			Additional credit structure to earn B.Tech. in.Civil E	ngineering w	ith Hond	ors and	MDM				
			Offered to batches entered into 2023-24 or later								
Sr. No.	Sem	Course Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	5	Refer List	NPTEL course approved by BoS Chairman					3	30	20	50
2	5	Refer List	NPTEL course approved by BoS Chairman					3	30	20	50
3	6	Refer List	NPTEL course approved by BoS Chairman OR Additional Program Elective -1	3	0	0	3	3	30	20	50
4	6	Refer List	NPTEL course approved by BoS Chairman					2	30	30	40
5	Α	Refer List	NPTEL course approved by BoS Chairman					3	30	20	50
6	В	7CV492	Minor Project					4			
		Bucket for	r Elective Laboraory					18			
		7CV373	Foundation Engineering Lab								
		7CV374	Waste Management and Pollution Control Lab								
		7CV375	Design of Hydraulic Structure Lab								
		7CV376	Geomatics Laboratory								
		7CV377	Earthquake Engineering Lab								
		7CV378	Design of Prestressed structures Lab								
		7CV379	Concrete Mix Design Lab								
			Additional credit structure to earn B.Tech. in Mecha Offered to batches entered into 2023-24 or later : Tra				ors and	MDM			
				ick : Turboma	Cillilei y						
Sr. No.	Sem	Course Code	Course Name	L L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
Sr. No.	Sem 5		Course Name Introduction to Turbomachinery				Hrs. 3	Cr 3	MSE/LA1 30	ISE/LA2 20	ESE 50
		Code		L	Т	Р					
1	5	Code 7ME305	Introduction to Turbomachinery	L 3	T 0	P 0	3	3	30	20	50
1 2	5	7ME305 7ME306	Introduction to Turbomachinery Design Principles of Turbomachinery	L 3 3	T 0 0	P 0 0	3	3	30 30	20	50 50
1 2 3	5 5 6	7ME305 7ME306 7ME324	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery	L 3 3 3	T 0 0 0	P 0 0 0	3 3 3	3 3 3	30 30 30	20 20 20	50 50 50
1 2 3 4	5 5 6 6	7ME305 7ME306 7ME324 7ME325	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery Manufacturing Processes for Turbomachinery	L 3 3 3 3 3 3	T 0 0 0 0 0 0	P 0 0 0 0 0	3 3 3 3	3 3 3 3	30 30 30 30	20 20 20 20 20	50 50 50 50
1 2 3 4 5	5 5 6 6 A	7ME305 7ME306 7ME324 7ME325 7ME401	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery Manufacturing Processes for Turbomachinery Assembly and Maintenance of Turbomachinery Global Scenario of Turbomachinery	L 3 3 3 3 3 3	T 0 0 0 0 0 0 0 0 0	P 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3	3 3 3 3 3 3 3	30 30 30 30 30 30 30	20 20 20 20 20 20	50 50 50 50 50
1 2 3 4 5	5 5 6 6 A	7ME305 7ME306 7ME324 7ME325 7ME401	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery Manufacturing Processes for Turbomachinery Assembly and Maintenance of Turbomachinery Global Scenario of Turbomachinery Additional credit structure to earn B.Tech. in Mechanic	L 3 3 3 3 3 3 3 anical Engine	T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3	3 3 3 3 3 3 18 MDM	30 30 30 30 30 30 30	20 20 20 20 20 20 20 20	50 50 50 50 50
1 2 3 4 5	5 5 6 6 A	7ME305 7ME306 7ME324 7ME325 7ME401	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery Manufacturing Processes for Turbomachinery Assembly and Maintenance of Turbomachinery Global Scenario of Turbomachinery	L 3 3 3 3 3 3 3 anical Engine	T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3	3 3 3 3 3 3 18 MDM	30 30 30 30 30 30 30	20 20 20 20 20 20 20 20	50 50 50 50 50
