Coimbatore Institute of Technology, Coimbatore - 14.

(Government Aided Autonomous Institution Affiliated to Anna University and Accredited by NBA)

Department of Computing

M. Sc. DECISION AND COMPUTING SCIENCES
Five year Integrated Programme
Curriculum from the Academic Year 2022 – 2023 onwards

Semester I

Course Code	Course Name	L	T	P	C	CAT
Theory						
22MDC11	Technical English	2	0	1	2	HS
22MDC12	Applied Algebra and Calculus	3	1	0	4	BS
22MDC13	Statistical Methods	3	0	0	3	BS
22MDC14	Principles of Management	3	0	0	3	PC
22MDC15	Problem Solving and Programming in C	3	0	0	3	PC
Practicals						
22MDC16	Mathematical and Statistical Computing Laboratory	0	0	4	2	PC
22MDC17	C Programming Laboratory	0	0	4	2	PC
22MDC18	Foundations of Computer Science Laboratory	0	0	4	2	PC
22MDC19	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	1	2	HS
22MDC21	Probability Distributions and Applications	3	0	0	3	BS
22MDC22	Organisational Behavior	4	0	0	4	PC
22MDC23	Data Structures and Algorithms	3	0	0	3	PC
22MDC24	Computer Systems	3	0	0	3	PC
Practicals						
22MDC25	Applied Probability Laboratory	0	0	4	2	PC
22MDC26	Data Structures and Algorithms Laboratory	0	0	4	2	PC
22MDC27	Python Programming Laboratory	0	0	4	2	PC
22MDC28	English for Employability	0	0	2	1	EEC
	Total Credits				**22**	

Semester III

Course Code	Course Name	L	T	P	C	CAT

	Theory	L	T	P	C	CAT
22MDC31	Applied Statistics for Business Decisions	3	0	0	3	BS
22MDC32	Financial Analysis and Reporting	3	1	0	4	PC
22MDC33	Digital Marketing	3	0	0	3	PC
22MDC34	Database Management Systems	3	0	0	3	PC
22MDC35	Object Oriented Programming	3	0	0	3	PC
Practicals						
22MDC36	Digital Marketing Laboratory	0	0	4	2	PC
22MDC37	Database Management Systems Laboratory	0	0	4	2	PC
22MDC38	Object Oriented Programming Laboratory	0	0	4	2	PC
	Total Credits				**22**	

Semester IV

Course Code	Course Name	L	T	P	C	CAT
Theory						
22MDC41	Predictive Analytics	3	0	0	3	BS
22MDC42	Operations Research for Business	3	1	0	4	PC
22MDC43	Financial Engineering	3	0	0	3	BS
22MDC44	Advanced Data Structures and Algorithms	3	0	0	3	PC
22MDC45	Artificial Intelligence	3	0	0	3	PC
Practicals						
22MDC46	Predictive Analytics Laboratory	0	0	4	2	PC
22MDC47	Financial Engineering Laboratory	0	0	4	2	PC
22MDC48	Advanced Data Structures and Algorithms Laboratory	0	0	4	2	PC
22MDC49	Personality Development	0	0	2	1	EEC
	Total Credits				**23**	

Semester V

Course Code	Course Name	L	T	P	C	CAT
Theory						
22MDC51	Human Resource Management and Analytics	3	1	0	4	PC
22MDC52	Software Engineering	3	0	0	3	PC
22MDC53	Computer Networks	3	0	0	3	PC
22MDC54	Machine Learning	3	0	0	3	PC
	Elective I	3	0	0	3	PE
Practicals						
22MDC55	Full Stack Application Development lab	0	0	4	2	PC
22MDC56	Machine Learning Laboratory	0	0	4	2	PC
	Elective Laboratory I	0	0	4	2	PE
22MDC57	Managerial Communiation Skills	0	0	2	1	EEC

	Total Credits				23	

Semester VI

Course Code	Course Name	L	T	P	C	CAT
Theory						
22MDC61	Economic Foundations of Business	3	0	0	3	PC
22MDC62	Systems for Decision Support	3	0	0	3	PC
22MDC63	Cloud Computing	3	0	0	3	PC
22MDC64	Deep Learning	3	0	0	3	PC
	Elective- II	3	0	0	3	PE
Practicals						
22MDC65	Cloud and Mobile Application Development Laboratory	0	0	4	2	PC
22MDC66	Deep Learning Laboratory	0	0	4	2	PC
	Elective Lab II	0	0	4	2	PE
22MDC67	Hackathon	0	0	2	1	EEC
	Total Credits				**22**	

Semester VII

Course Code	Course Name	L	T	P	C	CAT
22MDC71	Project Work and Viva Voce-I	0	0	0	18	EEC
	Total Credits				**18**	

