Honors Specialization in Civil Engineering

Sr. No.	Semester	Course Code	Course Title	Hour sper Week	Credits	Maximum Marks			ESE Duration in Hours
						Continuous Evaluation	End Sem Exams	Total	
1	IV	CETH41	Construction Technology	4	4	40	60	100	3
2	V	CETH51	Fire-fighting system	4	4	40	60	100	3
3	VI	CETH61	Geotechnical Design	4	4	40	60	100	3
4	VII	CETH71	Foundation Design	4	4	40	60	100	3
5	VIII	CETH81-1	Design of Environmental Structures	4	4	40	60	100	3
		CETH81-2	Geometric Design of Highways	4	4	40	60	100	3

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Computer Science Engineering

(Full stack Development Track)

SNo.	Semester	Course Code	Course Name	Hrs/ Week	Credits	Maximum Marks			ESE Duration
						CA	ESE	Total	
1.	IV	CSTH45	Web Development	4	4	50	50	100	-
2	V	CSTH55	Full Stack-I	4	4	50	50	100	-
3.	VI	CSTH65	Full Stack-II	4	4	50	50	100	-
4.	VII	CSTH75	Software Development Automation	4	4	50	50	100	-
5.	VIII	CSTH85	Big Data Analysis	4	4	50	50	100	-

Note: Marks division for all the courses mentioned above (CSE, Honors) will be off 50 marks for Continuous Evaluation and 50 marks for End Sem Exam. Evaluation pattern for Continuous Evaluation and ESE can be lab conduction, viva-voce, execution-based test and MCQ test.

Honors Specialization in Computer Science Engineering

(AIML & Data Science Track)

SNo.	Semester	Course Code	Course Name	Hrs/ Week	Credits	Maximum Marks			ESE Duration
						CA	ESE	Total	
1.	IV	CSTH42	Data Science Programming Languages	4	4	40	60	100	3
2	V	CSTH54	Statistics for Data Analysis	4	4	40	60	100	3
3.	VI	CSTH62	Data Engineering	4	4	40	60	100	3
4.	VII	CSTH72-1	Business and Web Analytics	4	4	40	60	100	3
		CSTH72-2	Machine Learning	4	4	40	60	100	3
5.	VIII	CSTH82	Embedded Machine Learning	4	4	40	60	100	3

Honors Specialization in Computer Science Engineering

(Cyber Security Track)

S No	Semester	Course Code	Course Name	Hrs/ Week	Credits	Maximum Marks		ESE Duration	
						CA	ESE	Total	
1.	IV	CSTH43	Information and Cyber Security	4	4	40	60	100	3 Hrs
2.	V	CSTH56	Cyber Security Auditing	4	4	40	60	100	3 Hrs
3.	VI	CSTH63	Cyber Forensics: Threats, Vulnerability, Malware	4	4	40	60	100	3 Hrs
4.	VII	CSTH73	Security Strategies in Windows and Linux	4	4	40	60	100	3 Hrs
5.	VIII	CSTH83	Advanced Topics in Cyber Security: Incident Response, Business Continuity and Disaster Recovery	4	4	40	60	100	3 Hrs

Honors Specialization in Electronics and Communication Engineering

Sr. No.	Semester	Course Code	Course Title	Hour sper Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1	IV	ECTH41	Communication System Analysis	4	4	40	60	100	3
2	V	ECTH51	Radio Frequency Circuit Design	4	4	40	60	100	3
3	VI	ECTH61	Multimedia Network	4	4	40	60	100	3
4	VII	ECTH71	Cryptography and Information Security	4	4	40	60	100	3
5	VIII	ECTH81 - 1	Evolution of Air Interface towards 5G	4	4	40	60	100	3

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Electrical Engineering
Honors in Distributed Energy Generation Systems

