

30.1.10

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

PROGRAMME STRUCTURE

M.TECH. COMPUTER SCIENCE AND ENGINEERING

SPECILIZATION : DATA SCIENCE

2022-2024

30.1.10

08.09.23



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

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School of ICT
Gautam Buddha University
Greater Noida, (U.P.)

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	CD522	Python Programming	3	0	0	3	CC6
2	CD524	AI Enabled Data Science	3	0	0	3	CC7
3	CD526	Optimization Techniques for Data Science	3	0	0	3	CC8
4	CD528	Advanced MS Excel	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	CD582	Python Programming Lab	0	0	3	2	CC-L3 / SEC
9	CD584	Advanced MS Excel 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 Second Year 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. - M.Tech. CSE .

Annexure 30.1.10

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SEMESTER III

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CD621	Machine Learning Algorithms	3	0	0	3	CC10
2	CD623	Big Data Framework for Data Science	3	0	0	3	CC11
3		Elective-3	3	0	0	3	E3 / DSE
4		Elective-4	3	0	0	3	E4 / DSE
5	CD681	Big Data Framework for Data Science Lab	0	0	3	2	CC-L5
6	CD683	Summer Project	0	0	8	4	SP / E
7	CD691	Dissertation Part - I	0	0	16	8	DP1 / E
8	GP	General Proficiency	Non Credit				
Total Hours and Credits			12	0	27	26	DP2 / E

SEMESTER IV

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CD692	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.

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Gautam Buddha University
3/4 Greater Noida, (U.P.)

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ELECTIVES FROM DCSE

S.No.	Course Code	Course Name	L	T	P	Credits	Types
1	CD530	Modelling Process in Data Science	3	0	0	3	E1
2	CD532	Data Security	3	0	0	3	E1
3	CD534	Parallel and Distributed Computing	3	0	0	3	E1
4	CD536	Data Stream Management	3	0	0	3	E1
5	CD538	Predictive Analytics and Data Visualization	3	0	0	3	E2
6	CD540	Business Acumen and Intelligence	3	0	0	3	E2
7	CD542	Data Science for Business Analytics	3	0	0	3	E2
8	CD544	Advanced Semantics Web Technology	3	0	0	3	E2
9	CS625	Big Data Analytics	3	0	0	3	E3
10	CS627	Advanced Metrics for Economics	3	0	0	3	E3
11	CS629	Multivariate Techniques for Data Science	3	0	0	3	E3
12	CS631	Blockchain Technology for Data Science	3	0	0	3	E3
13	CS633	Deep Learning in Biomedical and Genomics	3	0	0	3	E4
14	CS635	Data Analytics for Healthcare	3	0	0	3	E4
15	CS637	Regression for Time Series Analysis	3	0	0	3	E4
16	CS639	Internet of Things	3	0	0	3	E4

OPEN AND GENERIC ELECTIVES FROM OTHER SCHOOLS

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

CD Computer Science and Data Science for Course Code

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

FC Foundation Course

DSC Discipline Specific Course

SEC Skill Enhancement Course

E Elective

DP1 Dissertation Part 1

DP2 Dissertation Part 2

SP Summer Project