



Dr. Ambedkar Institute of Technology

Department of Medical Electronics

LESSON PLANNING

Subject Title: Bio-Materials and Artificial organs

Subject Code: 18ML751

October-2021

Reference DOC No:

No of Credits: 03

Issue Date: 2021-22

No of Hours: 39

PLANNED

ACTUAL

No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	Faculty Sign	Remarks
	1	Bio-Material	01	4/10	Introduction to Bio-material			
1		Introduction to Bio-Material		5/10	Uses, Performance of BM			
1		Uses of Bio-Material		11/10	Metallic Bio-materials			
		Performance of Bio-Materials		12/10	types CMS etc			
2		Metallic Bio-Material		13/10	Ceramic Bio materials			
2		Ceramic Bio-Materials		25/10	types CMS etc			
2		Polymeric Bio-Materials		26/10	Bioplastic Bio materials			
	2				types CMS etc			
2		Composite Bio Materials		27/10	composite Bio materials			
3		Biodegradable Polymeric Bio material		02/11	Bio degradable Polymers			
2		Tissue Derived Bio-Materials		08/11	Tissue Derived Biomaterials			
1		3-D printing		15/11	collagen based medical implants			

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1	3	Artificial organs Introduction		16/11	3-D Printing			
1		Artificial Heart and circulatory Assit Device (Introduction)		29/11	Introduction to Artificial Heart			
1		Engg Design		29/11	Substitution of medicine			
1		Non blood Interfacing Implants		30/11	ask book for design			
1		Cardiac valve Prostheses		01/12	Design considerations			
1		Hemodynamic Assessment of Prosthetic valve		06/12	Evaluation process			
2		Current trend in valve design		07/12	Artificial Heart & circulation			
	4	Artificial Kidney		08/12	Engg Design			
1		Introduction, Function		13/12	Engg Design Artificial renal			
2		Kidney disease and Renal transplant		13/12	circulatory Assit device			
2		Artificial Kidney, dialyzers, membranes for haemodialysis		14/12	blood interfacing implant			
3		Haemodialysis machine, Peritoneal dialysis equipment therapy		15/12	Introduction total Artificial renal			

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October 2021

PLANNED				ACTUAL			
No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of Students	Faculty Sign
1	5	Artificial Lungs (introduction)		20/12	ventricular assist device		
1		Gas exchange system,		22/12	Vascular Prostheses		
2		Cardiopulmonary by pass (Heart lung machine) Principle, block diagram		03/01	Non-Blood circulation		
1		Liver functions, hepatic failure		04/01	soft tissue sutures		
3		Liver support systems, General replacement of Liver functions		05/01	Allied organ donation		
				10/01	Pericardium & stem		
				12/01	maxillofacial implants		
				17/01	Eye and Ear implants		
				18/01	cardiac valve prostheses		
				19/01	mechanical valves		
				24/01	Tissue valve		

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No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	Faculty Sign	Remarks
				25/01	Artificial lungs			
				01/02	Gas exchange system			
				02/02	cardio pulmonary system			
				03/02	Principles blood circulation			
				05/02	Liver support system			
				09/02	General replacement of liver function			

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Dr. Ambedkar Institute of Technology
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LESSON PLANNING

Subject Code: 18MML652

March-2022

Subject Title: MEDICAL INFORMATICS

Reference DOC No:

No of Credits 03

Issue Date: 2021-22

No of Hours: 39

PLANNED				ACTUAL				
No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	Faculty Sign	Remarks
1	1	Introduction: MI	1	29.03.22	Introduction.		Dr	
1		Structure of MI		31.03.22	Medical Informatics		Dr	Presentation
1		Internet and Medicine-Security issues		05.04.22	Structure of MI		Dr	
2		Computer based IAI retrieval HIS, e- Health services		07.04.22	Description of structure		Dr	Presentation
		Functional capabilities of HIS		12.04.22	Combined.	-	Dr	13th April 2022
3		Cloud computing: Introduction		19.04.22	Internet & Medicine.	-	Dr	
		Architecture and Management		21.04.22	Functional Capabilities of HIS		Dr	
		Cloud computing in Medical Applications		22.04.22	Cloud computing		Dr	
1	2	CPR: Computer Based Patient Record		26.04.22	Applications		Dr	
1		History taking by computer, Dialogue with computer		28.04.22	Architecture of Cloud		Dr	Assignment 1 and 2
2		Components. Functionality		28.04.22	CPR- Computer based Record		Dr	
		Development tools		29.4.22	CPR in Radiology		Dr	
1		CPR in radiology, Appl. server provider		10.5.22	Application service Provider		Dr	

