

**Approved Scheme of Syllabus (III to VIII semesters)**

**of UG Programme BE in**

**“Electronics and Instrumentation Engineering” (EI)**

SCHEME OF TEACHING AND EXAMINATION B.E., ELECTRONICS & INSTRUMENTATION ENGINEERING									
III SEMESTER									
Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 MAT 31	Engineering Mathematics-III	Maths	04	-	03	25	100	125
2	10 ES 32	Analog Electronic Circuits	@	04	-	03	25	100	125
3	10 ES 33	Logic Design	@	04	-	03	25	100	125
4	10 ES 34	Network Analysis	@	04	-	03	25	100	125
5	10 EI 35	Electronic Measurements	@	04	-	03	25	100	125
6	10 EI 36	Transducers and Instrumentation	@	04	-	03	25	100	125
7	10 ESL 37	Analog Electronics Lab	@	-	03	03	25	50	75
8	10 ESL 38	Logic Design Lab	@	-	03	03	25	50	75
			TOTAL	24	06	24	200	700	900

**Note:** @ indicates concerned discipline. ES (for theory) & ECL (for lab) in the subject code indicates that the subject is common to electrical and electronics stream consisting of EE/EC/IT/TC/ML/BM/EI branches of engineering.

SCHEME OF TEACHING AND EXAMINATION B.E., ELECTRONICS & INSTRUMENTATION ENGINEERING									
IV SEMESTER									
Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 MAT 41	Engineering Mathematics-IV	Maths	04	-	03	25	100	125
2	10 ES 42	Microcontrollers	@	04	-	03	25	100	125
3	10 ES 43	Control Systems	@	04	-	03	25	100	125
4	10 EC 44	Signals & Systems	@	04	-	03	25	100	125
5	10 EC 45	Fundamentals of HDL	@	04	-	03	25	100	125
6	10 EC 46	Linear IC's & applications	@	04	-	03	25	100	125
7	10 ESL 47	Microcontrollers Lab	@	-	03	03	25	50	75
8	10 ECL 48	HDL Lab	@	-	03	03	25	50	75
			TOTAL	24	06	24	200	700	900

**Note:** @ indicates concerned discipline. ES (for theory) & ECL (for lab) in the subject code indicates that the subject is common to electrical and electronics stream consisting of EE/EC/IT/TC/ML/BM/EI branches of engineering.

SCHEME OF TEACHING AND EXAMINATION B.E., ELECTRONICS & INSTRUMENTATION ENGINEERING									
V SEMESTER									
Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 AL 51	Management and Entrepreneurship	@	04	-	03	25	100	125
2	10 EI 52	Advanced Control Systems	EI	04	-	03	25	100	125
3	10 EI 53	Microprocessor & Peripherals	EI	04	-	03	25	100	125
4	10 EI 54	Digital Signal Processing	EI	04	-	03	25	100	125
5	10 EI 55	Biomedical Instrumentation	EI	04	-	03	25	100	125
6	10 EI 56	Process Instrumentation	EI	04	-	03	25	100	125
7	10 EIL 57	Analog IC Lab	EI	-	03	03	25	50	75
8	10 EIL 58	Microprocessor Lab	EI	-	03	03	25	50	75
			TOTAL	24	06	24	200	700	900

**Note:** @ indicates any Engineering Department or Department of Business studies.

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**VI SEMESTER**

Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 EI 61	Communication Systems	EI	04	-	03	25	100	125
2	10 EI 62	C++ & Data Structures	EI	04	-	03	25	100	125
3	10 EI 63	Process Control Systems	EI	04	-	03	25	100	125
4	10 EI 64	DSP Architecture	EI	04	-	03	25	100	125
5	10 EI 65	Analytical Instrumentation	EI	04	-	03	25	100	125
6	10 EI 66X	Elective-I (Group A)	EI	04	-	03	25	100	125
7	10 EIL 67	DSP Lab	EI	-	03	03	25	50	75
8	10 EIL 68	Instrumentation and Control Lab	EI	-	03	03	25	50	75
			<b>TOTAL</b>	<b>24</b>	<b>06</b>	<b>24</b>	<b>200</b>	<b>700</b>	<b>900</b>

**Elective-I (Group-A)**

10 EI 661	Biomedical DSP
10 EI 662	Pneumatic Instrumentation
10 EI 663	Operating Systems
10 EI 664	Mechatronics

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**VII SEMESTER**

Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 EI 71	VLSI Design	EI	04	-	03	25	100	125
2	10 EI 72	Power & Industrial Electronics	EI	04	-	03	25	100	125
3	10 EI 73	Automation in Process Control	EI	04	-	03	25	100	125
4	10 EI 74	Digital Image Processing	EI	04	-	03	25	100	125
5	10 EI 75X	Elective-II (Group-B)	EI	04	-	03	25	100	125
6	10 EI 76X	Elective -III (Group C)	EI	04	-	03	25	100	125
7	10 EIL 77	Power Electronics & Data Conversion Lab	EI	-	03	03	25	50	75
8	10 EIL 78	Process Control Lab	EI	-	03	03	25	50	75
			<b>TOTAL</b>	<b>24</b>	<b>06</b>	<b>24</b>	<b>200</b>	<b>700</b>	<b>900</b>

<b>Elective-II (Group-B)</b>		<b>Elective-III (Group C)</b>	
10 EI 751	Medical Imaging Techniques	10 EI 761	Remote Sensing & Telemetry
10 EI 752	Aeronautical Instrumentation	10 EI 762	Robotics & Control
10 EI 753	Mobile Communication	10 EI 763	Virtual Instrumentation
10 EI 754	ARM Processor	10 EI 764	Neural Network & Fuzzy Logic Systems

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**VIII SEMESTER**

Sl. No	Subject Code	Title	Teaching Dept.	Teaching Hours/Week		Examination			
				Theory	Practical/ Drawing	Duration	I.A.Marks	Theory/ Practical Marks	Total Marks
1	10 EI 81	Lasers & Optical Instrumentation	EI	04	-	03	25	100	125
2	10 EI 82	Embedded System Design	EI	04	-	03	25	100	125
3	10 EI 83X	Elective-IV (Group-D)	EI	04	-	03	25	100	125
4	10 EI 84X	Elective-V (Group-E)	EI	04	-	03	25	100	125
5	10 EI 85	Project Work	EI	-	06	03	100	100	200
6	10 EI 86	Seminar	EI	-	03	-	50	-	50
			TOTAL	16	09	15	250	500	750

Elective-II (Group-D)		Elective-III (Group E)	
10 EI 831	Biosensors & Bioinstrumentation	10 EI 841	Unit Operations in Instrumentation
10 EI 832	MEMS & Microsystems	10 EI 842	Speech Signal Processing
10 EI 833	Computer Communication Networks	10 EI 843	Industrial Instrumentation
10 EI 834	System Modelling	10 EI 844	Smart Sensors