

SEMESTER WISE PROGRAM STRUCTURE

Semester I

Course Type	Course Code	Course Name	Teaching Hrs		Credits Assigned		Total Credits
			TH	PR	TH	PR	
Discipline Specific Courses (Major Mandatory) - DSC	CCS/MJT/500	Introduction to Algorithms: Theory, Practice and Case study	02	-	02	-	14
	CCS/MJT/501	Data Visualization	02	-	02	-	
	CCS/MJT/502	Sensors and Actuators	02	-	02	-	
	CCS/MJP/500	Practical Based on Introduction to Algorithms: Theory, Practice and Case study	-	04	-	02	
	CCS/MJP/501	Practical Based on Data Visualization	-	04	-	02	
	CCS/MJP/502	Practical Based on Sensors and Actuators	-	04	-	02	
Skill / Advance Course	CCS/MJP/503 - 507	Programming-1*	00	04	-	02	
Discipline Specific Electives - DSE	CCS/DSET/520 - 524	Elective-1 [#]	02	-	02	-	02
	CCS/DSEP/520 - 524	Elective-1 [#]	-	04	-	02	02
Research Methodology	CCS/RMT/530	Research Methodology	04	-	04	-	04
Total			12	20	12	10	22

Note: *,[#] Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical

Semester II

Course Type	Course Code	Course Name	Teaching Hrs.		Credits Assigned		Total Credits
			TH	PR	TH	PR	
Discipline Specific Courses (Major Mandatory) - DSC	CCS/MJT/550	Digital Image Processing & Analytics	02	-	02	-	14
	CCS/MJT/551	Statistical Machine Learning	02	-	02	-	
	CCS/MJT/552	Microcontroller Programming using Python	02	-	02	-	
	CCS/MJP/550	Practical Based on Digital Image Processing & Analytics	-	04	-	02	
	CCS/MJP/551	Practical Based on Statistical Machine Learning	-	04	-	02	
	CCS/MJP/552	Practical Based on Microcontroller Programming using Python	-	04	-	02	
Skill / Advance Course	CCS/MJP/553 - 557	Programming-2*	00	04	-	02	
Discipline Specific Electives - DSE	CCS/DSET/570 - 574	Elective-2 [#]	02	-	02	-	02
	CCS/DSEP/570 - 574	Elective-2 [#]	-	04	-	02	02
On-Job Training	CCS/OJT/590	On-Job Training / Field Project	-	08	-	04	04
Total			08	28	08	14	22

Note: *,[#] Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical

Semester III

Course Type	Course Code	Course Name	Teaching Hrs.		Credits Assigned		Total Credits
			TH	PR	TH	PR	
Discipline Specific Courses (Major Mandatory) - DSC	CCS/MJT/600	Computer Vision	02	-	02	-	14
	CCS/MJT/601	Data Mining and Warehousing using python	02	-	02	-	
	CCS/MJT/602	Internet of Things (IoT)	02	-	02	-	
	CCS/MJP/600	Practical Based on Computer Vision	-	04	-	02	
	CCS/MJP/601	Practical Based on Data Mining and Warehousing using python	-	04	-	02	
	CCS/MJP/602	Practical Based on Internet of Things (IoT)	-	04	-	02	
Skill / Advance Course	CCS/MJP/603-607	Programming-3*	00	04	-	02	
PDiscipline Specific Electives - DSE	CCS/DSET/620 – 624	Elective-1 [#]	02	-	02	-	04
	CCS/DSEP/620 – 624	Elective-1 [#]	-	04	-	02	
Research Project	CCS/RP/649	Research Project -1	00	08	04		04
Total			08	28	12	10	22

Note: *,[#] Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical

Semester IV

Course Type	Course Code	Course Name	Teaching Hrs.		Credits Assigned		Total Credits
			TH	PR	TH	PR	
Discipline Specific Courses (Major Mandatory) - DSC	CCS/MJT/650	Artificial Intelligence	02	-	02	-	12
	CCS/MJT/651	Data Analytics	02	-	02	-	
	CCS/MJT/652	IoT and Cloud : Concept, Case Study and Application	02	-	02	-	
	CCS/MJP/650	Practical Based on Artificial Intelligence	-	04	-	02	
	CCS/MJP/651	Practical Based on Data Analytics	-	04	-	02	
	CCS/MJP/652	Practical Based on IoT and Cloud : Concept, Case Study and Application	-	04	-	02	
Discipline Specific Electives - DSE	CSC/DSET/670 – 674	Elective-2 [#]	02	-	02	-	04
	CSC/DSEP/670 – 674	Elective-2 [#]	-	04	-	02	-
Research Project	CSC/RP/699	Research Project -2	00	12	-	06	06
Total			08	28	08	14	22

Note: *,[#] Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical

Skill / Advance Course (Programming Elective Group Basket)

Programming Group	Programming – 1 CSC/MJP/503-507	Programming-2 CSC/MJP/553-557	Programming -3 CSC/MJP/603-607
Java Group	Core Java	Advance Java	Android
Open Group	Python	Advanced Python	Open Web Programming (PHP)
Web Scripting Group	VB & JavaScript	NodeJS	React

Note: *,# Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET

Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical

Discipline Specific Electives - DSE (Elective Group Basket)

Elective Group	Elective 1 CSC/DSET/520-524 & CSC/DSEP/520-524	Elective 2 CSC/DSET/570-574 & CSC/DSEP/570-574	Elective 3 CSC/DSET/620-624 & CSC/DSEP/620-624	Elective 4 CSC/DSET/670-674 & CSC/DSEP/670-674
Pattern Analysis & Machine Intelligence	Soft Computing	Fuzzy Systems : Theory, Application & Case Study	Video Processing	Pattern Recognition
Remote Sensing and Geospatial Technology	Fundamental of Satellite Remote Sensing	GIS	Remote Sensing And Digital Image Analysis	Hyperspectral Image Analysis
Security	Network Security	Cyber Security	Cyber Forensics: Tools, Techniques and Case Studies	Cryptography & Blockchain
Natural Language Processing	Linguistic Fundamentals: Understanding Language Structure and Analysis	Semantics and Pragmatics	Natural Language Processing	AI Chatbot Services and Applications

Note: *,# Student is advised to select the any one course from the pool of courses, however horizontal selection of courses to be followed at the time of selection of the course. MJT means mandatory theory, MJP means mandatory theory, DSET

Discipline Specific Electives Theory and DSEP Discipline Specific Electives Practical