

Minor Specialization in Civil Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						Continuous Evaluation	End Sem Exams	Total	
1	IV	CETM41	Basics of Civil Engineering	4	4	40	60	100	3
2	V	CETM51	Basics of Surveying in Civil Engineering	4	4	40	60	100	3
3	VI	CETM61	Basics of Soil Engineering	4	4	40	60	100	3
4	VII	CETM71	Plumbing System	4	4	40	60	100	3
5	VIII	CETM81-1	Instrumentation	4	4	40	60	100	3
		CETM81-2	Rural Water Supply & Sanitation	4	4	40	60	100	3

Note :- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Computer Science and Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						Continuou s	End Sem	Total	
01	IV	CSTM42	Programming Frameworks	4	4	40	60	100	3
02	V	CSTM52	Software Engineering & Project Management	4	4	40	60	100	3
03	VI	CSTM62	Database Management System	4	4	40	60	100	3
04	VII	CSTM72	AI and Machine Learning	4	4	40	60	100	3
05	VIII	CSTM82	Mobile Application Programming	4	4	40	60	100	3

Minor Specialization in Computer Science Engineering (Artificial Intelligence & Machine Learning)

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1.	IV	CATM41	Programming and Data structure with Python	4	4	40	60	100	3
2.	V	CATM51	Artificial Intelligence	4	4	40	60	100	3
3.	VI	CATM61	Machine Learning	4	4	40	60	100	3
4.	VII	CATM71	Deep Learning and its Applications	4	4	40	60	100	3
5.	VIII	CATM81	Data Analytics	4	4	50	50	100	3

Minor Specialization in Computer Science Engineering (Data Science)

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						Continuou s	End Sem	Total	
1.	IV	CDTM41	Programming for Data Science	4	4	40	60	100	3
2.	V	CDTM51	Databases and SQL for Data Science	4	4	40	60	100	3
3.	VI	CDTM61	Data Handling and Visualization	4	4	40	60	100	3
4.	VII	CDTM71	Statistical Machine Learning	4	4	40	60	100	3
5.	VIII	CDTM81	Deep Learning	4	4	40	60	100	3

Minor Specialization in Computer Science Engineering (Cyber Security)

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						Continuou s	End Sem	Total	
1.	IV	CCTM41	Introduction to Cyber Security	4	4	40	60	100	3
2.	V	CCTM51	Cryptography	4	4	40	60	100	3
3.	VI	CCTM61	Network Security Fundamentals	4	4	40	60	100	3
4.	VII	CCTM71	Basics of Ethical Hacking	4	4	40	60	100	3
5.	VIII	CCTM81	Digital Forensics	4	4	40	60	100	3

Note :- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Economics (Department of Humanities)

Sr. No.	Course Code	Course Name	Sem	Hours/week	Credits	Maximum marks			ESE duration (Hrs.)
						Continuous Evaluation	End sem Exam	Total	
1.	HUTM41	Micro Economics	4 th	4	4	40	60	100	3
2.	HUTM51	Macro Economics and Public Finance	5 th	4	4	40	60	100	3
3.	HUTM61	Indian Economy	6 th	4	4	40	60	100	3
4.	HUTM71	International Economics	7 th	4	4	40	60	100	3
5.	HUTM81	Environmental Economics and Sustainability	8 th	4	4	40	60	100	3

Minor Specialization in Electronics and Communication Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1	IV	ECTM41	Communication Engineering	4	4	40	60	100	3
2	V	ECTM51	Sensor for smart city	4	4	40	60	100	3
3	VI	ECTM61	IoT for Industrial Application	4	4	40	60	100	3
4	VII	ECTM71	Mobile Communication	4	4	40	60	100	3
5	VIII	ECTM81	Future Generation Network	4	4	40	60	100	3

