

**13. Courses of Study and Scheme of Assessment
ME COMPUTER SCIENCE AND ENGINEERING**

**(2021 REGULATIONS)
(Minimum No. of credits to be earned: 71*)**

Course Code	Course Title	Hours / Week			Credits	Maximum Marks			CAT
		Lecture	Tutorial	Practical		CA	FE	Total	
I SEMESTER									
21ZC01	Linear Algebra And Statistical Methods	3	1	0	4	50	50	100	PC
21ZC02	Data Structures and Algorithms	3	1	0	4	50	50	100	PC
21ZC03	Database Technologies	3	0	0	3	50	50	100	PC
21ZC04	Advanced Software Engineering	3	1	0	4	50	50	100	PC
21ZC05	Advanced Operating Systems	3	1	0	4	50	50	100	PC
21ZC06	Research Methodology and IPR	2	0	0	2	50	50	100	RMC
21ZC72	Audit Course – I	2	0	0	Grade	100	0	100	MC
21ZC51	Computational Thinking Laboratory	0	0	4	2	50	50	100	PC
21ZC52	Database Technologies Laboratory	0	0	4	2	50	50	100	PC
Total 31hrs		19	4	8	25	500	400	900	
II SEMESTER									
21ZC07	Embedded Systems Design	3	0	0	3	50	50	100	PC
21ZC08	Networking Technologies	3	1	0	4	50	50	100	PC
21ZC__	Professional Elective – I	3	0	0	3	50	50	100	PE
21ZC__	Professional Elective – II	3	0	0	3	50	50	100	PE
21ZC__	Professional Elective – III	3	0	0	3	50	50	100	PE
21ZC82	Audit Course – II	2	0	0	Grade	100	0	100	MC
21ZC61	Embedded Systems Laboratory	0	0	4	2	50	50	100	PC
21ZC62	Application Development Laboratory	0	0	4	2	50	50	100	PC
21ZC63	Industrial visit and Technical Seminar	0	0	4	2	50	50	100	EEC
Total 30hrs		17	1	12	22	500	400	900	
III SEMESTER									
21ZC__	Professional Elective – IV	3	0	0	3	50	50	100	PE
21____	Open Elective	3	0	0	3	50	50	100	OE
21ZC71	Project Work - I	0	0	12	6	50	50	100	EEC
Total 18hrs		6	0	12	12	150	150	300	
IV SEMESTER									

21ZC81	Project Work - II	0	0	24	12	50	50	100	EEC
Total 24hrs		0	0	24	12	50	50	100	
PROFESSIONAL ELECTIVE THEORY COURSES (Four to be opted)									
21ZC21	Randomized and Approximation Algorithms	3	0	0	3	50	50	100	PE
21ZC22	Agile Software Development	3	0	0	3	50	50	100	PE
21ZC23	Blockchain and Distributed Ledger Technology	3	0	0	3	50	50	100	PE
21ZC24	Brain Computer Interface	3	0	0	3	50	50	100	PE
21ZC25	Cloud Computing	3	0	0	3	50	50	100	PE
21ZC26	Computer Vision	3	0	0	3	50	50	100	PE
21ZC27	Cryptography and Network Security	3	0	0	3	50	50	100	PE
21ZC28	Deep Learning	3	0	0	3	50	50	100	PE
21ZC29	Evolutionary Computing Techniques	3	0	0	3	50	50	100	PE
21ZC30	GPU Computing	3	0	0	3	50	50	100	PE
21ZC31	Information Retrieval	3	0	0	3	50	50	100	PE
21ZC32	Internet of Things	3	0	0	3	50	50	100	PE
21ZC33	Natural Language Processing	3	0	0	3	50	50	100	PE
21ZC34	Machine Learning	3	0	0	3	50	50	100	PE
21ZC35	Real Time Systems	3	0	0	3	50	50	100	PE
21ZC36	Software Defined Networks	3	0	0	3	50	50	100	PE
21ZC37	Quantum Computing	3	0	0	3	50	50	100	PE
21ZC38	Data Intensive Computing Systems	3	0	0	3	50	50	100	PE
21ZC39	Open Source Systems	3	0	0	3	50	50	100	PE
21ZC40	Software Engineering Management	3	0	0	3	50	50	100	PE
OPEN ELECTIVE THEORY COURSES (One to be opted)									
21ZC91	Game Theory	3	0	0	3	50	50	100	OE
21ZC92	Optimization Techniques	3	0	0	3	50	50	100	OE

* Indicated is the minimum number of credits to be earned by a student.

CAT – Category; PC – Professional Core; PE - Professional Elective; RMC - Research Methodology and IPR; EEC – Employability Enhancement Course; MC - Mandatory Course; Grade – Completed / Not completed; OE – Open Elective.