

Dated: 9 July 2021

4 year B. Tech. degree Course - IT w.e.f. 2018-19 Batch

FIRST SEMESTER

Sr No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B11MA111	Mathematics-1	3	1	-	4	4
2.	15B11PH111	Physics-1	3	1	-	4	4
3.	15B11CI111	Software Development Fundamentals-I	3	1	-	4	4
4.	15B11HS112	English	2	1	-	3	3
5.	15B17PH171	Physics Lab-1	-	-	2	2	1
6.	15B17CI171	Software Development Lab-I	-	-	4	4	2
7.	18B15GE111 / 18B15GE112	Engineering Drawing & Design/ Workshop			3	3	1.5
		TOTAL				24	19.5

SECOND SEMESTER

Sr No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B11MA211	Mathematics-2	3	1	-	4	4
2.	15B11PH211	Physics-2	3	1	-	4	4
3.	15B11EC111	Electrical Science-I	3	1	-	4	4
4.	15B11CI211	Software Development Fundamentals-II	3	1	-	4	4
5.	15B17PH271	Physics Lab-2	-	-	2	2	1
6.	15B17EC171	Electrical Science Lab-I	-	-	2	2	1
7.	15B17CI271	Software Development Lab-II	-	-	2	2	1
8.	18B15GE112 / 18B15GE111	Workshop/ Engineering Drawing & Design			3	3	1.5
		TOTAL				25	20.5

THIRD SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B11CI212	Theoretical Foundations of Computer Science	3	1	-	4	4
2.	15B11CI312	Database Systems and Web	3	1	-	4	4
3.	18B11CS211	Data Structures and Algorithms	3	1	-	4	4
4.	18B15CS211	Data Structures and Algorithms Lab	-	-	4	4	2
5.	15B17CI372	Database Systems and Web Lab	-	-	2	2	1
6.	15B11EC211	Electrical Science -II	3	1	-	4	4
7.	15B17EC271	Electrical Science Lab-II	-	-	2	2	1
8.	15B11HS211	Economics	2	1	-	3	3
		TOTAL				27	23

FOURTH SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective - 1	2	1	-	3	3
2.	15B11MA301	Probability and Random Processes	3	1	-	4	4
3.	18B11EC213	Digital Systems	3	1	-	4	4
4.	15B11CI313	Computer Organisation and Architecture	3	1	-	4	4
5.	15B11GE301	Environmental Science	3	-	-	3	Qualifying
6.	18B15EC213	Digital Systems Lab	-	-	2	2	1
7.	15B17CI373	Computer Organisation and Architecture Lab	-	-	2	2	1
8.	15B11HS111	Life Skills				2	2
		TOTAL				24	19

FIFTH SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxx	HSS Elective-2	3		-	3	3
2.	18B11CS212	Computer Networks and Security	3		-	3	3
3.	Xxxxx	Discipline Elective -1(#)	3	-	-	3	3
4.	Xxxxx	Science Elective	3	-	-	3	3
5.	15B29CI591	Minor Project – 1			4	4	2
6.	18B15CS212	Computer Networks and Security Lab	-	-	2	2	1
7.	15B17CI472	Operating Systems and Systems Programming Lab	-	-	2	2	1
8.	15B17CI575	Open Source Software Lab	-	-	2	2	1
9.	15B11CI412	Operating Systems and Systems Programming	3	1	-	4	4
10.	15B28CI582	Multimedia Lab	-	-	2	2	1
11.	18B12HS311	Indian Constitution & Traditional Knowledge	3	-	-	3	Qualifying
		TOTAL				31	22

SIXTH SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	15B22CI521	Cloud based Enterprise Systems	3		-	3	3
2.	Xxxxxx	Discipline Elective – 2(##)	3	-	-	3	3
3.	Xxxxxx	Discipline Elective – 3(###)	3	-	-	3	3
4.	Xxxxxx	Open Elective - 1	3			3	3
		Selected Value Added Course(*)	2			2	Audit
5.	15B28CI581	Cloud based Enterprise Systems Lab	-	-	2	2	1
6.	15B29CI691	Minor Project-2	-	-	4	4	2
7.	15B22CI621 OR 15B22CI622	Data Mining and Web Algorithms OR Mobile Applications and Internet of Things	3	1	-	4	4
8.	15B28CI681 OR 15B28CI682	Data Mining and Web Algorithms Lab OR Mobile Applications and Internet of Things Lab	-	-	2	2	1
9.	Xxxxxx	HSS Elective - 3	2	1	-	3	3
		TOTAL				27/ 29	23

1. Students may opt to study Selected Foreign Language during 5th semester as an additional course of 2 credits not to be counted towards CGPA calculation. Those who qualify will be provided with additional certificate.
2. All students will undergo Value Added Course, however it will not count for CGPA calculations and will not be reflected in transcript of those students who fail to qualify. Those who qualify will be provided with additional certificate.
3. Students will undergo 6 weeks Industrial Training during Summer Vacation after 6th Semester.

