



Integral University, Lucknow
Department of Computer Science and Engineering
Study and Evaluation Scheme

Program: M.Tech. Computer Science & Engineering with specialization in Advanced Computing & Data sciences (ACDS)

Semester I

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub Total	Credit	Total Credits	Attributes												
				L	T	P	CT	TA	Tot	ES E				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics						
THEORIES																										
1	CS 518	Soft Computing	DC	3	1	0	40	20	60	40	100	3:1:0	4	√		√										
2	CS 546	Mathematical Programming	DC	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√										
3	CS 516	Advance Data Structures & Algorithm	DC	3	1	0	40	20	60	40	100	3:1:0	4	√		√										
4	CS 525	Advanced concepts of database design	DC	3	1	0	40	20	60	40	100	3:1:0	4	√		√										
PRACTICAL																										
5	CS 519	Soft Computing Lab	DC	0	0	2	30	30	60	40	100	0:0:2	2	√	√	√										
6	CS 543	Advanced Database System Lab	DC	0	0	2	30	30	60	40	100	0:0:2	2	√	√	√										
Total				12	4	4	220	140	360	240	600			20												

DC- Departmental Core

DE- Departmental Elective



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Semester II

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub. Total	Credit	Total Credits	Attributes						
				L	T	P	CT	TA	Tot	ES E				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
THEORIES																				
1	CS 520	Advance Distributed Operating Systems	DC	3	1	0	40	20	60	40	100	3:1:0	4			√				
2	CS 544	Machine Learning: Theory and Methods	DC	3	1	0	40	20	60	40	100	3:1:0	4			√				
3		Elective 1	DE	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√				
4		Elective 2	DE	3	1	0	40	20	60	40	100	3:1:0	4			√				
PRACTICAL																				
5	CS 545	R Programming Lab	DC	0	0	2	30	30	60	40	100	0:0:2	2	√	√	√				
6	CS 549	Machine learning Tools Lab	DC	0	0	2	30	30	60	40	100	0:0:2	2	√	√	√				
Total				12	4	4	220	140	360	240	600		20	20						

DC- Departmental Core

DE- Departmental Elective

Electives										
S. No.	Electives	Course code	Course Title	Type of Paper	Attributes					
					Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value
1	Elective-1*	CS-540	Advanced Human Computer Interaction				√			
		CS-524	Software Testing & Quality Management	√	√	√				
		CS-525	Digital Image Processing & its applications	√	√					
		CS-526	Advance Cryptography & Network security			√				

Electives										
S. No.	Electives	Course code	Course Title Type of Paper	Attributes						
				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
1	Elective-2*	CS-527	Advance Real Time Systems			√				
		CS-528	Forensic & Cyber Crime	√	√	√				
		CS-529	Web Mining/Web Intelligence	√	√					
		CS-530	Advanced Statistical Techniques for data Analytics			√				



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Semester III

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week /sem			Evaluation Scheme				Sub. Total	Credit	Total Credits	Attributes							
				L	T	P	CT	TA	Tot	ES				E	Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
THEORIES																					
1	CS 609	Big Data Analytics	DC	3	1	0	40	20	60	40	100	3:1:0	4	√							
2		Elective-3	DE	3	1	0	40	20	60	40	100	3:1:0	4	√	√	√					
3		Elective-4	DE	3	1	0	40	20	60	40	100	3:1:0	4								
PRACTICAL																					
4	CS 699	M.Tech. Dissertation	DC	0	0	4	-	-	60	40	100	0:0:4	4	√	√	√					
5	CS-617	Big Data Management and Data Analytics Lab	DC	0	0	2	30	30	60	40	100	0:0:2	2	√	√	√					
Total				9	3	4	150	90	300	200	500			18							

DC- Departmental Core DE- Departmental Elective

Electives											
S. No.	Electives	Course code	Course Title	Type of Paper	Attributes						
					Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
1	Elective-3*	CS-603	Ad-hoc Sensor Network				√				
		CS-605	Agile Software Engineering		√	√	√				
		CS-606	Advanced Cloud Computing		√	√	√				

Electives											
S. No.	Electives	Course code	Course Title	Type of Paper	Attributes						
					Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
1	Elective-4*	CS-618	Natural Language Processing		√	√	√				
		CS-624	Advanced Statistical Techniques for data Analytics		√	√	√				
		CS-626	Internet of Things		√	√	√				



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Semester IV

S. No.	Course code	Course Title	Type of Paper	Period Per hr/week/sem			Evaluation Scheme				Sub Total	Credit	Total Credits	Attributes						
				L	T	P	CT	TA	Tot	ESE				Employability	Entrepreneurship	Skill Development	Gender Equality	Environment & Sustainability	Human Value	Professional Ethics
THEORIES																				
1	CS-699	M.Tech. Dissertation	DC	0	0	4	-	-	60	40	100	0:0:4	4	√	√	√				
2	CS-699	M.Tech. Dissertation	DC	0	0	4	-	-	60	40	100	0:0:4	4	√	√	√				
3	CS-699	M.Tech. Dissertation	DC	0	0	4	-	-	60	40	100	0:0:4	4	√	√	√				
4	CS-699	M.Tech. Dissertation	DC	0	0	4	-	-	60	40	100	0:0:4	4	√	√	√				
Total				0	0	16	-	-	240	160	400		16							

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Total Credit of the Course: 20+20+18+16 = 74

L-Lecture T-Tutorial P-Practical C-Credits CT-Class Test TA-Teacher Assessment

Sessional Total (CA) = Class Test + Teacher Assessment

Subject Total = Sessional Total (CA) + End Semester Examination (ESE)

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