1 2 3 4 5	5 5 6 6 A	7ME305 7ME306 7ME324 7ME325 7ME401	Introduction to Turbomachinery Design Principles of Turbomachinery FEA & CFD Analysis of Turbomachinery Manufacturing Processes for Turbomachinery Assembly and Maintenance of Turbomachinery Global Scenario of Turbomachinery Additional credit structure to earn B.Tech. in Mechanic	L 3 3 3 3 3 3 3 anical Engine	T 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	P 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	3 3 3 3 3 3	3 3 3 3 3 3 18 MDM	30 30 30 30 30 30 30	20 20 20 20 20 20 20 20	50 50 50 50 50

2	5	7ME308	Applied Linear Algebra	3	0	0	3	3	30	20	50
3	6	7ME326	Numerical Methods	3	0	0	3	3	30	20	50
4	6	7ME327	Statistics for Engineers	3	0	0	3	3	30	20	50
5	Α	7ME402	Data Manipulation and Feature Engineering	3	0	0	3	3	30	20	50
6	В	7ME423	Mathematics for Computer Vision and Optimization	3	0	0	3	3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Electronic	e Engino	ring wi	th Hone	ore and	MDM			
			Offered to batches entered into 2023-24 or later	.s Enginee	ing wi		Ji S allu				
			Offered to batches efficied into 2023-24 of fater								
		Course									
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	5	7EN304	Digital System Engineering	3	0	0	3	3	30	20	50
2	5	7EN305	Wireless Communication	3	0	0	3	3	30	20	50
3	6	7EN324	Image analysis and pattern recognition	3	0	0	3	3	30	20	50
4	6	7EN325	VLSI DSP	3	0	0	3	3	30	20	50
5	Α	7EN403	Speech Signal Processing	3	0	0	3	3	30	20	50
6	В	7EN421	Broadband Antenna Design	3	0	0	3	3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Electrical	Engineer	ing with	Honor	s and M	IDM			
			Offered to batches entered into 2023-24 or later								
		Course									
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	5	7EL305	Process Control	3	0	0	3	3	30	20	50
2	5	7EL306	Biomedical Instrumentation	3	0	0	3	3	30	20	50
3	6	7EL324	Power Plant Instrumentation	3	0	0	3	3	30	20	50
4	6	7EL325	Digital Protection of Power System	3	0	0	3	3	30	20	50
5	Α	7EL401	Computer Aided Power System Analysis	3	0	0	3	3	30	20	50
6	В	7EL423	Power System Dynamics	3	0	0	3	3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Computer					lonor	s and MDM		
			Offered to batches entered into 2023-24 or later : Track	Security	and dig	jital for	ensics				
		Course									
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	5	7CS304	Advanced Cryptography	3	0	0	3	3	30	20	50
2	5	7CS354	Advanced Cryptography Lab	0	0	2	2	1	30	30	40

3	6	7CS324	Digital Forensics	3	0	0	3	3	30	20	50
4	6	7CS373	Digital Forensics Lab	0	0	2	2	1	30	30	40
5	6	7CS346	Seminar	0	0	2	2	1	30	30	40
6	В	7CS424	Quantum Cryptography and Quantum Security	3	0	0	3	3	30	20	50
7	В	7CS472	Quantum Cryptography and Quantum Security Lab	0	0	2	2	1	30	30	40
8	В	7CS446	Mini-Project	0	0	4	4	2	30	30	40
9	Α	7CS401	NPTEL (Ethical Hacking)					3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Comput	er Science a	and Eng	jineerin	g with F	lonor	s and MDM		
