

B. Tech IT- Curriculum Structure of batch admitted 2015 onwards

I semester (B1) (Same as 1st sem CSE)

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) (Same as 2nd sem CSE)

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) (Same as 3rd sem CSE)

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) (Core same as 4th sem CSE)

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	IT 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 IT 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 Organisation and 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	Computer Networks	3	1	-	4	4
3.	15B22CI521	Cloud based Enterprise Systems	3	1	-	4	4
		Selected Foreign Language	2/3			2/3	Audit
4.	Xxxxx	Science Elective - 1	3	1	-	4	4
5.	15B29CI591	Minor Project – 1					5
6.	15B17CI571	Computer Networks Lab	-	-	2	2	1
7.	15B28CI581	Cloud based Enterprise Systems Lab	-	-	2	2	1
8.	15B28CI582	Multimedia 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.	15B22CI621 OR 15B22CI622	Flexi Core: a. Data Mining and Web Algorithms OR b. Mobile Applications and Internet of Things	3	1	-	4	4
3.	Xxxxx	IT Elective-2	3	1	-	4	4
4.	Xxxxx	IT 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.	15B28CI681 OR 15B28CI682	a. Data Mining and Web Algorithms Lab OR b. Mobile Applications and Internet of Things Lab	-	-	2	2	1
7.	15B29CI691	Minor Project-2	-	-			5
		TOTAL				23/24+	25

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

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

1	16B1NCI631	Advanced Data Structures and Applications
2	16B1NCI634	Agile Software Development
3	16B1NCI639	User Centered Design
4	16B1NCI640	Theory of Computational Complexity
5	16B1NCI642	Wireless Networks
6	16B1NCI643	Computational Intelligence

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	16B19CI695	Competitive Programming Workshop
5	16B19CI697	Distributed Database Workshop
6	16B19CI698	Social Media Workshop
7	16B19CI601	Hive Workshop

VII semester (B7)

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	IT Elective-4	3	1	-	4	4
2.	Xxxxx	IT Elective-5	3	1	-	4	4
3.	Xxxxx	IT Elective-6	3	1	-	4	4
4.	Xxxxx	Open Elective - 1	3		-	3	3
5.	15B29CI791	Major Project Part-1	-	-			4
6.	15B29CI792	Term Paper	-	-	-	-	3
	15B29CI793	Summer Training Viva	-	-	-	-	2
		TOTAL				15+	24

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

1	16B1NCI731	Combinatorics
2	10B1NCI737	Multimedia Computing
3	17B1NCI747	Cloud Computing
4	16B1NCI732	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	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	IT Elective-7	3	1	-	4	4
2.	Xxxxx	IT Elective-8	3	1	-	4	4
3.	Xxxxx	Open Elective - 2	3		-	3	3
4.	15B29CI891	Major Project Part-2	-	-			12
		TOTAL				11+	23

List of elective courses for IT Elective-7, IT 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