

SR UNIVERSITY
School of Computer Science and Artificial Intelligence
R25 Course Structure

I SEM

S No	Course Code	Course Name	L	R	P	C
1	25HUM204HS101	Life Skills: Entrepreneurship, Language, Communication and Personality	2	0	4	4
2	25EEE312ES103	Electrical and Electronics Engineering	3	1	2	4.5
3	25SCI202BS106	Computational Chemistry and Biology	2	0	2	3
4	25MAT310BS107	Calculus and Differential Equations	3	1	0	3.5
5	25CAI310PC101	Discrete Mathematics	3	1	0	3.5
6	25CAI002ES105	Design Thinking	0	0	2	1
Total			13	3	10	19.5

* Actual lectures will Total Up to 1st Semester 19.5

II SEM

S No	Course Code	Course Name	L	R	P	C
1	25CAI314PC102	Problem Solving using Python Programming	3	1	4	5.5
2	25MAT310BS108	Linear Algebra and Numerical Methods	3	1	0	3.5
3	25MAT310BS109	Probability and Statistics	3	1	0	3.5
4	25CAI312ES101	Computer Organization and Architecture	3	1	2	4.5
5	25SCI312BS101	Applied Physics for Computer Science and Engineering	3	1	2	4.5
6	25HUM102HS103	Indian Consitution and Ancient Knowledge	1	0	2	2
Total			16	5	10	23.5
	25HUM002AU401	Hobbies, Co-Curricular and Extra-Curricular Elective	0	0	2	1
Total Up to 2nd Semester						44

III SEM

S No	Course Code	Course Name	L	R	P	C
1	25CAI202PC201	Data Analytics and Visualization	2	0	2	3
2	25CAI302PC202	Information Management System	3	0	2	4
3	25CAI402PC203	Operating Systems and Computer Networks	4	0	2	5
4	25CAI204PC204	Web Technologies and Mobile Programming	2	0	4	4
5	25CAI102PC205	Cloud Computing	1	0	2	2
6	25CAI004PC206	AI Assisted Coding	0	0	4	2
Total			12	0	16	20
Total Up to 3rd Semester						64

IV SEM

S No	Course Code	Course Name	L	R	P	C
1	25CAI314PC207	Data Structures	3	1	4	5.5
2	-	Open Elective -1	3	0	0	3
3	25CAI302ES201	Cyber Security	3	0	2	4
4	25CAI314ES202	Machine Learning	3	1	4	5.5
5		Specialization Core-I	3	0	4	5
Total			15	2	14	23
Total Up to 4th Semester						87

V SEM

S No	Course Code	Course Name	L	R	P	C
1	25CAI314ES301	Algorithms	3	1	4	5.5
2	25CAI314PC301	Artificial Intelligence and Deep Learning	3	1	4	5.5
3	25CAI202PC302	Software Engineering and System Design	2	0	2	3
4	25CIV200HS301	Sustainability and Ethical Innovation	2	0	0	2
5	25HUM104HS201	Critical Thinking and Interpersonal Skills	1	0	4	3
6	25CAI002PR401	Undergraduate Research in Computer Science	0	0	2	1
Total			11	2	16	20
Total Up to 5th Semester						107

VI SEM

S No	Course Code	Course Name	L	R	P	C
1	-	Specialization Core-II	3	0	2	4
2	25CAI304PC303	High Performance Computing	3	0	4	5
3	-	Specialization Elective-I	2	0	2	3
4	25HUM006HS202	Quantitative Aptitude and Logical Reasoning	0	0	6	3
5	-	Specialization Elective - II	2	0	2	3
6	25CAI304PC304	Competitive Programming	3	0	4	5
Total			13	0	20	23
Total Up to 6th Semester						130

VII SEM

S No	Course Code	Course Name	L	R	P	C
1	25CAI010PR402	Capstone Project with Design Thinking	0	0	10	5
2	-	Professional Elective - 1	2	0	2	3
3	-	Professional Elective - II	2	0	2	3
4	-	Professional Elective - III	2	0	2	3
5	-	Professional Elective-IV	2	0	2	3
6	-	Open Elective-II	2	0	2	3
Total			10	0	20	20

or

1	25CAI040PR403	Industrial Project/R&D Project/Industry Internship/Start-up/Externship	0	0	40	20
Total Up to 7th Semester						150

S No	Course Code	Course Name	L	R	P	C
1	25CAI040PR404	Major Project/Industrial Project/R&D Project/Industry Internship/Start-up/Externship	0	0	40	20
		Total Up to 8th Semester				170

S No	Course Code	Course Name	L	R	P	C
1	25CAI304SC201	Natural Language Processing	3	0	4	5
2	25CAI304SC202	Linux Programming	3	0	4	5
3	25MEC304SC302	Robotics and Automation	3	0	4	5

