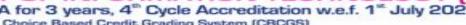


DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)



Under TCET Autonomy

M.E. Semester –I (Information Technology) **Choice Based Credit Grading Scheme (CBCGS 2023)**

	Course	Description	Teaching Scheme (Academic)				Examination scheme(Academic)					
										ontinuous Assessm		
Sr. No.	Course Code	Course Title	H	lours Per W	eek	Contact Hours	Credits	Theo	ry(100)	Practical/Oral/ Presentation (25)	Term Work(25/ 50)	Total
			Theory	Tutorial	Practical			IA(25/ 15)	ESE(75/ 35)	PR/OR	TW	
1	PCC- ITME101	Applied Statistics & Exploratory Data Analytics	3	-	-	3	3	25	75	-	-	100
2	PCC- ITME102	Machine Learning	3	-	-	3	3	25	75	-	-	100
3	PEC- ITME101X	Program Elective 1*	3	-	-	3	3	25	75	-	-	100
4	PEC- ITME102X	Program Elective 2*	3	-	-	3	3	25	75	-	-	100
5	MC- ITME101	Research Methodology & IPR	2	-	-	2	2	15	35	-	-	50
6	AC- ITME00X	Audit Course	2	-	-	2	-	-	-	-	50	50
7	LC- ITME101	Laboratory I(Machine Learning)	ı	-	4	4	2	-	-	25	25	50
8	LC- ITME102	Laboratory II(Based on Electives)	-	-	4	4	2	-	-	25	25	50
9	IC-ITME2	Industry Certification#	-	-	4	4	2			25	25	50
		Fotal	16	-	12	28	20	Total marks			650	



TCET DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)





Under TCET Autonomy **Program Elective**

Sr. No.	Corse Code	Program Elective 1	Corse Code	Program Elective 2	Domain Specialization*
1	PEC-ITME1011	Ethical Hacking and Digital Forensics	PEC-ITME1021	ICT Security for Social Cause	
	PEC-ITME1012 Cyber Security & Laws		PEC-ITME1022	Security & Risk Management	Cyber Security
	PEC-ITME1013	Cryptography & PKI	PEC-ITME1023	Network Security	
2	PEC-ITME1014	Applied Natural Language Programming	PEC-ITME1024	Computer Vision & Image Processing	
	PEC-ITME1015 Conversational AI		PEC-ITME1025	Robotic Process & Automation	Artificial Intelligence
	PEC-ITME1016	Reinforcement Learning	PEC-ITME1026	Advanced Soft Computing	
	PEC-ITME1017	Advance Web Technologies	PEC-ITME1027	Web X.0	Web Application development
3	PEC-ITME1018	Web Application Security	PEC-ITME1028	Web Analytics and Intelligence	web Application development

		Audit Course
Sr. No.	Course Code	Course Title
1	AC-ITME001	English for Research Paper Writing
2	AC-ITME002	Disaster Management
3	AC-ITME003	Sanskrit for Technical Knowledge
4	AC-ITME004	Value Education
5	AC-ITME005	Constitution of India
6	AC-ITME006	Pedagogy Studies
7	AC-ITME007	Stress Management by Yoga
8	AC-ITME008	Personality Development through Life Enlightenment Skills

^{*} Students opting for a particular Domain Specialization Track in all the semesters & Industry Certification will be eligible for domain specialization by Institute.



DEPARTMENT OF INFORMATION TECHNOLOGY (IT)

(Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1st July 2022)

Choice Based Credit Grading System (CBCGS)





M.E. Semester –II (Information Technology) **Choice Based Credit Grading Scheme (CBCGS 2023)**

Course Description			Teaching Scheme (Academic)					Examination scheme(Academic)				
								Mode	s of Continu	ous Assessme	ent / Evalu	ation
Sr. No.	Course Code	Course Title		Hours Per V	Week	Contact Hours	Credits			Theory(100) Practical/ Ter Oral/Pres entation (25/50) 25/5		Total
			Theory	Tutorial	Practical			IA(25)	ESE(75)	PR/OR	TW	
1	PCC-ITME201	Advanced Data Structures & Algorithms	3	-	-	3	3	25	75	-	-	100
2	PCC-ITME202	Advance Database Management	3	-	-	3	3	25	75	-	-	100
3	PEC- ITME201X	Program Elective 3*	3	-	-	3	3	25	75	-	-	100
4	PEC- ITME202X	Program Elective 4*	3	-	-	3	3	25	75	1	-	100
5	AC-ITME00X	Audit Course	2	-	-	2	-	-	-	-	50	50
6	MC-ITME201	Research & Scientific paper writing and Communication	2	-	-	2	2	15	35	1	-	50
7	LC-ITME201	Laboratory III(Based on cores)	-	-	4	4	2	-	-	25	25	50
8	LC-ITME202	Laboratory IV(Based on Electives)	-	-	4	4	2	-	-	25	25	50
9	LC-ITME203	Mini Project with Seminar	-	-	4	4	2	-	-	50	-	50
	Total			-	12	28	20		Total mark	s (Academic)	•	650



TCET DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)

Under TCET Autonomy

Program Elective

Sr. No.	Corse Code	Program Elective 3	Corse Code	Program Elective 4	Domain Specialization
1	PEC-ITME2011 Laws of Data Security & Investigations		PEC-ITME2021	IT Security Strategic Planning, Policy and Leadership	Cyber Security
	PEC-ITME2012	Hacker Technique, Exploits and Incident handling	PEC-ITME2022	Advanced Computer Forensic Analysis	
	PEC-ITME2013	Digital & Cyber Forensics	PEC-ITME2023	Advanced Cryptography	
2	PEC-ITME2014	Game Design	PEC-ITME2024	Advanced Machine Learning	Artificial Intelligence
	PEC-ITME2015	Web Analytics and Development	PEC-ITME2025	Human Machine Interaction	
	PEC-ITME2016	AI in BlockChain	PEC-ITME2026	Sentiment Analysis	
3	PEC-ITME2017	Advanced Web Technology	PEC-ITME2027	Application & Web Security	Web Application
	PEC-ITME2018	Service Oriented Architecture & Web Security	P8C-ITME2027	Front end & Back end Development with React	Development

^{*} Students opting for a particular Domain Specialization Track in all the semesters & Industry Certification will be eligible for domain specialization by Institute.



DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)



Under TCET Autonomy

M.E. Semester –III (Information Technology) **Choice Based Credit Grading Scheme (CBCGS 2023)**

	Course	Description	,	Teaching S	Scheme (A	cademic)		Examination scheme(Academic)						
Sr. No.	Course Code	Course Title	Hou	rs Per We	ek	Contact Hours	Credits	Theory(100)		Theory(100)		Practical/Oral /Presentation (25/50)	Term Work (25/50)	Total
			Theory	Tutori al	Practic al			IA	ESE	PR/OR	TW			
1	PEC- ITME301X	Program Elective 5*	1	- -	- -	1	1	-	-	25	25	50		
2	OEC- ITME30X	Open Elective@	1	-	-	1	1	-	-	25	25	50		
3	D1- ITME301	Dissertation –I/ Industry Project	-	=	36	36	18	-	-	50	50	100		
		Total	2	-	36	38	20	20 Total marks (Academic)			mic)	200		

Sr. No.	Course code	Program Elective 5	Domain Specialization
1	PEC-ITME3011	Security Architecture : Design & Analysis	
	PEC-ITME3012	Ethical Hacking and Penetration Testing	Cyber Security
	PEC-ITME3013	Public Key Infrastructure and Trust Management	
2	PEC-ITME3015	Cognitive Computing	Artificial
	PEC-ITME3016	Explainable & Ethical AI	1 11 11 11 11 11 11 11 11 11 11 11 11 1
	PEC-ITME3017	Generative AI	Intelligence
3	PEC-ITME3018	Full Stack web development	Web Application
	PEC-ITME3019	E-Business & E-Commerce	Development



TCET DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)



Under TCET Autonomy

Open Elective

Sr.	Course Code	Course Title
No.		
1	OEC-ITME301	Business Analytics
2	OEC-ITME302	Industrial Safety
3	OEC-ITME303	Operations Research
4	OEC-ITME304	Cost Management of Engineering Projects
5	OEC-ITME305	Composite Materials
6	OEC-ITME306	Waste to Energy

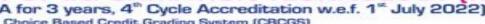
^{*} Students may complete Sem III Program Elective courses through MOOCs/self-learning mode.

@Students may complete Sem III Open Elective courses through MOOCs/self-learning mode.

Dissertation-I should be preferably based on industrial /research project carried out in industry or institute /research organization.



TCET DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System [CBCGS]





Under TCET Autonomy

M.E. Semester –IV (Information Technology) **Choice Based Credit Grading Scheme (CBCGS 2023)**

	Со	urse Description		Teachin	g Scheme	e (Academic)	Examination scheme(Academic)						
Sr. No.	Course Code	Course Title	Hou	rs Per W	eek	Contact Hours	Credits	Theory(100)		Theory(100)		Practical/Ora l/Presentation	Term Work	Total
			Theory	Tutor ial	Practic al			IA	ESE	PR/OR	TW			
1	D2- ITME401	Dissertation –II / Industry Project	-	-	40	40	20	-	-	100	100	200		
Total			-	-	40	40	20	Total marks (Academic)			200			

Dissertation-I should be preferably based on industrial /research project carried out in industry or institute /research organization.

Th: Theory	IA- In-Semester Assessment
Tut:Tutorial	ESE- End Semester Examination
Pr:Practical	PR- Practical Examination
PCC: Professional Core Courses	TW – Term Work Examination
PEC: : Professional Elective Courses	OR- Oral Examination
MC: Mandatory Courses	AC- Activity
AC: Audit Courses	@ITP :Integrated Theory/Practice
LC: Laboratory Courses	@CL/PL: Collaborative/Peer Learning
OEC: Open Elective Courses	
D: Dissertation	



DEPARTMENT OF INFORMATION TECHNOLOGY (IT) (Accredited by NBA for 3 years, 4th Cycle Accreditation w.e.f. 1th July 2022) Choice Based Credit Grading System (CBCGS)

Under TCET Autonomy



Sr. No.	Program Elective 1	Program Elective 2	Program Elective 3	Program Elective 4	Program Elective 5	Domain Specialization
1	Security Analysis of Protocols/ Wireless Security/Intrusion Detection/ Social Network Analysis	Biometric Security/ Provable and Modern Cryptosystems / Information Security Audit/ Defensible Security Architectures	Cyber Secure Software Engineering/ Foundations of Cyber Physical System	Cyber Physical Systems and Applications / Computational Cyber Physical Systems	Trust Worthy Cyber Physical Systems/ Cyber Physical Systems Verification	Cyber Security
2	Applied Natural Language Processing/ Conversational AI/ Reinforcement Learning	Computer Vision & Image Processing/ Robotics & Automation/ Advanced Soft Computing	Game Design/ Web Analytics and Development/ AI in BlockChain	Advanced Machine Learning/ Human Machine Interaction/ Sentiment Analysis	Cognitive Computing/ Explainable & Ethical AI/ Generative AI	Artificial Intelligence
3	Web Engineering	Enterprise Resource Planning	Modern Application Development	Web Development with Python	Design Patterns & Object Modeling	Web Application Development