

CURRICULUM & SYLLABUS



CHOICE BASED CREDIT SYSTEM (CBCS)
FOR
MASTER OF TECHNOLOGY (M.Tech.)
(2 Year Postgraduate Degree Programme)
IN
COMPUTER SCIENCE AND ENGINEERING
IN BIG DATA ANALYTICS
[w. e. f. 2023-2024]

FACULTY OF ENGINEERING AND TECHNOLOGY
SRM UNIVERSITY DELHI-NCR, SONEPAT
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Haryana-131029

COURSE CURRICULUM
MASTER OF TECHNOLOGY
(COMPUTER SCIENCE& ENGINEERING)
POST GRADUATION COURSE
PROGRAMME COURSES SRUCTURE SEMESTERWISE

SEMESTER – I

COURSE CODE	COURSE	CATEGORY	HOURS PER WEEK				CREDITS
			L	T	P	TOTAL HOURS	
21MBDA101	ADVANCED OPERATING SYSTEMS	PC	3	1	0	4	4
21MBDA102	ADVANCED DATA STRUCTURES & ALGORITHMS	PC	3	1	0	4	4
21MBDA103	ADVANCED HADOOP	PC	3	1	0	4	4
21MBDA104	RESEARCH METHODOLOGY AND IPR	PC	4	0	0	4	4
21MBDA11X	PROFESSIONAL ELECTIVE – I	PE	4	0	0	4	4
21MBDA121	ADVANCED DATA STRUCTURES & ALGORITHMS LAB	P	0	0	2	2	1
21MBDA122	ADVANCED HADOOP LAB	P	0	0	2	2	1
21MBDA123	ADVANCED OPERATING SYSTEM LAB	P	0	0	2	2	1
21MBDA124	TECHNICAL TRAINING	P	0	0	2	2	1
TOTAL			17	3	8	28	24

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SEMESTER-II

COURSE CODE	COURSE	CATEGORY	HOURS PER WEEK				CREDITS
			L	T	P	TOTAL HOURS	
21MBDA201	BIG DATA ANALYTICS	PC	3	1	0	4	4
21MBDA202	ADVANCED DATABASE MANAGEMENT SYSTEM	PC	3	1	0	4	4
21MBDA203	LIVE PROJECT-I	LP	0	0	6	6	3
21MBDA21X	PROFESSIONAL ELECTIVE – II	PE	4	0	0	4	4
21MBDA23X	PROFESSIONAL ELECTIVE – III	PE	4	0	0	4	4
21MBDA2XX	OPEN ELECTIVE-I	OE	3	0	0	3	3
21MBDA221	IBM COGNOS LAB	P	0	0	2	2	1
21MBDA222	SEMINAR	P	0	0	2	2	1
TOTAL			17	2	10	29	24

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SEMESTER-III

COURSE CODE	COURSE	CATEGORY	HOURS PER WEEK				CREDITS
			L	T	P	TOTAL HOURS	
21MBDA301	DATA ANALYSIS AND REGRESSION	PC	4	0	0	4	4
21MBDA302	LIVE PROJECT – II	LP	0	0	8	8	4
21MBDA31X	PROFESSIONAL ELECTIVE – IV	PE	4	0	0	4	4
21MBDA32X	PROFESSIONAL ELECTIVE-V	PE	4	0	0	4	4
21MBDA311	DISSERTATION PART-I	LP	0	0	8	8	4
TOTAL			12	0	16	28	20

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PROGRAMME COURSES SRUCTURE SEMESTERWISE

SEMESTER-IV

COURSE CODE	COURSE	CATEGORY	HOURS PER WEEK				CREDITS
			L	T	P	TOTAL HOURS	
21MBDA401	DISSERTATION PART– II	LP	0	0	24	24	12
TOTAL			0	0	24	24	12

LIST OF PROFESSIONAL ELECTIVE COURSES (PEs)

S. No.	COURSE CODE	COURSE	L	T	P	C
PROFESSIONAL ELECTIVE - I						
1	21MBDA111	ADVANCED ALGORITHMS EVOLUTIONARY	4	0	0	4
2	21MBDA112	ARTIFICIAL INTELLIGENCE AND NEURAL NETWORKS	4	0	0	4
3	21MBDA113	DISTRIBUTED SYSTEMS	4	0	0	4
PROFESSIONAL ELECTIVE -II						
3	21MBDA211	DATA SCIENCE	4	0	0	4
4	21MBDA212	ARCHITECTURE OF HIGH-PERFORMANCE COMPUTER SYSTEMS	4	0	0	4
5	21MBDA213	DATA WAREHOUSING & DATA MINING	4	0	0	4
6	21MBDA214	SOFTWARE RELIABILITY & FAULT TOLERANT SYSTEM	4	0	0	4
PROFESSIONAL ELECTIVE-III						
7	21MBDA231	ADHOC & SENSOR NETWORK	4	0	0	4
8	21MBDA232	COMPILER FOR HPC	4	0	0	4
9	21MBDA233	ADVANCED MACHINE LEARNING	4	0	0	4
10	21MBDA234	MATHEMATICAL FOUNDATIONS OF COMPUTER SCIENCE	4	0	0	4
PROFESSIONAL ELECTIVE-IV						
11	21MBDA311	OPTIMIZATION TECHNIQUES	4	0	0	4
12	21MBDA312	CLOUD COMPUTING	4	0	0	4
13	21MBDA313	COMPUTER NETWORK AND DISTRIBUTED SYSTEMS	4	0	0	4
PROFESSIONAL ELECTIVE-V						

S. No.	COURSE CODE	COURSE	L	T	P	C
14	21MBDA321	APPLIED WIRELESS SENSOR NETWORKS	4	0	0	4
15	21MBDA322	SOFT COMPUTING	4	0	0	4
16	21MBDA323	COMPUTER VISION	4	0	0	4

LIST OF OPEN ELECTIVE COURSES (OEs)

S. No.	COURSE CODE	COURSE	L	T	P	C
1	21MBDA222	QUANTITATIVE TECHNIQUES	3	0	0	3
2	21MBDA224	INTRODUCTION TO BIOINFORMATICS	3	0	0	3
3	21MBDA225	BUSINESS ANALYTICS	3	0	0	3
4	21MBDA226	DESIGN OF EMBEDDED SYSTEMS	3	0	0	3