Semester VIII

Course Code	Course Name	L	T	P	C	CAT
Theory						
22MDC81	Modelling and Simulation	3	0	0	3	PC
22MDC82	Game Theory and Decision Analysis	3	0	0	3	PC
22MDC83	Production and Operations Management	3	0	0	3	PC
	Elective – III	3	0	0	3	PE
	Elective – IV	3	0	0	3	PE
Practicals						
22MDC84	Game Theory and Decision Analysis Laboratory	0	0	4	2	EEC
22MDC85	Minor Project (Decision Tool Development)	0	0	4	2	PC
	Elective Laboratory III	0	0	4	2	PE
	Total Credits				**21**	

Semester IX

Course Code	Course Name	L	T	P	C	CAT
Theory						

22MDC91	Project Management	3	0	0	3	PC
22MDC92	Business Ethics and Entrepreneurship Development	3	0	0	3	PC
22MDC93	Data Privacy and Security	3	0	0	3	PC
	Elective – V	3	0	0	3	PE
	Elective – VI	3	0	0	3	PE
Practicals						
22MDC94	Data Privacy and Security Analytics Laboratory	0	0	4	2	PC
	Elective Laboratory IV	0	0	4	2	EEC
	Elective Laboratory V	0	0	4	2	
	Total Credits				**21**	

Semester X

Course Code	Course Name	L	T	P	C	CAT
22MDC101	Project Work and Viva Voce- II	0	0	0	18	EEC
	Total Credits				**18**	
	Grand Total of Credits				**212**	

Professional Electives

	Management Stream					
Subject Code	**Title**	**L**	**T**	**P**	**C**	**Cat.**
	General					
22MDCE01	Business Process Management	3	0	0	3	PE
22MDCE02	Business Environment	3	0	0	3	PE
22MDCE03	Legal Aspects of Business	3	0	0	3	PE
22MDCE04	Strategic Management	3	0	0	3	PE
22MDCE05	Technology and Innovation Management	3	0	0	3	PE
	Finance					
22MDCE11	Equity Valuation	3	0	0	3	PE
22MDCE12	Credit Risk Analytics and Management	3	0	0	3	PE
22MDCE13	International Financial Management	3	0	0	3	PE
	Marketing					
22MDCE21	Customer Relationship Management	3	0	0	3	PE
22MDCE22	Brand Management	3	0	0	3	PE
22MDCE23	Marketing Analytics	3	0	0	3	PE
	Human Resources					
22MDCE31	Strategic Human Resource Management	3	0	0	3	PE
22MDCE32	Performance Management	3	0	0	3	PE
22MDCE33	Compensation Management	3	0	0	3	PE
	Operations & Logistics					
22MDCE41	Total Quality Management	3	0	0	3	PE

22MDCE42	Logistics Strategy and Planning	3	0	0	3	PE
22MDCE43	Supply Chain Management	3	0	0	3	PE

Computer Science Stream

Subject Code	Title	L	T	P	C	Cat.
Advanced Analytics and Intelligent Systems						
22MDCE51	Graph Theory for Data Science	3	0	0	3	PE
22MDCE52	Health Care Analytics	3	0	0	3	PE
22MDCE53	Social Network Analysis	3	0	0	3	PE
22MDCE54	Natural Language Processing	3	0	0	3	PE
Distributed and Network Systems						
22MDCE61	Blockchain Technologies	3	0	0	3	PE
22MDCE62	Distrubuted Computing	3	0	0	3	PE
22MDCE63	Embedded Systems	3	0	0	3	PE
22MDCE64	Sensing and Sensors	3	0	0	3	PE
22MDCE65	Internet of Things	3	0	0	3	PE
Software Engineering						
22MDCE71	Software Testing and Quality Assurance	3	0	0	3	PE
22MDCE72	Human Computer Interaction and Interface	3	0	0	3	PE
22MDCE73	Software Architecture and Design Patterns	3	0	0	3	PE
Cyber Security						
22MDCE81	Cyber Security Analytics	3	0	0	3	PE
22MDCE82	Digital Forensics	3	0	0	3	PE

Professional Electives - Laboratory

Subject code	Subject Name	L	T	P	C	CAT
22MDCEL1	Business Intelligence Laboratory	0	0	4	2	PE
22MDCEL2	Natural Language Processing Laboratory	0	0	4	2	PE
22MDCEL3	Computational Intelligence Laboratory	0	0	4	2	PE
22MDCEL4	Software Engineering Laboratory	0	0	4	2	PE
22MDCEL5	Internet of Things Laboratory	0	0	4	2	PE