COIMBATORE INSTITUTE OF TECHNOLOGY

(Government Aided Autonomous Institution Affiliated to Anna University, Chennai)

DEPARTMENT OF COMPUTING

M.SC. (SOFTWARE SYSTEMS)

Curriculum - For the Students admitted during 2020 - 2021 and onwards

Semester I

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS11	Technical English	2	0	0	2	HS
20MSS12	Applied Algebra and Calculus	3	1	0	4	BS
20MSS13	Structured Systems Analysis and Design	3	0	0	3	PC
20MSS14	Digital Electronics	3	0	0	3	PC
20MSS15	Problem Solving using C Programming	3	1	0	4	PC
	PRACTICALS					
20MSS16	Computing Laboratory	0	0	4	2	PC
20MSS17	Programming Laboratory in C	0	0	4	2	PC
20MSS18	Digital Electronics Laboratory	0	0	2	1	PC
20MSS19	Employability Skills	0	0	2	1	EEC
	TOTAL CREDITS				22	

Semester II

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
	Language Elective	2	0	0	2	HS
20MSS21	Probability and Statistics - I	3	1	0	4	BS
20MSS22	Data Structures and Algorithms	3	1	0	4	PC
20MSS23	Fundamentals of Web Technology	3	0	0	3	PC
20MSS24	Object Oriented Programming	3	0	0	3	PC
	PRACTICALS					
20MSS25	Web Application Development Laboratory	0	0	4	2	PC
20MSS26	Data Structures and Algorithms Laboratory	0	0	4	2	PC
20MSS27	Object Oriented Programming Laboratory	0	0	4	2	PC
20MSS28	English for Employability	0	0	2	1	EEC
	TOTAL CREDITS				23	

Semester III

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS31	Theoretical Computer Science	3	0	0	3	BS
20MSS32	Probability and Statistics - II	3	1	0	4	BS
20MSS33	Advanced Data Structures	3	0	0	3	PC
20MSS34	Computer Architecture	3	0	0	3	PC
20MSS35	Operating Systems	3	0	0	3	PC
	PRACTICALS					
20MSS36	Python Programming Laboratory	0	0	4	2	PC
20MSS37	Advanced Data Structures Laboratory	0	0	4	2	PC
20MSS38	Operating Systems Laboratory	0	0	4	2	PC
	TOTAL CREDITS				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS41	Resource Management Techniques	3	0	0	3	BS
20MSS42	Microprocessors and Microcontrollers	3	0	0	3	PC
20MSS43	Software Engineering	3	0	0	3	PC
20MSS44	Database Management Systems	3	0	0	3	PC
20MSS45	Java Programming	3	0	0	3	PC
	PRACTICALS					
20MSS46	Microprocessors and Microcontrollers Laboratory	0	0	4	2	PC
20MSS47	Database Management Systems Laboratory	0	0	4	2	PC
20MSS48	Java Programming Laboratory	0	0	4	2	PC
20MSS49	Personality Development	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester V

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS51	Full Stack Application Development	3	0	0	3	PC
20MSS52	Computer Networks	3	0	0	3	PC
20MSS53	Design and Analysis of Algorithms	3	1	0	4	PC
20MSS54	Machine Learning	3	0	0	3	PC
	Elective I	3	0	0	3	PC
	PRACTICALS					
20MSS55	Full Stack Application Development Laboratory	0	0	4	2	PC
20MSS56	Network Programming Laboratory	0	0	4	2	PC
	Elective Laboratory I	0	0	4	2	PC
20MSS57	Communications Skills	0	0	2	1	EEC
	TOTAL CREDITS				**23**	

Semester VI

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS61	Software Testing and Quality Assurance	3	0	0	3	PC
20MSS62	Mobile Computing	3	0	0	3	PC
20MSS63	Cloud Computing	3	0	0	3	PC
20MSS64	Software Architecture	3	0	0	3	PC
	Elective II	3	0	0	3	PC
	PRACTICALS					
20MSS65	Software Engineering Laboratory	0	0	4	2	PC
20MSS66	Cloud and Mobile Application Development Lab	0	0	4	2	PC
	Elective Laboratory II	0	0	4	2	PC
20MSS67	Hackathon	0	0	2	1	EEC
	TOTAL CREDITS				**22**	

Semester VII

Course Code	Course Name	L	T	P	C	CAT
20MSS71	Project Work and Viva Voce-I	0	0	0	18	EEC

