

Computer Science & Engineering

General Structure (2022-26)

Semester-III						Semester-IV						
II	Introduction to IoT	2	2	3		Database Management Systems	3	2	4			
	Object Oriented Programming Concepts	3	2	4		Computer Organization and Architecture	3	0	3			
	Mathematics-III	3	0	3		Artificial Intelligence	3	0	3			
	Discrete Structure for Computer Science	3	0	3		Web Enabled Technologies (Web 3.0)	3	0	3			
	Design and Analysis of Algorithm	3	0	3		Industry Coding practice (Python & R)	2	2	3			
	Theory of Computation	3	0	3		Speech Processing	3	0	3			
	Principles of Managerial Economics	3	0	3		Data Science	3	0	3			
	CRT	0	2	1		CRT	0	2	1			
	MOOCS (Python Programming// Julia Programming)	0	0	0								
	Total No of Credits		23			Total No of Credits		23				
SUMMER INTERNSHIP PROGRAM I (for Internship option only)										5		
Semester-V						Semester-VI						
III	Principal of Cryptography	3	0	3		Open Elective	3	0	3			
	Operating Systems	3	2	4		Computer Networks	3	2	4			
	Programming Language & Compiler Construction	3	0	3		Big Data Systems	3	0	3			
	Machine Learning	3	0	4		Cloud Computing	3	2	4			
	Software Engineering	3	0	3		Intelligent Transport Systems	3	0	3			
	Open Elective	3	0	3		Computer Vision	3	0	3			
	Audit Course	0	0	0		Special Project/Capstone Project	0	6	3			
	CRT	0	2	1		CRT	0	2	1			
Total No of Credits		21			Total No of Credits		24					
Semester-VII						Semester-VIII						
IV	Internship Program II /						Internship Program II /					
	Thesis & Seminar /						Thesis & Seminar /					
	Electives (4) + Professional/Discipline						Electives (4) + Professional/Discipline					
	Humanities Elective (1) (Digital Humanities)						Humanities Elective (1) (Digital Humanities)					
	Total No of Credits		20/18			Total No of Credits		20/18				
Total No of Credits										177		

The Program structure is tentative, subject to change (if required).

Discipline Elective I (V Semester)				
Course Code	Course Title	L	P	U
	Advanced Java	3	0	3
	Advanced Computer Architecture	3	0	3
	Parallel Computing	3	0	3
	Blockchain Technology	3	0	3
Discipline Elective I (VI Semester)				
	Social Network Analysis	3	0	3
	Real Time Systems	3	0	3
	Human Computer Interface	3	0	3
	Combinatorial Optimization	3	0	3

Digital Humanities Electives I (VII/VIII Semester)				
Course Code	Course Title	L	P	U
	Social Innovation	3	0	3

Specialization Electives (VII/VIII Semester)

Machine Learning				
Course Code	Course Title	L	P	U
CS404	Deep Learning	3	0	3
CS405	Natural Language Processing	3	0	3
CS406	Information retrieval	3	0	3
CS407	Pattern Recognition	3	0	3

Cyber Security				
Course Code	Course Title	L	P	U
CS404	Ethical Hacking	3	0	3
CS405	Information Security	3	0	3
CS406	IoT Security	3	0	3
CS407	Cyber Security	3	0	3

Networks				
Course Code	Course Title	L	P	U
CS404	Wireless Networks	3	0	3
CS405	Network Administration	3	0	3
CS406	Network Security	3	0	3
CS407	AI in Wireless Communications	3	0	3

Advanced Computing				
Course Code	Course Title	L	P	U

CS404	High Performance Computing	3	0	3
CS405	Advanced Computer Architecture	3	0	3
CS406	Multicore Architecture	3	0	3
CS407	Parallel Computing	3	0	3

Database				
Course Code	Course Title	L	P	U
CS401	Database Administration	3	0	3
CS402	SQL & DB Applications	3	0	3
CS403	Database Security & Privacy	3	0	3
CS404	Data Wrangling	3	0	3