Faculty of Engineering & Technology

Syllabus

For

Master of Technology (M.Tech.)

in

Computer Science & Engineering

(Program Code: MT0151CS)

Approved by the Academic Council vide resolution no ……

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9. PROGRAM STRUCTURE M. Tech. (CSE)

Semester - I

Code	Title of Subject	Type	L	T	P	IA	EA	Total	Credits
MTCSCS 101	Mathematical foundations of Computer Science	Core	3	0	0	50	100	150	3
MTCSCS 102	Advanced Data Structures	Core	3	0	0	50	100	150	3
MTCSCS 103A	Machine Learning	Elective	3	0	0	50	100	150	3
MTCSCS 103B	Wireless Sensor Networks	Elective	3	0	0	50	100	150	3
MTCSCS 103C	Introduction to Intelligent Systems	Elective	3	0	0	50	100	150	3
MTCSCS 104A	Data Science	Elective	3	0	0	50	100	150	3
MTCSCS 104B	Distributed Systems	Elective	3	0	0	50	100	150	3
MTCSCS 104C	Advanced Wireless and Mobile Networks	Elective	3	0	0	50	100	150	3
MTCSCS 105	Research Methodology and IPR	Core	2	0	0	50	100	150	2
MTCSCS 106	Audit Course –**1** AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	AECC	2	0	0	0	0	0	0
Practical/Viva Voce		**Type**	**L**	**T**	**P**	**IA**	**EA**	**Total**	**Credits**
MTCSCS 107	Advanced Data Structures Lab	Core	0	0	2	60	40	100	2
MTCSCS 108	Distributed Systems Lab	Core	0	0	2	60	40	100	2
MTCSCS 109	ANANDAM	AECC	1	-	1	50	50	100	2
Total			**17**	**0**	**5**	**420**	**630**	**1050**	**20**

Semester – II

Code	Subject	Type	L	T	P	IA	EA	Total	Credits
MTCSCS 201	Information Security System	Core	3	0	0	50	100	150	3
MTCSCS 202	Soft Computing	Core	3	0	0	50	100	150	3
MTCSCS 203A	Data Preparation and Analysis	Elective	3	0	0	50	100	150	3
MTCSCS 203B	Secure Software Design & Enterprise Computing	Elective	3	0	0	50	100	150	3
MTCSCS 203C	Computer Vision	Elective	3	0	0	50	100	150	3
MTCSCS 204A	Advanced Communication Network	Elective	3	0	0	50	100	150	3
MTCSCS 204B	GPU Computing	Elective	3	0	0	50	100	150	3
MTCSCS 204C	Digital Forensics	Elective	3	0	0	50	100	150	3
MTCSCS 205	Audit Course –2 AUDIT 1 and 2 : English for Research Paper Writing AUDIT 1 and 2: Disaster Management AUDIT 1 and 2 : Sanskrit For Technical Knowledge AUDIT 1 and 2 : Value Education AUDIT 1 and 2 : Constitution Of India AUDIT 1 and 2 : Pedagogy Studies AUDIT 1 and 2: Stress Management by Yoga AUDIT 1 and 2: Personality Development through Life Enlightenment Skills	AECC	2	0	0	0	0	0	0
Practical/Viva Voce									
MTCSCS 206	Information Security SystemLab	Core	0	0	2	60	40	100	2
MTCSCS 207	Advanced Communication Network Lab	Core	0	0	2	60	40	100	2
MTCSCS 208	Mini Project with Seminar	Core	2	0	0	60	40	100	2
MTCSCS 209	ANANDAM	AECC	1	-	1	50	50	100	2
Total			**17**	**0**	**5**	**430**	**570**	**1000**	**20**

Semester - III

Code	Subject	Type	L	T	P	IA	EA	Total	Credits
MTCSCS 301A	Mobile Applications and Services	Elective	3	0	0	50	100	150	3
MTCSCS 301B	Compiler for HPC	Elective	3	0	0	50	100	150	3
MTCSCS 301C	Optimization Techniques	Elective	3	0	0	50	100	150	3
MTCSCS 302A	Business Analytics	Elective	3	0	0	50	100	150	3
MTCSCS 302B	Industrial Safety	Elective	3	0	0	50	100	150	3
MTCSCS 302C	Operations Research	Elective	3	0	0	50	100	150	3
MTCSCS 302D	Cost Management of Engineering Projects	Elective	3	0	0	50	100	150	3
MTCSCS 302E	Composite Materials	Elective	3	0	0	50	100	150	3
MTCSCS 302F	Waste to Energy	Elective	3	0	0	50	100	150	3
Practical/Viva Voce		**Type**	**L**	**T**	**P**	**IA**	**EA**	**Total**	**Credits**
MTCSCS 303	Dissertation-I/ Industrial Project	Core	0	0	10	60	40	100	10
MTCSCS 304	ANANDAM	AECC	1	-	1	50	50	100	2
Total			**7**	**0**	**11**	**210**	**290**	**500**	**18**

Semester - IV

Code	Subject	Type	L	T	P	IA	EA	Total	Credits
MTCSCS 401	Dissertation II	Core	0	0	16	300	400	700	16
MTCSCS 402	ANANDAM	AECC	1	-	1	50	50	100	2
Total			**1**	**0**	**17**	**350**	**450**	**800**	**18**

Note:

- A student is required to obtain min. 40% marks in individual paper & 50% in aggregate to pass.
- The total credit of M.Tech. (CSE) Programme is 76. However, the minimum credit required for award of degree shall be 70.
- The credit relaxation will be applicable only on the elective course (i.e. the student can opt out only elective subject).
- Out of the total credits, 20% of the credits may be earned by the student through MOOCs (SWAYAM, NPTEL, Coursera etc.). However, the choice of online courses to be approved in advance by Dean/ HoD and Coordinator SWAYAM keeping in view the latest guidelines of the UGC/ respective regulatory body guidelines.