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1	IV	EETH42	Renewable and Distributed Energy Sources	4	4	40	60	100	3
2	V	EETH52	Energy Storage System	4	4	40	60	100	3
3	VI	EETH62	Distributed Generation and Smartgrids Or Equivalent SWAYAM NPTEL course approved by the Department	4	4	40	60	100	3
4	VII	EETH72	Design of Power Converter for Distributed Generation SystemOr Equivalent SWAYAM NPTEL course approved by the Department	4	4	40	60	100	3
5	VIII	EETH82	Power Quality ImprovementTechniques Or Equivalent SWAYAM NPTEL course approved by the Department	4	4	40	60	100	3

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Biomedical Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1	IV	BMTH42	Biological Data and Databases	4	4	40	60	100	3
2	V	BMTH52	Computational Biology and Bioinformatics	4	4	40	60	100	3
3	VI	BMTH62	Programming in Bioinformatics	4	4	40	60	100	3
4	VII	BMTH72	Computer Aided Drug design and Chemoinformatics	4	4	40	60	100	3
5	VIII	BMTH82	Project	4	4	50	50	100	3

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Electronics Engineering

Sr. No.	Semester	CourseCode	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration (Hrs)
						CA	ESE	Total	
1	IV	ENTH 42	Introduction to Artificial intelligence and Machine Learning	4	4	40	60	100	3Hrs
		ENTH 43	Introduction to IoT		4				
2	V	ENTH 52	Deep Learning for VisualRecognition	4	4	40	60	100	3Hrs
		ENTH 53	Sensor Interfacing with Arduino and ESP8266		4				
3	VI	ENTH 62	Edge for AI Fundamentals	4	4	40	60	100	3Hrs
		ENTH 63	Cloud Computing using Raspberry pi		4				
4	VII	ENTH 72	Hardware Designing for AI/ML applications	4	4	40	60	100	3Hrs
		ENTH 73	Data Management and Analytics for IoT		4				
5	VIII	ENTH 81	Project	4	4	50	50	100	3Hrs

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Industrial Engineering

Sr. No.	Semester	Course Code	Course Title	Hour sper Week	Credits	Maximum Marks			ESE Durationin Hours
						Continuous Evaluation	End Sem Exams	Total	
1	IV	INTH41	Industry 4.0	4	0	0	4	40	60
2	V	INTH51	Soft Computing	4	0	0	4	40	60
3	VI	INTH61	Taguchi Methods for Experimentation	4	0	0	4	40	60
4	VII	INTH71	Supply Chain Optimization	4	0	0	4	40	60
5	VIII	INTH81-1	Business Analytics	4	0	0	4	40	60
		INTH81-2	Strategic Information Management System	4	0	0	4	40	60

Note: Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD.

Honors Specialization in Information Technology

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Durationin Hours
						CA	ESE	Total	
1	IV	ITTH42	Scientific Computing for Programmers	4	4	40	60	100	3
2	V	ITTH52	Software Testing	4	4	40	60	100	3
3	VI	ITTH62	Software Design and Architecture	4	4	40	60	100	3
4	VII	ITTH72	NPTEL Course (12 Weeks)*	4	4	-	-	-	-
5	VIII	ITTH82	NPTEL Course (12 Weeks)*	4	4	-	-	-	-

Note: 1.The above courses are to be opted as NPTEL courses with prior permission and consultation with Head Information Technology Department

2. If the above listed courses are not available at the time of registration, alternate courses will be offered by the department

Honors Specialization in Mechanical Engineering

Sr. No.	Semester	Course Code	Course Title	Hours per Week	Credits	Maximum Marks			ESE Duration in Hours
						CA	ESE	Total	
1	IV	METH41	Digital Manufacturing	4	4	40	60	100	3
2	V	METH51	Tool Design	4	4	40	60	100	3
3	VI	METH61	Turbo Machinery	4	4	40	60	100	3
4	VII	METH71	Design of Heat Exchangers	4	4	40	60	100	3
5	VIII	METH81-1	Tribology	4	4	40	60	100	3
		METH81-2	Robotics	4	4	40	60	100	3

Note : Credit transfer against above courses may be allowed if an appropriate MOOC course is completed by student after prior permission from HOD