

**UNIVERSITY SCHOOL
OF
INFORMATION AND COMMUNICATION TECHNOLOGY
DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

PROGRAMME STRUCTURE

**M.TECH. COMPUTER SCIENCE AND ENGINEERING
SPECIALIZATION : SOFTWARE ENGINEERING**

2024-2026



**GAUTAM BUDDHA UNIVERSITY
GAUTAM BUDH NAGAR, GREATER NOIDA, UP, INDIA**

SEMESTER I

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS521	Advanced Data Base Management System	3	0	0	3	CC1
2	CS523	Design and Architecture for Software Systems	3	0	0	3	CC2
3	CS525	Advanced Data Structure and Algorithm	3	1	0	4	CC3
4	CS527	Research Techniques in ICT	3	0	0	3	CC4
5	CS529	Java Programming	3	0	0	3	CC5
6	ES415	Energy and Environment	3	0	0	3	OE1 /AECC
7	EN531	Language, Culture and Society	3	0	0	3	OE2 /AECC
8	CS581	Advanced Data Base Management System Lab	0	0	3	2	CC-L1
9	CS583	Java Programming Lab	0	0	3	2	CC-L2 / SEC
10	GP	General Proficiency	Non Credit				
Total Hours and Credits			21	1	6	26	

SEMESTER II

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS522	Computer Vision	3	0	0	3	CC6
2	CS524	Advanced Software Engineering	3	0	0	3	CC7
3	CS526	Open Source Software Systems	3	0	0	3	CC8
4	CS528	Software Engineering for Data Science	3	0	0	3	CC9
5		Elective-1	3	0	0	3	E1 / DSE
6		Elective-2	3	0	0	3	E2 / DSE
7		Generic Elective	3	1	0	4	GE1
8	CS582	Computer Vision Lab	0	0	3	2	CC-L3 / SEC
9	CS584	Open Source Software Systems Lab	0	0	3	2	CC-L4
10	GP	General Proficiency	Non Credit				
Total Hours and Credits			21	1	6	26	

Summer Project in Industry will be done individually after Fourth Year of Integrated B.Tech. - M.Tech. CSE and after Second semester of M.Tech. during the summer break and it will be of minimum 4 weeks. It will be evaluated as per University Examination Rules in III semester of M.Tech. and IX semester for Integrated B.Tech. -

SEMESTER III

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS621	AI Methods for Software Engineering	3	0	0	3	CC10
2	CS623	Software Engineering for Cloud Computing	3	0	0	3	CC11
3		Elective-3	3	0	0	3	E3 / DSE
4		Elective-4	3	0	0	3	E4 / DSE
5	CS681	Cloud Computing Lab	0	0	3	2	CC-L5
6	CS683	Summer Project	0	0	8	4	SP / E
7	CS691	Dissertation Part - I	0	0	16	8	DP1 / E
8	GP	General Proficiency	Non Credit				
Total Hours and Credits			12	0	27	26	

SEMESTER IV

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS692	Dissertation Part - II	0	0	52	26	DP2 / E
2	GP	General Proficiency	Non Credit				
Total Hours and Credits			0	0	52	26	

GRAND TOTAL OF CREDITS = 104

Summer Project will be done individually and It will be evaluated as per University Examination Rules.

Dissertation will be done individually and It will be evaluated as per University Examination Rules.

USICT will provide a mentor/supervisor for summer project, and dissertation.

ELECTIVES FROM DCSE

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CS530	Software Reliability Engineering	3	0	0	3	E1
2	CS532	Data Security	3	0	0	3	E1
3	CS534	Web-Based Software Engineering	3	0	0	3	E1
4	CS536	Service-Oriented Computing	3	0	0	3	E1
5	CS538	Data Science Basics and Visualization	3	0	0	3	E2
6	CS540	Software Maintenance	3	0	0	3	E2
7	CS542	Software Measurement and Estimation	3	0	0	3	E2
8	CS544	Software Quality Assurance	3	0	0	3	E2
9	CS625	Embedded System Design	3	0	0	3	E3
10	CS627	Applied Machine Learning	3	0	0	3	E3
11	CS629	Blockchain Technology and Software Systems	3	0	0	3	E3
12	CS631	Secure Software Engineering	3	0	0	3	E3
13	CS633	AI Enabled Cyber Security	3	0	0	3	E4
14	CS635	Big Data Platforms and Analytics	3	0	0	3	E4
15	CS637	Internet of Things	3	0	0	3	E4
16	CS639	Edge Computing	3	0	0	3	E4
17	CS641	Deep Learning and Deep Neural Networks	3	0	0	3	E4

OPEN AND GENERIC ELECTIVES FROM OTHER SCHOOLS

18	ES415	Energy and Environment	3	0	0	3	OE1
19	EN531	Language, Culture and Society	3	0	0	3	OE2
20	MA402	Modeling and Simulation	3	1	0	4	GE1
21	MA416	Probability and Stochastic Process	3	1	0	4	GE1

CS Computer Science for Course Code**CC** Core Course from USICT for Type of Course**CC-L** Core Course Lab from USICT for Type of Course**GE** General Elective from related discipline of other Deptt./School**AECC** Ability Enhancement Compulsary Course**OE** Open Elective from other discipline of other Deptt./School**DSE** Discipline Specific Course**FC** Foundation Course**SEC** Skill Enhancement Course**E** Elective**DP1** Dissertation Part 1**DP2** Dissertation Part 2**SP** Summer Project