluated in VII semester

### YEAR III, SEMESTER-V

Syllabus B. Tech. B. Tech. (1) Instrumentation and Control Engineering (2) Applied Electronics & Instrumentation (3) electronics & Instrumentation (4) Electronics Instrumentation & Control and (5) Instrumentation Engineering

#### Analog and Digital Communication (TIC-501)

Unit	Topic	Text Book/ Chapter	Lectures
1.	Introduction to communication Systems, modulation and bandwidth requirements, types of noise, noise calculations, Noise figure and Noise Temperature.	1/1, 1/2	8
2.	Amplitude modulation (AM), representation of AM, frequency spectrum, power relations, single side band techniques, AM receivers	1/3, 1/4 and 1/6	8
3.	Theory of frequency and phase modulation, Noise in frequency modulation, generations of FM signal, FM receivers.	1/5, 1/6	8
4.	Radiation and propagation of wave, Information Theory and pulse modulation	1/8, 1/13	8
5.	Broad band communication – multiplexing short haul, medium haul and long haul systems, filter optic components and systems., Installation, testing and repair	1/15, 1/18	8

**Text Book:**

1. Kennedy G and Davis, B; Electronic Communication System, Tata McGraw - Hill Publishing company ltd. Second editions.

**Reference Book:**

1. B P Lathi, Modern Analog and Digital Communication System Oxford 3<sup>rd</sup> Ed
2. Simon Haykins, Communication Systems Wiley Edition