Note :- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Electrical Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration Hours
						CA	End Sem Exams	Total	
1	IV	EETM42	Basics of Electrical Engineering and EV	4	4	40	60	100	3
2	V	EETM52	EV Motors and their Control	4	4	40	60	100	3
3	VI	EETM62	EV Energy Management and Charging Infrastructure	4	4	40	60	100	3
4	VII	EETM72	EV Communication and Instrumentation	4	4	40	60	100	3
5	VIII	EETM82	EV Policies and Safety Aspects	4	4	40	60	100	3

Note :- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Biomedical Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration Hours
						CA	End Sem Exams	Total	
1	IV	BMTM41	Biomedical Engineering Fundamentals	4	4	40	60	100	3
2	V	BMTM51	Biomedical Imaging Modalities	4	4	40	60	100	3
3	VI	BMTM61	Computer Analysis of Biomedical Image	4	4	40	60	100	3
4	VII	BMTM71	Imaging Applications of AI in healthcare	4	4	40	60	100	3
5	VIII	BMTM81	Mini Project	4	4	50	50	100	3

Note: If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD

Minor Specialization in Electronics Engineering Electronics with Minors in Industry 4.0

Sr. No.	Semester	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE Duration (Hrs.)
				L	T	P		CE	ESE	Total	
1	IV	ENTM 42	Sensors and Actuators for Cyber Physical Systems	4	0	0	4	40	60	100	3Hrs
2	V	ENTM 52	Factory Automation	4	0	0	4	40	60	100	3Hrs
3	VI	ENTM 62	Industrial IoT network	4	0	0	4	40	60	100	3Hrs
4	VII	ENTM 72	Technologies of Smart Factory	4	0	0	4	40	60	100	3Hrs
5	VIII	ENTM 82	Mini Project	0	0	4	4	50	50	100	3Hrs

Note :- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Industrial Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CE	End Sem Exams	Total	
1	IV	INTM41	Methods Engineering	4	4	40	60	100	3
2	V	INTM51-1	Material Management	4	4	40	60	100	3
		INTM51-2	Production Planning and Control	4	4	40	60	100	3
3	VI	INTM61	Operations Research	4	4	40	60	100	3
4	VII	INTM71	Quality Engineering and Management	4	4	40	60	100	3
5	VIII	INTM81	Project Engineering & Management	4	4	40	60	100	3

Note:- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Minor Specialization in Information Technology

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration Hours
						Continuous Evaluation	End Sem Exams	Total	
1	IV	ITTM41	Python for Everybody	4	4	40	60	100	3
2	V	ITTM51	Object Oriented Programming	4	4	40	60	100	3
		ITTM51-1	Software Engineering	4	4	40	60	100	3
3	VI	ITTM61	Web Design for Everybody	4	4	40	60	100	3
4	VII	ITTM71-1	Introduction to Machine Learning	4	4	40	60	100	3
		ITTM71-2	Computer Networking	4	4	40	60	100	3
		ITTM71-3	Introduction to Industry 4.0 and Industrial Internet of Things						
5	VIII	ITTM81	Emerging Technologies : IOT,Wireless and Cloud Computing	4	4	40	60	100	3

Note: If any of the above course is accessible to a student in his/her parent branch or open elective then the credit transfer against the course will be allowed subject to completion of a MOOC course with prior permission and consultation with Head Information Technology Department.

Minor Specialization in Mechanical Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration Hours
						CE	End Sem Exams	Total	
1	IV	METM41	Automotive Engineering	4	4	40	60	100	3
2	V	METM51	Computer Aided Design	4	4	40	60	100	3
3	VI	METM61	Automation and Robotics	4	4	40	60	100	3
4	VII	METM71	Solar Energy Technology	4	4	40	60	100	3
5	VIII	METM81-1	Manufacturing Engineering	4	4	40	60	100	3
		METM81-2	Mechanical Engineering Design	4	4	40	60	100	3

Note:- If any of the above course is accessible to a student in his/her parent branch or Open electives then Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD