

B. Tech CSE- Curriculum Structure of batch admitted 2015 on wards

I semester (B1)

Sr.No	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B11HS111	Life Skills	1	1	-	2	2
2.	15B11MA111	Mathematics-1	3	1	-	4	4
3.	15B11PH111	Physics-1	3	1	-	4	4
4.	15B11EC111	Electrical Science-1	3	1	-	4	4
5.	15B11CI111	Software Development Fundamentals-I	3	1	-	4	4
6.	15B11HS112	English	2	1	-	3	3
7.	15B17PH171	Physics Lab-1	-	-	2	2	1
8.	15B17EC171	Electrical Science Lab -1	-	-	2	2	1
9.	15B17CI171	Software Development Lab-I	-	-	4	4	2
		TOTAL				29	25

II semester (B2)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B11HS211	Economics	2	1	-	3	3
2.	15B11MA211	Mathematics-2	3	1	-	4	4
3.	15B11PH211	Physics-2	3	1	-	4	4
4.	15B11EC211	Electrical Science -2	3	1	-	4	4
5.	15B11CI211	Software Development Fundamentals-II	3	1	-	4	4
6.	15B11CI212	Theoretical Foundations of Computer Science	3	1	-	4	4
7.	15B17PH271	Physics Lab-2	-	-	2	2	1
8.	15B17EC271	Electrical Science Lab -2	-	-	2	2	1
9.	15B17CI271	Software Development Lab-II	-	-	2	2	1
		TOTAL				29	26

III semester (B3)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective - 1	2	1	-	3	3
2.	15B11CI311	Data Structures	3	1	-	4	4
3.	15B11EC314	Introduction to Digital Systems	3	1	-	4	4
4.	15B11CI312	Database Systems and Web	3	1	-	4	4
5.	15B11CI313	Computer Organisation and Architecture	3	1	-	4	4
6.	15B17CI371	Data Structures lab	-	-	2	2	1
7.	15B17EC374	Digital Systems Lab	-	-	2	2	1
8.	15B17CI372	Database Systems and Web lab	-	-	2	2	1
9.	15B17CI373	Computer Organisation and Architecture Lab	-	-	2	2	1
		TOTAL				27	23

IV semester (B4)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective - 2	2	1	-	3	3
2.	15B11MA301	Probability and Random Processes	3	1	-	4	4
3.	15B11CI411	Algorithms and Problem Solving	3	1	-	4	4
4.	15B11CI412	Operating Systems and Systems Programming	3	1	-	4	4
5.	Xxxxx	CS Elective-1	3	1	-	4	4
6.	15B11GE301	Environmental Science	3	-	-	3	3
7.	15B17CI471	Algorithms and Problem Solving Lab	-	-	4	4	2
8.	15B17CI472	Operating Systems and Systems Programming Lab	-	-	2	2	1
		TOTAL				28	25

List of elective courses for CS Elective-1(To be updated time to time)

1	16B1NCI436	Microcontroller based System Design
2	16B1NCI432	Fuzzy Logic and Neural Networks
3	16B1NCI439	Advanced Computer Architecture
4	16B1NCI440	Computer Graphics and Image Processing
5	16B1NCI435	Systems, Engineering and Computational Thinking

V semester (B5)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective-3	2	1	-	3	3
2.	15B11CI511 Or 14B1NCI731	Computer Networks OR Embedded Systems	3	1	-	4	4
3.	15B11CI513 OR 15B11CI514	Software Engineering OR Artificial Intelligence	3	1	-	4	4
		Selected Foreign Language	2/3			2/3	Audit
4.	Xxxxx	Science Elective - 1	3	1	-	4	4
5.	15B19CI591	Minor Project – 1					5
6.	15B17CI571 OR 15B17CI572	Computer Networks Lab OR Embedded Systems Lab	-	-	2	2	1
7.	15B17CI573 OR 15B17CI574	Software Engineering Lab OR Artificial Intelligence Lab	-	-	2	2	1
8.	15B17CI575	Open Source Software Lab	-	-	2	2	1
9.	15B17CI576	Information Security Lab	-	-	2	2	1
		TOTAL				25/26+	24

VI semester (B6)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective -4	2	1	-	3	3
2.	15B11CI611 15B11CI612	Theory of Computation and Compiler Design OR Theory of Programming Languages	3	1	-	4	4
3.	Xxxxx	CS Elective-2	3	1	-	4	4
4.	Xxxxx	CS Elective-3	3	1	-	4	4

5.	Xxxxx	Science Elective - 2	3	1	-	4	4
		Selected Value Added Course	2/3			2/3	Audit
6.	15B17CI671 15B17CI672	Compiler Design Lab OR Programming Languages Lab	-	-	2	2	1
7.	15B19CI691	Minor Project-2	-	-			5
		TOTAL				24	25

Students will undergo 6 weeks Industrial Training during Summer Vacation after 6th Semester.

List of elective courses for CS Elective-2, CS Elective-3 (To be updated time to time)

1	16B1NCI631	Advanced Data Structures and Applications
2	16B1NCI633	Introduction to Mobile Application Development
3	16B1NCI634	Agile Software Development
4	16B1NCI635	Data and Web Mining
5	16B1NCI639	User Centered Design
6	16B1NCI640	Theory of Computational Complexity
7	16B1NCI642	Wireless Networks
8	16B1NCI643	Computational Intelligence
9	16B1NCI644	Cloud based Enterprise Applications

List of Courses for Audit(To be updated time to time)

1	16B19CI691	Advanced Java Workshop
2	16B19CI692	Robotics Workshop
3	16B19CI693	Multimedia Workshop
4	16B19CI694	Computer Games Workshop
5	16B19CI695	Competitive Programming Workshop
6	16B19CI697	Distributed Database Workshop
7	16B19CI698	Social Media Workshop
8	16B19CI699	Mobile Application Development Workshop

VII semester (B7)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	CS Elective-4	3	1	-	4	4
2.	Xxxxx	CS Elective-5	3	1	-	4	4
3.	Xxxxx	CS Elective-6	3	1	-	4	4
4.	Xxxxx	Open Elective - 1	3		-	3	3
5.	15B19CI791	Major Project Part-1	-	-			4
6.	15B19CI792	Term Paper	-	-	-	-	3
7.	15B19CI793	Summer Training Viva	-	-	-	-	2
		TOTAL				15+	24

List of elective courses for CS Elective-4, CS Elective-5, CS Elective-6 (To be updated time to time)

1	16B1NCI731	Combinatorics
2	10B1NCI737	Multimedia Computing
3	17B1NCI747	Cloud Computing
4	16B1NCI732/17B1NCI731	Machine learning and NLP
5	16B1NCI733	Data Compression Algorithms
6	17B1NCI746	Image Processing
7	17B1NCI732	Computer and web security
8	17B1NCI749	Mobile Computing

9	17B1NCI735	High Performance Web & mobile Applications
10	17B1NCI736	Bioinformatics Algorithms
11	17B1NCI737	IT Entrepreneurship and Design Thinking
12	17B1NCI739	Concurrent Programming
13	17B2NCI731	Computer Graphics
14	16B1NCI833	Nature Inspired Computing
15	16B1NCI834	Program analysis and transformation
16	17B2NCI742	Natural Language Processing
17	17B1NCI748	Graph Algorithms and Applications
18	15B1NCI732/15B1NCI738	Social Network Analysis
19	17B1NCI734	Software Architecture and Design Patterns
20	10B1NCI736	Information Retrieval and Data Mining
21	14B1NCI833	Advanced Data Structures
22	11B1NCI731	Soft Computing

List of elective courses for Open Elective-1(To be updated time to time)

1	17B1NCI743	Theory of Knowledge and learning
2	17B1NCI742	Algorithms & Artificial Intelligence (For ECE and BioTech Only)
3	17B1NCI741	Software Engineering methods(For ECE and BioTech Only)
4	17B1NCI744	Computer Architecture and System software(For ECE and BioTech Only)
5	17B1NCI745	Software Testing(For ECE and BioTech Only)
6		Various Electives offered by other Departments

VIII semester (B8)

Sr.No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	CS Elective-7	3	1	-	4	4
2.	Xxxxx	CS Elective-8	3	1	-	4	4
3.	Xxxxx	Open Elective - 2	3		-	3	3
4.	15B19CI891	Major Project Part-2	-	-			12
		TOTAL				11+	23

List of elective courses for CS Elective-7, CS Elective-8(To be updated time to time)

1	16B1NCI835	Data Warehousing and Business Intelligence
2	11B1NCI831	Distributed Computing
3	13B1NCI833	Computer Games
4	10B13CI834	Parallel Processing
5	12B1NCI832	Mobile Application Engineering
6	16B1NCI838	Advanced Computer Graphics
7	15B1NCI831	Machine Learning and Big Data Analytics
8	17B2NCI743	Cryptography and Network Security

Total Credits for B. Tech. –195