			Offered to batches entered into 2023-24 or later : Trac	k : Blockcha	ain Tech	nology	,				
Sr. No.	Sem	Course Code	Course Name	L	т	P	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
	5	7CS305	Introduction to Blockchain	3	0	0	3	3	30	20	50
	5	7CS354	Introduction to Blockchain Lab	0	0	2	2	1	30	30	40
	6	7CS325	Blockchain use cases	3	0	0	3	3	30	20	50
	6	7CS374	Blockchain use cases Lab	0	0	2	2	1	30	30	40
	6	7CS347	Seminar	0	0	2	2	1	30	30	40
	В	7CS425	cryptocurrency technology	3	0	0	3	3	30	20	50
	В	7CS473	cryptocurrency technology Lab	0	0	2	2	1	30	30	40
	В	7CS447	Mini-Project	0	0	4	4	2	30	30	40
	Α	7CS402	NPTEL (Blockchain and its Applications)					3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Comput	er Science a	and Eng	ineerin	g with F	lonor	s and MDM		
			Offered to batches entered into 2023-24 or later : Trac								
Sr. No.	Sem	Course Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
JII 110.	5	7CS306	Introduction to AR and VR	3	0	0	3	3	30	20	50
	5	7CS355	Introduction to AR and VR Lab	0	0	2	2	1	30	30	40
	6	7CS326	3D modeling and Animation	3	0	0	3	3	30	20	50
	6	7CS375	3D modeling and Animation Lab	0	0	2	2	1	30	30	40
	6	7CS348	Seminar	0	0	2	2	1	30	30	40
	В	7CS426	Game Development for AR/VR	3	0	0	3	3	30	20	50
	В	7CS474	Game Development for AR/VR Lab	0	0	2	2	1	30	30	40
	В	7CS448	Mini-Project	0	0	4	4	2	30	30	40
	A	7CS403	NPTEL (HCI/Industry 4.0 and Metaverse)		<u> </u>		-	3	30	20	50
	,,	. 55.00	:== (1		1	18			

			Additional credit structure to earn B.Tech. in Information		logy ii		ors and	141 (214)			
			Offered to batches entered into 2023-24 or later : Trac	k :GIS							
Sr. No.	Sem	Course Code	Course Name	L	т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	4	7IT225	Remote Sensing and Digital Image Processing	3	0	0	3	3	30	20	50
2	4	7IT275	Remote Sensing and Digital Image Processing Lab	0	0	2	1	1	30	30	40
3	5	7IT304	Geographic Information System	3	0	0	3	3	30	20	50
4	5	7IT354	Geographic information system Lab	0	0	2	1	1	30	30	40
5	5	7IT355	GPS Surveying and Data handling	0	0	2	1	1	30	30	40
6	6	7IT323	Spatial Data Analysis	3	0	0	3	3	30	20	50
7	6	7IT374	Spatial Data Analysis Lab	0	0	2	1	1	30	30	40
8	В	7IT422	Geoinformatics - Applications of GIS	3	0	0	3	3	30	20	50
9	В	7IT473	Geoinformatics Lab	0	0	2	1	1	30	30	40
10	В	7IT446	Mini-Project	0	0	2	1	1	30	30	40
								18			
			Additional credit structure to earn B.Tech. in Information Technology with Honors and M								
			Offered to batches entered into 2023-24 or later : Trac								
		Course									
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	4	7IT226	Cloud Technologies	3	0	0	3	3	30	20	50
2	4	7IT276	Cloud Technologies Lab	0	0	2	2	1	30	30	40
3	5	7IT306	Virtualization Techniques	3	0	0	3	3	30	20	50
4	5	7IT356	Open Source Virtualization Tools	0	0	2	4	1	30	30	40
5	5	7IT357	AWS Cloud Sevices Lab	0	0	2	4	1	30	30	40
	6	7IT324	Cloud Computing and Services	3	0	0	3	3	30	20	50
6	_	7IT374	Cloud Computing and Services Lab	0	0	2	4	1	30	30	40