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Subject Title: MEDICAL INFORMATICS		Subject Code: 18ML652	
Reference DOC No:		No of Creds: 03	
Issue Date: 2021-22		No of Hours: 39	
PLANNED		ACTUAL	

Classes	No of Unit	Planned Lesson	Unit No	Date	Lesson Covered	No of Faculty	No of Students	Signature	Remarks
1	2	CIS-Clinical Information System		12/05/22	Completed presentation for patients	1	15		15/5/22
1	1	Computerized prescription for patients		13/05/22	Unit-3, Lab Med. Imaging	1			15/5/22
1	3	Computers in Lab and medical Imaging: Automated methods		16/05/22	Contd..	1			
2	2	Intelligent Lab information system		17/05/22	Computers in Lab	1			
1	1	Contd.,		18/05/22	Intelligent Lab info system	1			
1	1	Computerized bioelectric signals		19/05/22	Computerized bioelectric signals	1			Assign Unit 3 & 5
1	1	Computer in medical imaging: US, X-ray		19/05/22	X-ray imaging	1			
2	2	Radiation therapy planning		20/05/22	Radiation therapy planning	1			
1	1	Radiation therapy planning		26/05/22	Contd.	1			class work
1	1	NMR		27/05/22	Contd.	1			presentation
1	4	CAMDM-introduction		27/05/22	CAMDM (Contd)	1			
1	1	Neurocomputers		31/05/22	CMD contd (Model)	1			
1	1	ANN		03/06/22	ANN	1			

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Subject Title: MEDICAL INFORMATICS		Subject Code: 18ML652		March-2022	
Reference DOC No:		No of Credits: 03		No of Hours: 39	
Issue Date: 2021-22		PLANNED		ACTUAL	

No of Unit	Classes	Planned Lesson	Unit No	Date	Lesson Covered	No of Faculty	Sign	Remarks
1	1	Expert system	4	07.06.22	ES	M		Attending
1	1	cognitive model		14.06.22	Decision Analysis.			
1	1	Semantic networks	5	16.06.22	Critical care - M2 education	M		
2		decision analysis	6	17.06.22	CARD Decision analysis	M		
1	1	critical care and surgery		21.06.22	Critical care health care	M		
1	5	Recent trends in MI: virtual reality		23.06.22	MI recent trends	M		
1	1	computer assisted surgery		24.06.22	Stenocostal surgery	M		
1	1	contd., computer assisted surgery		28.06.22	Contd.	M		
1		simulation		30.06.22	Simulation	M		case study
2		Telemedicine		01.07.22	Telemedicine in India	M		Presentation
		Telesurgery		05.07.22	Health care for challenged	M		
1	1	Aids for the handicapped		07.07.22	Speech, hearing, Visual aids	M		
1		Information		08.07.22	Community Planning	M		Concluding remarks

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Dr. Ambedkar Institute of Technology
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LESSON PLANNING

Subject Title: **LINEAR IC'S AND APPLICATIONS**

Subject Code: 18MD45

Academic Year: April 2022 - July 2022

No of Credits: 3

No of Hours: 3

PLANNED				ACTUAL				
No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	Faculty Sign	Remarks
1	I	Operational Amplifier Fundamentals	1	30.05.2022	Op-amp Fundamentals		Dr	First day
1	I	Introduction		01.06.22	Fundamentals	15	Dr	
1	I	Op-amp		06.06.22	Concl.	15	Dr	* self study
2	I	Internal circuit		08.06.22	General circuitry Block dia		Dr	
1	I	IC741 op-amp circuit		13.06.22	Op-amp Clf.			
1	I	DC characteristics		16.06.22	DC - Ac. Characteristics		Dr	
1	I	AC characteristics		17.06.22	Concl.		Dr	
1	I	TINA		20.06.22	Self Study		Dr	71MB 95
	II	Operational Amplifier applications		22.06.22	Basic Op-amp. applications		Dr	
1	II	Basic op-amp application	2	27.06.22	Concl. - Adder / Subtractor		Dr	
1	II	Instrumentation amplifier		28.06.22	Instrumentable Amp	15	Dr	* extra class
1	II	AC amplifier		29.06.22	Ac - amp filters		Dr	
1	II	V to I and I to V Converters		30.06.22	V to I, I to V		Dr	

