



**M.E. Semester –I (Computer Engineering)**  
**Choice Based Credit Grading Scheme (CBCGS 2019)**

Course Description			Teaching Scheme (Academic)					Examination scheme(Academic)				
Sr. No.	Course Code	Course Title	Hours Per Week			Contact Hours	Credits	Modes of Continuous Assessment / Evaluation				
			Theory	Tutorial	Practical			Theory(100)		Practical/Oral/Presentation (25) PR/OR	Term Work(25/50) TW	Total
								IA(25/15)	ESE(75/35)			
1	PCC-CSME101	Mathematical Foundations of Computer Science& Information Technology	3	-	-	3	3	25	75	-	-	100
2	PCC-CSME102	Advanced Data Structures	3	-	-	3	3	25	75	-	-	100
3	PEC-CSME101X	Program Elective 1	3	-	-	3	3	25	75	-	-	100
4	PEC-CSME102X	Program Elective 2	3	-	-	3	3	25	75	-	-	100
5	MC-CSME101	Research Methodology & IPR@	2	-	-	2	2	15	35	-	-	50
6	AC-CSME00X	Audit Course	2	-	-	2	-	-	-	-	50	50
7	LC-CSME101	Laboratory I(Advanced Data Structures)	-	-	4	4	2	-	-	25	25	50
8	LC-CSME102	Laboratory II(Based on Electives)	-	-	4	4	2	-	-	25	25	50
<b>Total</b>			<b>16</b>	<b>-</b>	<b>8</b>	<b>24</b>	<b>18</b>	<b>Total marks</b>				<b>600</b>



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Choice Based Credit Grading System with Holistic Student Development (CBCGS - H 2019)

Under TCET Autonomy Scheme - 2019



**Program Elective**

Sr. No.	Corse Code	Program Elective 1	Corse Code	Program Elective 2	Domain Specialization*
1	PEC-CSME1011	Big Data Analytics	PEC-CSME1021	Recommender System	Data Science
	PEC-CSME1012	Distributed Systems	PEC-CSME1022	Machine Learning	
	PEC-CSME1013	Data Preparation and Analysis	PEC-CSME1023	Data Storage Technologies and Networks	
2	PEC-CSME1014	Data Science for IoT	PEC-CSME1024	Machine Learning for IoT	Internet of Things
	PEC-CSME1015	Wireless Access Technologies	PEC-CSME1025	Smart Sensors and Internet of Things	
	PEC-CSME1016	Mobile Applications and Services	PEC-CSME1026	Logic and Functional programming	

**\* Students opting for a particular Domain Specialization Track in all the semesters will be eligible for domain specialization certificate in the Particular domain.**

**%Students selecting program electives across different tracks will be offered a degree without domain specialization certificate.**



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<b>Audit Course</b>		
<b>Sr. No.</b>	<b>Course Code</b>	<b>Course Title</b>
1	AC-CSME001	English for Research Paper Writing
2	AC-CSME002	Disaster Management
3	AC-CSME003	Sanskrit for Technical Knowledge
4	AC-CSME004	Value Education
5	AC-CSME005	Constitution of India
6	AC-CSME006	Pedagogy Studies
7	AC-CSME007	Stress Management by Yoga
8	AC-CSME008	Personality Development through Life Enlightenment Skills

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MC: Mandatory Courses	AC- Activity
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OEC: Open Elective Courses	
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**M.E. Semester –II (Computer Engineering)  
Choice Based Credit Grading Scheme (CBCGS 2019)**

Course Description			Teaching Scheme (Academic)					Examination scheme(Academic)				
								Modes of Continuous Assessment / Evaluation				
Sr. No.	Course Code	Course Title	Hours Per Week			Contact Hours	Credits	Theory(100)		Practical/Oral /Presentation (25/50) PR/OR	Term Work(25/50) TW	
			Theory	Tutorial	Practical			IA(25)	ESE(75)			
1	PCC-CSME201	Advanced Algorithms	3	-	-	3	3	25	75	-	-	100
2	PCC-CSME202	Soft Computing	3	-	-	3	3	25	75	-	-	100
3	PEC-CSME201X	Program Elective 3	3	-	-	3	3	25	75	-	-	100
4	PEC-CSME202X	Program Elective 4	3	-	-	3	3	25	75	-	-	100
5	AC-CSME00X	Audit Course	2	-	-	2	-	-	-	-	50	50
6	LC-CSME201	Laboratory III(Based on cores)	-	-	4	4	2	-	-	25	25	50
7	LC-CSME202	Laboratory IV(Based on Electives)	-	-	4	4	2	-	-	25	25	50
8	LC-CSME203	Mini Project with Seminar	-	-	4	4	2	-	-	50	-	50
<b>Total</b>			<b>14</b>	<b>-</b>	<b>12</b>	<b>26</b>	<b>18</b>	<b>Total marks (Academic)</b>				<b>600</b>