1	25CAI302SC301	Computer Vision	3	0	2	4
2	25CAI302SC302	Cryptography and Network Security	3	0	2	4
3	25CAI302SC303	Data Science and Business Intelligence	3	0	2	4
4	25MEC302SC302	Robotic System Design	3	0	2	4

1	25CAI202SE401	Generative AI	2	0	2	3
2	25CAI202SE402	Reinforcement Learning	2	0	2	3
3	25CAI202SE403	Explainable AI	2	0	2	3
4	25CAI202SE404	Agentic AI	2	0	2	3
5	25CAI202SE405	AI Technologies in Unmanned Aerial Vehicles	2	0	2	3
6	25CAI202SE406	Data Insights using Internet of Things	2	0	2	3
7	25CAI202SE407	Satellite Data Analysis	2	0	2	3
8	25CAI202SE408	Digital forensics	2	0	2	3
9	25CAI202SE409	Information Security Risk Assessment, Audit and Monitoring	2	0	2	3
10	25CAI202SE410	Ethical Hacking and Vulnerability Analysis	2	0	2	3

1	25CAI300PE401	Theory of Computation	3	0	0	3
2	25CAI202PE402	Human Computer Interaction	2	0	2	3
4	25CAI202PE403	Blockchain Engineering	2	0	2	3
5	25CAI202PE404	Quantum Computing	2	0	2	3
6	25CAI202PE405	Augmented and Virtual Reality	2	0	2	3
7	25CAI300PE406	Data Center Operations and Infrastructure	3	0	0	3
8	25CAI104PE407	DevOps and Full Stack	1	0	4	3
9	25CAI202PE408	Compiler Design	2	0	2	3
10	25CAI202PE409	Game Mechanics, Design and Development	2	0	2	3
11	25CAI202PE410	Java Programming	2	0	2	3
12	25CAI202PE411	Security Ethics and Regulations in AI	2	0	2	3

S No	Course Code	Course Name	L	R	P	C
Semester-III						

1	25CAI204MN401	Web and Mobile Programming	2	0	4	4
Semester-IV						
2	25CAI302MN402	Cyber Protection	3	0	2	4
Semester-V						
3	25CAI302MN403	Foundations of Artificial Intelligence & Deep Learning	3	0	2	4
Semester-VI						
4	25CAI302MN404	Foundations of Data Science and Business Intelligence	3	0	2	4

Honors (I, II, III, IV) (Electives to be Taken from Specialization Bucket)						
S No	Course Code	Course Name	L	R	P	C
Semester-III						
1	25CA202HN401	<i>Parallel and Concurrent Programming</i>	2	0	2	3
Semester-IV						
2	25CA202HN402	Mathematical Foundations of Machine Intelligence	2	0	2	3
Semester-V						
3	25CA202HN403	Advanced Deep Learning Architectures	2	0	2	3
Semester-VI						
4	25CA202HN404	Edge and Cloud Intelligence	2	0	2	3
Semester-VII						
5	25CA202HN405	Quantum Machine Learning	3	0	2	4

Open Elective						
S No	Course Code	Course Name	L	R	P	C
1	25CAI202OE401	Fundamentals of Database Management Systems	2	0	2	3
2	25CAI202OE402	Fundamentals of Data Structures	2	0	2	3
3	25CAI202OE403	Analysis and Design of Algorithms	2	0	2	3
Hobbies, Co-Curricular and Extra-Curricular (HCE) Electives						
S No	Course Code	Course Name	L	R	P	C
1		NSS	0	0	2	1
2		Club	0	0	2	1
3		Sports	0	0	2	1
4		Community Services	0	0	2	1
5		Hobby	0	0	2	1
6		Summer Internship	0	0	2	1
7		Boot Camp	0	0	2	1
8		Music	0	0	2	1
9		Dance	0	0	2	1
10		Fitness	0	0	2	1
11		Photography	0	0	2	1
12		Cooking	0	0	2	1
13		Hackathon	0	0	2	1

Career Readiness Electives						
S No	Course Code	Course Name	L	R	P	C
1		Communication Skills and Personality Development	1	0	4	3
2		International Language skills	1	0	4	3
Language Electives						
			L	R	P	C
1		French	2	0	0	2
2		Spanish	2	0	0	2
3		German	2	0	0	2
4		Japanese	2	0	0	2
5		Korean	2	0	0	2
6		Telugu	2	0	0	2
7		Chinese	2	0	0	2
8		Russian	2	0	0	2
9		Hindi	2	0	0	2

Note
Open Electives, Program Electives, and Specialization Electives may be interchangeable.

Flexible Courses for Open Elective and Professional Elective				
Self Paced Learning	3	0	0	3
Industry Certification	2	0	2	3
Professional Skill Development training	3	0	0	3