6 7	6		Data Canta Matanala			0	3	3	30	20	50
	6 B	7IT423	Data Centre Network	3	0	0			30	30	40
7	-	7IT423 7IT474	Data Centre Network Data Centre Network Lab	0	0	2	4	1	30	00	
7 8	В	+	-		-	-	4	1	30	30	40
7 8 9	B B	7IT474	Data Centre Network Lab	0	0	2	-	-	-		40
7 8 9	B B	7IT474	Data Centre Network Lab	0 0	0	2 2	4	1 18	30		40
7 8 9	B B	7IT474	Data Centre Network Lab Mini-Project	0 0	0 0	2 2	4	1 18	30		40
7 8 9 10	B B B	7IT474 7IT447 Course	Data Centre Network Lab Mini-Project Additional credit structure to earn B.Tech. in Informat Offered to batches entered into 2023-24 or later: Trace	0 0 tion Techno	0 0 logy w	2 2 ith Hon	4 and	1 18 MDM	30	30	
7 8 9	B B	7IT474 7IT447	Data Centre Network Lab Mini-Project Additional credit structure to earn B.Tech. in Information	0 0	0 0	2 2	4	1 18	30		40 ESE 50

3	5	7IT308	Network Security and Access Management	3	0	0	3	3	30	20	50
4	5	7IT358	Network Security and Access Management Lab	0	0	2	4	1	30	30	40
5	5	7IT359	Digital Forensic and Detection Lab	0	0	2	4	1	30	30	40
6	6	7IT325	Applied Cryptography	3	0	0	3	3	30	20	50
7	6	7IT375	Applied Cryptography Lab	0	0	2	4	1	30	30	40
8	В	7IT424	Handling Blockchains	3	0	0	3	3	30	20	50
9	В	7IT475	Handling Blockchains Lab	0	0	2	4	1	30	30	40
10	В	7IT448	Mini-Project	0	0	2	4	1	30	30	40
								18			
			Additional credit structure to earn B.Tech. in Robotics a	nd Auton	nation	with Ho	nors ar	d MD	M		
			Offered to batches entered into 2024-25 or later : Turbon	nachinery							
		Course								_	
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	5	7RA305	Introduction to Turbomachinery	3	0	0	3	3	30	20	50
2	5	7RA355	Design Principles of Turbomachinery	0	0	2	4	3	30	30	40
3	6	7RA324	FEA & CFD Analysis of Turbomachinery	3	0	0	3	3	30	20	50
4	6	7RA374	Manufacturing Processes for Turbomachinery	0	0	2	4	3	30	30	40
5	Α	7RA451	Assembly and Maintenance of Turbomachinery	0	0	2	4	3	30	30	40
6	В	7RA473	Global Scenario of Turbomachinery	3	0	0	3	3	30	20	50
								18			
			Additional credit structure to earn B.Tech. in Al-ML with	Honoro d	and MDI	NA					
			Offered to batches entered into 2024-25 or later : Track :		and MD	IVI					
		Course	Offered to batches entered into 2024-25 of later. Track.	JIS							
Sr. No.	Sem	Code	Course Name	L	Т	P	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	4	7AI225	Remote Sensing and Digital Image Processing	3	0	0	3	3	30	20	50
2	4	7AI275	Remote Sensing and Digital Image Processing Lab	0	0	2	2	1	30	30	40
3	5	7AI304	Geographic Information System	3	0	0	3	3	30	20	50
4	5	7AI354	Geographic information system Lab	0	0	2	2	1	30	30	40
5	5	7AI355	GPS Surveying and Data handling	0	0	2	2	1	30	30	40
6	6	7AI323	Spatial Data Analysis	3	0	0	3	3	30	20	50
7	6	7AI374	Spatial Data Analysis Lab	0	0	2	2	1	30	30	40
8	В	7AI422	Geoinformatics - Applications of GIS	3	0	0	3	3	30	20	50
9	В	7AI473	Geoinformatics Lab	0	0	2	2	1	30	30	40
10	В	7AI446	Mini-Project	0	0	2	2	1	30	30	40
	-				1						
								18			
-								18			

Sr. No.	Sem	Course	Offered to batches entered into 2024-25 or later : Track : Course Name	L	T	P	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	4	7AI226	Cloud Technologies	3	0	0	3	3	30	20	50
2	4	7AI276	Cloud Technologies Lab	0	0	2	2	1	30	30	40
3	5	7AI305	Virtualization Techniques	3	0	0	3	3	30	20	50
4	5	7AI356	Open Source Virtualization Tools	0	0	2	2	1	30	30	40
5	5	7AI357	AWS Cloud Sevices Lab	0	0	2	2	1	30	30	40
6	6	7AI323	Cloud Computing and Services	3	0	0	3	3	30	20	50
7	6	7AI374	Cloud Computing and Services Lab	0	0	2	2	1	30	30	40
8	В	7AI423	Data Centre Network	3	0	0	3	3	30	20	50
9	В	7AI474	Data Centre Network Lab	0	0	2	2	1	30	30	40
10	В	7AI447	Mini-Project	0	0	2	2	1	30	30	40
								18			
			Additional credit structure to earn B.Tech. in Al-ML with	Honors a	and MDI	И					
			Offered to batches entered into 2024-25 or later : Track :								
		Course									
Sr. No.	Sem	Code	Course Name	L	Т	Р	Hrs.	Cr	MSE/LA1	ISE/LA2	ESE
1	4	741007	Cyber Security, Law and Ethics		_	0	_				
		7AI227	Cyber Security, Law and Ethics	3	0	U	3	3	30	20	50
2	4	7AI227 7AI277	Cyber Security, Law and Ethics Cyber Security, Law and Ethics Lab	0	0	2	2	1	30 30	20 30	50 40
3	4 5			_		_		-		_	
	•	7AI277	Cyber Security, Law and Ethics Lab	0	0	2	2	1	30	30	40
3	5	7AI277 7AI306	Cyber Security, Law and Ethics Lab Network Security and Access Management	0 3	0 0	2	2	1 3	30 30	30 20	40 50
3 4	5	7AI277 7AI306 7AI358	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab	0 3 0	0 0	2 0 2	2 3 2	1 3 1	30 30 30	30 20 30	40 50 40
3 4 5	5 5 5	7AI277 7AI306 7AI358 7AI359	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab Digital Forensic and Detection Lab	0 3 0 0	0 0 0 0	2 0 2 2	2 3 2 2	1 3 1	30 30 30 30	30 20 30 30	40 50 40 40
3 4 5 6	5 5 5 6	7AI277 7AI306 7AI358 7AI359 7AI324	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab Digital Forensic and Detection Lab Applied Cryptography	0 3 0 0 3	0 0 0 0 0	2 0 2 2 0	2 3 2 2 3	1 3 1 1 3	30 30 30 30 30 30	30 20 30 30 20	40 50 40 40 50
3 4 5 6 7	5 5 5 6 6	7AI277 7AI306 7AI358 7AI359 7AI324 7AI375	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab Digital Forensic and Detection Lab Applied Cryptography Applied Cryptography Lab	0 3 0 0 3 3 0	0 0 0 0 0	2 0 2 2 0 2	2 3 2 2 3 2	1 3 1 1 3 1	30 30 30 30 30 30 30	30 20 30 30 30 20 30	40 50 40 40 50 40
3 4 5 6 7 8	5 5 5 6 6 8	7AI277 7AI306 7AI358 7AI359 7AI324 7AI375 7AI4275	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab Digital Forensic and Detection Lab Applied Cryptography Applied Cryptography Lab Handling Blockchains	0 3 0 0 3 0 3	0 0 0 0 0 0	2 0 2 2 0 2 0	2 3 2 2 3 2 3 2	1 3 1 1 3 1 3	30 30 30 30 30 30 30 30	30 20 30 30 20 30 20	40 50 40 40 50 40 50
3 4 5 6 7 8 9	5 5 5 6 6 8 B	7AI277 7AI306 7AI358 7AI359 7AI324 7AI375 7AI4275 7AI476	Cyber Security, Law and Ethics Lab Network Security and Access Management Network Security and Access Management Lab Digital Forensic and Detection Lab Applied Cryptography Applied Cryptography Lab Handling Blockchains Handling Blockchains Lab	0 3 0 0 3 0 3 0 3	0 0 0 0 0 0 0	2 0 2 2 0 2 0 2	2 3 2 2 3 2 3 2	1 3 1 1 3 1 3	30 30 30 30 30 30 30 30 30 30	30 20 30 30 20 30 20 30 20 30	40 50 40 40 50 40 50 40