### Program Elective

Sr. No.	Corse Code	Program Elective 3	Corse Code	Program Elective 4	Domain Specialization
1	PEC-CSME2011	Data Visualization	PEC-CSME2021	Data Security and Access Control	Data Science
	PEC-CSME2012	Data Science	PEC-CSME2022	Web Analytics and Development	
	PEC-CSME2013	Data Warehouse and Data Mining	PEC-CSME2023	Knowledge Discovery	
2	PEC-CSME2014	Sensor Networks and Internet of Things	PEC-CSME2024	Big Data Analytics for IoT	Internet of Things
	PEC-CSME2015	Data Visualization for IoT	PEC-CSME2025	Network Security	
	PEC-CSME2016	IoT Application and Communication Protocol	PEC-CSME2026	Advanced Machine Learning	

**\*\*Students should be encouraged to go to Industrial Training/Internship for at least 2-3 Weeks during semester break.**

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**M.E. Semester –III (Computer Engineering)**  
**Choice Based Credit Grading Scheme (CBCGS 2019)**

Course Description			Teaching Scheme (Academic)				Examination scheme(Academic)					
Sr. No.	Course Code	Course Title	Hours Per Week			Contact Hours	Credits	Theory(100)		Practical/Oral /Presentation (25/50) PR/OR	Term Work (25/50) TW	Total
			Theory	Tutorial	Practical			IA	ESE			
1	PEC-CSME301X	Program Elective 5#	3	-	-	3	3	-	-	25	25	50
2	OEC-CSME30X	Open Elective#	3	-	-	3	3	-	-	25	25	50
3	D1-CSME301	Dissertation –I/ Industry Project	-	-	20	20	10	-	-	50	50	100
<b>Total</b>			<b>6</b>	<b>-</b>	<b>20</b>	<b>26</b>	<b>16</b>	<b>Total marks (Academic)</b>			<b>200</b>	

Sr. No.	Course code	Program Elective 5	Domain Specialization
1	PEC-CSME3011	GPU Computing	Data Science
	PEC-CSME3012	Cloud Computing	
	PEC-CSME3013	Distributed Databases	
2	PEC-CSME3014	Cloud Computing for IOT	Internet of Things
	PEC-CSME3015	IOT and Smart Cities	
	PEC-CSME3016	Emulation and Simulation Methodologies	

**/\* Students going for Industrial Project may complete the semester -III courses through MOOCs/self-learning mode.**

**# Students may complete Open/ Program Elective or similar PG level courses through MOOCs/self-learning mode.**

**Note:1. Dissertation- I/industry project shall be preferably carried out as an in-house or outhouse internship.**

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

**Open Elective**

Sr. No.	Course Code	Course Title
1	OEC-CSME301	Business Analytics
2	OEC-CSME302	Industrial Safety
3	OEC-CSME303	Operations Research
4	OEC-CSME304	Cost Management of Engineering Projects
5	OEC-CSME305	Composite Materials
6	OEC-CSME306	Waste to Energy

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**M.E. Semester –IV (Computer Engineering)  
Choice Based Credit Grading Scheme (CBCGS 2019)**

Course Description			Teaching Scheme (Academic)				Examination scheme(Academic)					
Sr. No.	Course Code	Course Title	Hours Per Week			Contact Hours	Credits	Theory(100)		Practical/Ora I/Presentation	Term Work	Total
			Theory	Tutorial	Practical			IA	ESE			
1	D2-CSME401	Dissertation –II / Industry Project	-	-	32	32	16	-	-	100	100	200
<b>Total</b>			-	-	<b>32</b>	<b>32</b>	<b>16</b>	<b>Total marks (Academic)</b>			<b>200</b>	

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
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**Program Elective**

Sr. No.	Program Elective 1	Program Elective 2	Program Elective 3	Program Elective 4	Program Elective 5	Domain Specialization
1	Big Data Analytics / Distributed Systems/ Data Preparation and Analysis	Recommender System/ Machine Learning/ Data Storage Technologies and Networks	Data Visualization/ Data Science / Data Warehouse and Data Mining	Data Security and Access Control/ Web Analytics and Development/ Knowledge Discovery	GPU Computing/ Cloud Computing/ Distributed Databases	Data Science
2	Data Science for IoT/ Wireless Access Technologies/ Mobile Applications and Services	Machine Learning for IoT/ Smart Sensors and Internet of Things/ Logic and Functional programming	Sensor Networks and Internet of Things/ Data Visualization for IoT/ IoT Application and Communication Protocol	Big Data Analytics for IoT/ Network Security/ Advanced Machine Learning	Cloud Computing for IoT/ IOT and Smart Cities/ Emulation and Simulation Methodologies	Internet of Things