

**SCHEME OF TEACHING & EXAMINATION
B.E. MEDICAL ELECTRONICS
III SEMESTER (COMMON TO EC/TC/ML)**

Subject Code	Title of the Subject	Teaching Dept.	Teaching hours/week		Examination			
			Theory	Practical	Duration (Hrs)	Marks		
						I. A	Theory/ Practical	Total
10MAT - 31	Engg. Mathematics - III	Mat	04		03	25	100	125
10ES – 32	Analog Electronic Ckts	@	04		03	25	100	125
10ES – 33	Logic Design	@	04		03	25	100	125
10ES – 34	Network Analysis	@	04		03	25	100	125
10IT– 35	Electronic Instrumentation	@	04		03	25	100	125
10ES – 36	Field Theory	@	04		03	25	100	125
10ESL – 37	Analog Electronics Lab	@		03	03	25	50	75
10ESL – 38	Logic Design Lab	@		03	03	25	50	75
		Total	24	06	24	200	700	900

**SCHEME OF TEACHING & EXAMINATION
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IV SEMESTER (COMMON TO EC/TC/ML)**

Subject Code	Title of the Subject	Teach Dept.	Teaching hours/week		Examination			
			Theory	Practical	Duration (Hrs)	Marks		
						I. A	Theory/ Practical	Total
10MAT - 41	Engg. Mathematics – IV	Mat	04		03	25	100	125
10ES – 42	Microcontrollers	@	04		03	25	100	125
10ES – 43	Control Systems	@	04		03	25	100	125
10EC – 44	Signals & Systems	@	04		03	25	100	125
10EC– 45	Fundamentals of HDL	@	04		03	25	100	125
10EC – 46	Linear ICs & Applications	@	04		03	25	100	125
10ESL – 47	Microcontrollers Lab	@		03	03	25	50	75
10ECL – 48	HDL Lab	@		03	03	25	50	75
		Total	24	06	24	200	700	900

Note : @ indicates concerned discipline. **ES (for theory) & ESL (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 branches** of engineering.

SCHEME OF TEACHING AND EXAMINATION
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V SEMESTER

SI No	Subject Code	Title of the Subject	Teaching Dept.	Hours/week		Examination			
				Theory	Practical	Duration (Hrs)	Marks		
							IA	External Marks	Total
1	10AL51	Management and Entrepreneurship	ANY	04	-	03	25	100	125
2	10ML52	Communication Systems	ML	04	-	03	25	100	125
3	10ML53	Medical Science	ML	04	-	03	25	100	125
4	10ML54	Biomedical Instrumentation	ML	04	-	03	25	100	125
5	10ML55	Physiological Control Systems	ML	04	-	03	25	100	125
6	10ML56	Digital Signal Processing	ML	04	-	03	25	100	125
7	10MLL5 7	Analog IC's and Communication Lab	ML	-	03	03	25	50	75
8	10MLL5 8	Digital Signal Processing Lab	ML	-	03	03	25	50	75
TOTAL				24	06	24	200	700	900

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VI SEMESTER**

SI No	Subject Code	Title of the Subject	Teaching Dept.	Hours/week		Examination Scheme			
				Theory	Practical	Duration (Hrs)	Marks		
							IA	External Marks	Total
1	10ML61	Data Communication	ML	04	-	03	25	100	125
2	10ML62	Medical Physics	ML	04	-	03	25	100	125
3	10ML63	Biomedical Equipments	ML	04	-	03	25	100	125
4	10ML64	Laser & Fiber Optics in Medicine	ML	04	-	03	25	100	125
5	10ML65	C++ & Data Structures	ML	04	-	03	25	100	125
6	10ML66x	Elective-1 (Group-A)	ML	04	-	03	25	100	125
7	10MLL67	Medical Electronics Lab	ML	-	03	03	25	50	75
8	10MLL68	C++ & Data Structures Lab	ML	-	03	03	25	50	75
Total				24	06	24	200	700	900

Electives-I (Group- A)		
Sl. No	Subject Code	Title of the Subject
1	10ML661	VLSI Design
2	10ML662	DSP Architecture
3	10ML663	Biomechanics
4	10ML664	Applied Numerical Methods

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VII SEMESTER**

Sl. No	Subject Code	Title	Teaching Dept.	Hours/week		Examination Scheme			Total Marks
				Theory	Practical	Duration	IA	ExternalMarks	
1	10ML71	Biomedical Digital Signal Processing	ML	04	-	03	25	100	125
2	10ML72	Medical Imaging Systems	ML	04	-	03	25	100	125
3	10ML73	Biomaterials and Artificial Organs	ML	04	-	03	25	100	125
4	10ML74	Digital Image Processing	ML	04	-	03	25	100	125
5	10ML75x	Elective-2 (Group-B)	ML	04	-	03	25	100	125
6	10ML76x	Elective-3 (Group-C)	ML	04	-	03	25	100	125
7	10MLL77	Biomedical DSP Lab	ML	-	03	03	25	50	75
8	10MLL78	Digital Image Processing Lab	ML	-	03	03	25	50	75
Total				24	06	24	200	700	900

Electives-2 (Group- B)			Electives-3 (Group- C)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	10ML751	Speech Processing	1	10ML761	Pattern Recognition in Medicine
2	10ML752	Electro-optical devices	2	10ML762	Biostatistics
3	10ML753	Linear Algebra	3	10ML763	Adaptive Signal Processing
4	10ML754	Operating Systems	4	10MS769	Micro and Smart System Tech

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VIII SEMESTER

Sl. No	Subject Code	Title	Teaching Dept.	Hours/week		Examination Scheme			Total Marks
				Theory	Practical	Duration	IA	External Marks	
1	10ML81	Embedded Systems Design	ML	04	-	03	25	100	125
2	10ML82	Neural Networks	ML	04	-	03	25	100	125
3	10ML83x	Elective-4 (Group-D)	ML	04	-	03	25	100	125
4	10ML84x	Elective-5 (Group-E)	ML	04	-	03	25	100	125
5	10ML85	Project Work	ML	-	06	03	100	100	200
6	10ML86	Seminar	ML	-	03	-	50	-	50
Total				16	06	15	250	500	750

Electives-4 (Group-D)			Electives-5 (Group-E)		
Sl. No	Subject Code	Title of the Subject	Sl. No	Subject Code	Title of the Subject
1	10ML831	Artificial Intelligence & expert Systems	1	10ML841	Bio-MEMS
2	10ML832	Fuzzy Logic & Applications	2	10ML842	Advanced Digital Image Processing
3	10ML833	Biosensors & Smart sensors	3	10ML843	Rehabilitation Engineering
4	10ML834	Low Power VLSI Design	4	10ML844	ARM Processor