

JSS MAHAVIDYAPEETHA
JSS Science and Technology University
Sri Jayachamarajendra College of Engineering

DEPARTMENT OF INSTRUMENTATION TECHNOLOGY
Scheme of teaching and examination for B.E (E&I)

SEMESTER: III

Sl. No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	MA310	Fourier Series, Integral Transforms & Applications	Maths	4	0	0	4	4	50	50	100	03
2	EI310	Transducers and Instrumentation I	IT	4	0	1	5	6	50	50	100	03
3	EI 320	Circuit Theory and Analysis	IT	3	1	0	4	5	50	50	100	03
4	EI 330	Analog Electronic Circuits	IT	4	0	1	5	6	50	50	100	03
5	EI 340	Logic Design	IT	3	1	1	5	7	50	50	100	03
6	EI 350	C++ and Data Structures	IT	4	0	1	5	6	50	50	100	03
7		Environmental studies	Envi. Engg.				---	2	50	-	50	
		Total		Total credits			28		Total marks		650	

SEMESTER: IV

Sl . No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	MA410	Mathematics IV	Mathematics	4	0	0	4	4	50	50	100	03
2	EI 410	Transducers and Instrumentation II	IT	4	0	1	5	6	50	50	100	03
3	EI 420	Biomedical Instrumentation	IT	3	0	1	4	5	50	50	100	03
4	EI 430	Signal Conditioning Circuits	IT	4	0	1	5	6	50	50	100	03
5	EI 440	System Design Using HDL	IT	4	0	1	5	6	50	50	100	03
6	EI 450	Signals and Systems	IT	4	1	0	5	6	50	50	100	03
7		Constitution of India	Humanities				---	2	50	---	50	
		Total		Total credits			28		Total marks		650	

SEMESTER: V

Sl. No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	EI 510	Linear Algebra	IT/Maths	3	0	0	3	3	50	50	100	03
2	EI 520	Control Systems	IT	4	1	0	5	6	50	50	100	03
3	EI 530	Industrial Communication	IT	4	0	0	4	4	50	50	100	03
4	EI 540	8051 & AVR Microcontroller	IT	4	0	1	5	6	50	50	100	03
5	EI 550	Digital Signal Processing	IT	4	0	1	5	6	50	50	100	03
6	EI 56X	Elective – I	IT	4/3	0	0/1	4	4/5	50	50	100	03
		Total		Total credits			26		Total marks		600	

Elective-I	
EI 561	Aircraft Instrumentation (4:0:0)
EI 562	Product Design Technology (3:0:1)
EI 563	Operating systems (4:0:0)
EI 564	Java programming (3:0:1)

SEMESTER: VI

Sl. No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	EI 610	Process Control	IT	3	0	1	4	4	50	50	100	03
2	EI 620	Advanced Control Systems	IT	3	1	0	4	5	50	50	100	03
3	EI 630	Digital Image Processing	IT	3	0	1	4	5	50	50	100	03
4	EI 640	Python Programming and Raspberry Pi	IT	3	0	1	4	5	50	50	100	03
5	EI 650	DSP Architecture	IT	3	0	1	4	5	50	50	100	03
6	EI 66X	Elective – II	IT	4/3	0	0/1	4	4/5	50	50	100	03
7	EI 67P	Mini Project (self study)	IT	0	0	2	2	-	50	--	50	--
		Total		Total credits			26		Total marks		650	

Elective-II	
EI 661	Analytical Instrumentation (4:0:0)
EI 662	Automobile Instrumentation (4:0:0)
EI 663	Computer networks (3:0:1)
EI 664	Artificial Intelligence (4:0:0)

SEMESTER: VII

Sl. No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	EI 710	Automation in Process Control	IT	3	0	1	4	5	50	50	100	03
2	EI 720	CMOS Integrated Circuit Design	IT	4	0	0	4	5	50	50	100	03
3	EI 73X	Elective - III	IT	4	0	1	5	6	50	50	100	03
4	EI 74X	Elective - IV	IT	4	0	0	4	4	50	50	100	03
5	EI 75L	Real time signal & image processing Lab	IT	0	0	1	1	2	50	-	50	
6	EI 76X	Foreign Language		2	0	0	2	2	50	50	100	03
				Total credits		20				Total marks		550

Elective-III	
EI 731	Industrial Instrumentation (4:0:1)
EI 732	Machine Learning (4:0:1)
EI 733	Big Data Analytics (4:0:1)
EI 734	Pattern Recognition (4:0:1)

Elective-IV	
EI 741	Micro and Smart System Technology (4:0:0)
EI 742	Robotics (4:0:0)
EI 743	Fuzzy Logic and applications (4:0:0)
EI 744	Medical Imaging (4:0:0)

SEMESTER: VIII

Sl. No	Subject code	Course title	Teaching department	CREDITS				Contact hours	Marks			Exam duration in hrs
				L	T	P	TOTAL		CIE	SEE	Total	
1	EI 810	Entrepreneurship and Management	IT	4	0	0	4	4	50	50	100	03
2	EI 82X	Elective-V	IT	4/3	0	0/1	4	4/5	50	50	100	03
3	EI 83X	Elective-VI	IT	4/3	0	0/1	4	4/5	50	50	100	03
4	EI 84P	Project work	IT	0	0	10	10	-	100	100	200	03
		Total		Total credits			22		Total marks		500	

Elective-V	
EI 821	Photovoltaic Theory and Design (4:0:0)
EI 822	Laser and Optical Instrumentation (4:0:0)
EI 823	Cloud Computing (4:0:0)
EI 824	Speech Signal Processing (3:0:1)

Elective-VI	
EI 831	IoT and Smart Sensors (3:0:1)
EI 832	Low power VLSI (4:0:0)
EI 833	Cryptography and Network security (4:0:0)
EI 834	Bio Medical Signal processing (3:0:1)