SEVENTH SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxxx	Discipline Elective – 4(**)	3			3	3
2.	Xxxxxx	Discipline Elective – 5	3			3	3
3.	Xxxxxx	Discipline Elective - 6	3	-	-	3	3
4.	Xxxxxx	Open Elective - 2	3		-	3	3
5.	15B29CI791	Major Project Part-1	-	-	8	8	4
6.		Summer Training Viva	-	-	-	-	Qualifying
		TOTAL				20	16

EIGHTH SEMESTER

Sr. No.	Course		Contact Hours				Credits
	No.	Title	L	T	P	Total	
1.	Xxxxxx	Discipline Elective – 7	3			3	3
2.	Xxxxxx	Discipline Elective - 8	3			3	3
3.	Xxxxxx	Open Elective -3	3		-	3	3
4.	15B29CI891	Major Project Part-2	-	-	16	16	8
		TOTAL				25	17

Total Credits for B. Tech. –160

Discipline Elective -1(#)

1. 20B12CS333 Fundamentals of Machine learning
2. 20B12CS332 Fundamentals of Computer security
3. 20B12CS333 Introduction to Big data and Data Analytics
4. 20B12CS334 Object Oriented Analysis and Design using Java
5. 20B12CS335 Image Processing and Computer Vision
6. 20B12CS336 Automata Theory and its applications

Discipline Elective – 2(##)

1. 21B12CS312 Sensor Technology & Android Programming
2. 21B12CS313 Fundamentals of Distributed and Cloud Computing
3. 21B12CS314 Introduction to Large Scale Database Systems
4. 21B12CS315 Web Technology and Cyber Security
5. 21B12CS316 Introduction to Compiler Design

Discipline Elective – 3(###)

1. 21B12CS317 Introduction to Blockchain Technology
2. 21B12CS318 Big Data Ingestion
3. 21B12CS319 Fundamentals of Soft Computing
4. 21B12CS320 Open source software development
5. 21B12CS321 Concepts of Graph theory

Selected Value Added Course (*)

1. 20B16CS322 Java Programming
2. 20B16CS323 Problem Solving using C and C++
3. 20B16CS324 Non-linear Data Structures & problem solving
4. 20B16CS325 Game Development: Fundamentals and practices
5. 20B16CS326 Front End Programming

Discipline Elective – 4

1. 19B12CS425 Advanced Blockchain : A game theoretic view
2. 21B12CS411 Big Data with Hadoop and Spark
3. 18B12CS428 Introduction to Deep Learning
4. 21B12CS412 Cryptography and its Applications
5. 16B1NCI648 Information Retrieval and Semantic Web

Discipline Elective – 5

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|---------------|-----------------------------------|
| 1. 19B12CS426 | IoT Analytics |
| 2. 21B12CS417 | Machine Learning and Big Data |
| 3. 21B12CS415 | Secure Design of Software Systems |
| 4. 19B12CS423 | Computing for data science |
| 5. 21B12CS413 | Fog and Edge Computing |

Discipline Elective – 6

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|---------------|--|
| 1. 21B12CS414 | Smart Systems and IOT |
| 2. 17B1NCI731 | Machine Learning and Natural Language Processing |
| 3. 19B12CS427 | Introduction to DEVOPS |
| 4. 15B1NCI732 | Social Network Analysis |
| 5. 21B12CS418 | Ethical Hacking and Prevention |

Discipline Elective – 7

TBD

Discipline Elective – 8

TBD

Open Elective :

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|-----------------------------|---|
| Open Elective 1: 21B12CS311 | Software Development Principles and Practices |
| Open Elective 2: 18B12CS424 | Algorithm Analysis and AI |
| Open Elective 3: TBD | |