Semester VIII

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS81	Software Project Management	3	0	0	3	PC
20MSS82	Smart Sensors and Internet of Things	3	0	0	3	PC
20MSS83	Artificial Intelligence	3	0	0	3	PC
	Elective III	3	0	0	3	PC
	Elective IV	3	0	0	3	PC
	PRACTICALS					
20MSS84	Internet of Things Laboratory	0	0	4	2	PC
20MSS85	Artificial Intelligence Laboratory	0	0	4	2	PC
	Elective Laboratory III	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	CAT
	THEORY					
20MSS91	Agile Methods for Software Development	3	0	0	3	PC
20MSS92	Information Security	3	0	0	3	PC
20MSS93	Professional Ethics	3	0	0	3	EEC
	Elective V	3	0	0	3	PC
	Elective VI	3	0	0	3	PC
	PRACTICALS					
20MSS94	Information Security Laboratory	0	0	4	2	PC
	Elective Laboratory IV	0	0	4	2	PC
	Elective Laboratory V	0	0	4	2	PC
	TOTAL CREDITS				**21**	

Semester X

Course Code	Course Name	L	T	P	C	CAT
20MSS101	Project Work and Viva Voce-II	0	0	0	18	EEC
	TOTAL CREDITS				**18**	
	GRAND TOTAL OF CREDITS				**212**	

ELECTIVE THEORY COURSES

Course Code	Course Name	L	T	P	C	CAT
	DISTRIBUTED AND NETWORKED SYSTEMS STREAM					
20MSSE01	SOA and Web Services	3	0	0	3	PE
20MSSE02	Distributed Computing	3	0	0	3	PE
20MSSE03	Parallel Computing	3	0	0	3	PE
20MSSE04	Blockchain Technologies	3	0	0	3	PE
	DATA ANALYTICS STREAM					
20MSSE05	Big Data Architecture	3	0	0	3	PE
20MSSE06	Information Retrieval	3	0	0	3	PE
20MSSE07	Advanced Database Management Systems	3	0	0	3	PE
20MSSE08	Predictive Analytics	3	0	0	3	PE
20MSSE09	Data Mining	3	0	0	3	PE
	INTELLIGENT SYSTEMS STREAM					
20MSSE10	Computer Vision	3	0	0	3	PE
20MSSE11	Natural Language Processing	3	0	0	3	PE
20MSSE12	Meta-Heuristic Learning	3	0	0	3	PE
20MSSE13	Deep Learning	3	0	0	3	PE
20MSSE14	Decision Support Systems	3	0	0	3	PE
20MSSE15	Business Intelligence	3	0	0	3	PE
	GENERAL STREAM					
20MSSE16	Virtual and Augmented Reality	3	0	0	3	PE
20MSSE17	Compiler Design	3	0	0	3	PE
20MSSE18	Software User Interface Design	3	0	0	3	PE
20MSSE19	Enterprise Application Development	3	0	0	3	PE
20MSSE20	Design Thinking	3	0	0	3	PE
20MSSE21	Business Process Management	3	0	0	3	PE
20MSSE22	Software Language Engineering	3	0	0	3	PE
20MSSE23	Accounting and Financial Management	3	0	0	3	PE
20MSSE24	Human Computer Interaction and Interface	3	0	0	3	PE
20MSSE25	Quantum Computing	3	0	0	3	PE
20MSSE26	Real Time Systems	3	0	0	3	PE

ELECTIVE LABS

Course Code	Course Name	L	T	P	C	CAT
	DISTRIBUTED AND NETWORKED SYSTEMS STREAM					
20MSSL01	S0A and Web Services Laboratory	0	0	4	2	PE
20MSSL02	Parallel Computing Laboratory	0	0	4	2	PE
20MSSL03	Blockchain Technologies Laboratory	0	0	4	2	PE
	DATA ANALYTICS STREAM					
20MSSL04	Data Mining Laboratory	0	0	4	2	PE
20MSSL05	Big Data Architecture Laboratory	0	0	4	2	PE
20MSSL06	Predictive Analytics Laboratory	0	0	4	2	PE
	INTELLIGENT SYSTEMS STREAM					
20MSSL07	Natural Language Processing Laboratory	0	0	4	2	PE
20MSSL08	Meta-Heuristic Learning Laboratory	0	0	4	2	PE
20MSSL09	Deep Learning Laboratory	0	0	4	2	PE
20MSSL10	Business Intelligence Laboratory	0	0	4	2	PE
20MSSL11	Computer Vision Laboratory	0	0	4	2	PE
20MSSL12	Machine Learning Laboratory	0	0	4	2	PE
	GENERAL STREAM					
20MSSL13	Virtual and Augmented Reality Laboratory	0	0	4	2	PE
20MSSL14	Compiler Construction Laboratory	0	0	4	2	PE
20MSSL15	Enterprise Application Development Laboratory	0	0	4	2	PE
20MSSL16	Accounting and Financial Management Laboratory	0	0	4	2	PE
20MSSL17	Quantum Computing Laboratory	0	0	4	2	PE

LANGUAGE ELECTIVES

Course Code	Course Name	L	T	P	C	CAT
20MSSLE01	Professional English	2	0	0	2	HS
19FYG21	Basic German	2	0	0	2	HS
19FYF21	Basic French	2	0	0	2	HS