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Dr. Ambedkar Institute of Technology
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LESSON PLANNING

Subject Title: LINEAR IC'S AND APPLICATIONS

Subject Code: 18MD45

Academic Year: April 2022-July 2022

No of Credits: 3

No of Hours: 3

PLANNED

ACTUAL

No of Unit	Classes	No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	No of Faculty	Remarks
1	II	1	Op-amp circuits using diodes	01.07.22	Op-amp using diodes	-	04		
1	II	1	Sample and hold circuit	06.07.22	S/H CLT	-	04		* Self Study
1	II	1	Differentiator, Integrator	07.07.22	Diff. & Int.	-	04		
1	II	1	TINA	08.07.22	TINA	-	04		* Self Study
III		III	Comparators and Waveform generators	11.07.22	S/H	-	04		* S.P.L. Self Study
1	III	1	Comparator.	14.07.22	TINA	-	04		
1	III	1	Schmitt trigger	14.07.22	Op-amp using diodes	-	04		* S.P.L. Self Study
1	III	1	Astable multivibrator	15.07.22	Diff. & Integrator	-	04		
1	III	1	Monostable multivibrator	22.07.22	Integrator	-	04		
1	III	1	Triangular wave generator	29.07.22	U.N.T. III Com. Refer.	-	04		
2	III	2	Oscillators	29.07.22	Schmitt trigger	-	10		

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LESSON PLANNING

Subject Title: LINEAR IC's AND APPLICATIONS		Subject Code: 18MD45	Academic Year: April 2022 - July 2022
		No of Credits: 3	
		No of Hours: 3	

PLANNED				ACTUAL				
No of Classes	Unit No	Planned Lesson	Unit No	Date	Lesson Covered	No of students	Faculty Sign	Remarks
	IV	Active filters		30.07.2022	Contd. Schmitt Triggers	-	M	45
1	IV	Introduction		08.08.2022	Monostable Astable & Bistable	14	M	
2	IV	First and second order low pass	IV	12.08.2022	Active filters	-	M	
1	IV	High pass filters.		18.08.2022	LPF, HPF	-	M	
	IV	555 Timer		19.08.2022	Design procedure	-	M	
1	IV	Introduction		22.08.22	Timer. 555	-	M	
1	IV	Functional diagram		23.08.22	Introduction	-	M	
1	IV	Monostable, Astable		24.08.22	Mode of operation	-	M	
1	IV	Schmitt trigger operations.		05.09.22	555 Schmitt Trigger	-	M	

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Dr. Ambedkar Institute of Technology
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Subject Title: LINEAR IC'S AND APPLICATIONS

Subject Code: 18M145

Academic Year: April 2022 - July 2022

LESSON PLANNING

Planned Lesson		Actual	
No of Unit	No of Credits: 3	No of Unit	No of Credits: 3
Planned		Actual	

No of Classes	No of Unit	Planned Lesson	Date	Lesson Covered	No of students	Faculty Sign	Remarks
	V	D-A and A-D converter	01.05.2022	Converters	-	M	
	1 V	Introduction	12.05.2022	DAC techniques	-	M	
	1 V	DAC techniques	14.05.2022	DAC - Eg.	-	M	
	1 V	Binary weighted resistor network	15.05.2022	A/D, Techniq.	-	M	
	1 V	R-2R Ladder Network	21.05.2022	Band slope & Error	-	M	
	1 V	A-D converters: Specifications	22.05.2022	Successive R Approx	-	M	
	1 V	Dual Slope converters					
	1 V	Flash Converters					
	1 V	Successive Approximation					

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