1st Year B.Tech. - Computer Science and Information Technology
1st Semester Course Structure

Regulations: R18-CBCS **With effect from Academic year 2020-21 Onwards**

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks		
				L	T/P /D		Internal	External	Total
1	68102	Mathematics-I	BS	3	0	3	30	70	100
2	68103	Engineering Chemistry	BS	3	0	3	30	70	100
3	68105	Environmental Science	BS	3	0	3	30	70	100
4	65101	Problem Solving Through C	ES	3	0	3	30	70	100
5	63102	Engineering Drawing	ES	2	3	3.5	30	70	100
Practicals									
6	68131	English Language Communication Skills Lab - I	HS	0	2	1	30	70	100
7	68133	Engineering Chemistry Lab	BS	0	2	1	30	70	100
8	65131	Computer Programming Lab	ES	0	3	1.5	30	70	100
9	67131	IT Workshop Lab	ES	0	2	1	30	70	100
		Total		**14**	**12**	**20**	**270**	**630**	**900**
		Total Hours		**26**					

2nd Semester Course Structure

Regulations: R18-CBCS **With effect from Academic year 2020-21 Onwards**

Sl. No.	Subject Code	Subject	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks		
				L	T/P /D		Internal	External	Total
1	68152	Mathematics-II	BS	3	0	3	30	70	100
2	68151	English	HS	3	0	3	30	70	100
3	68157	Applied Physics	BS	3	0	3	30	70	100
4	69151	Python Programming	ES	2	0	2	30	70	100
5	62151	Basic Electrical and Electronics Engineering (EEE)	ES	3	0	3	30	70	100
Practicals									
6	68181	English Language Communication Skills Lab-II	HS	0	2	1	30	70	100
7	68187	Applied Physics Lab	BS	0	2	1	30	70	100
8	69181	Python Programming Lab	ES	0	3	1.5	30	70	100
9	62181	Electrical and Electronics Engineering Lab	ES	0	3	1.5	30	70	100
10	63181	Engineering Workshop	ES	0	2	1	30	70	100
		Total		**14**	**12**	**20**	**300**	**700**	**1000**
		Total Hours		**26**					

Note: Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

1. HS : HUMANITIES AND SOCIAL SCIENCES **2. ES : ENGINEERING SCIENCES**
3. BS: BASIC SCIENCES

2nd Year B.Tech. Computer Science and Information Technology
1st Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
1	69201	Data Structures	PC	3	0	3	30	70	100
2	65202	Discrete Structures and Graph Theory	PC	3	0	3	30	70	100
3	69202	Digital Logic Design	ES	3	0	3	30	70	100
4	69203	Statistical Foundations of Data Science	BS	3	0	3	30	70	100
5	69204	Object Oriented Programming	ES	3	0	3	30	70	100
6	69231	Data Structures Lab	PC	0	3	1.5	30	70	100
7	69232	Statistical Methods with R Lab	BS	0	2	1	30	70	100
8	69233	Java Programming Lab	ES	0	3	1.5	30	70	100
9	68232	Verbal Ability Lab	HS	0	2	1	30	70	100
			Total	**15**	**10**	**20**	**270**	**630**	**900**
			Total Periods	**25**					

2nd Year B.Tech. Computer Science and Information Technology
2nd Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per Week		Credits	Scheme of Examination Maximum Marks		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
1	69251	Computer Architecture	PC	3	0	3	30	70	100
2	67252	Operating Systems	PC	3	0	3	30	70	100
3	67255	Design and Analysis of Algorithms	PC	3	0	3	30	70	100
4	65252	Database Management Systems	PC	3	0	3	30	70	100
5	69252	Software Engineering Concepts	PC	3	0	3	30	70	100
6	69281	Algorithms and CASE Tools Lab	PC	0	3	1.5	30	70	100
7	69282	Advanced Java Programming Lab	PC	0	3	1.5	30	70	100
8	65283	Database Management Systems Lab	PC	0	2	1	30	70	100
9	68283	Reasoning & Data Interpretation Lab	BS	0	2	1	30	70	100
			Total	**15**	**10**	**20**	**270**	**630**	**900**
			Total Periods	**25**					
10	68282	Gender Sensitization	MC	1	0	0	100	-	-

Note: Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

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5. OE : OPEN ELECTIVE
6. SDC : SKILL DEVELOPMENT COURSE
7. BS: BASIC SCIENCES
8. MANDATORY COURSES

3rd Year B.Tech. Computer Science and Information Technology
1st Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per		Credits	Scheme of Examination		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
1	67302	Automata and Compiler Design	PC	3	0	3	30	70	100
2	**69301**	**Concepts in Data Science**	PC	3	0	3	30	70	100
3	**69302**	**Emerging Web Technologies**	PC	3	0	3	30	70	100
4	67305	Computer Networks	PC	3	0	3	30	70	100
5	68301	Managerial Economics and Financial Analysis	HS	3	0	3	30	70	100
6	67332	Mobile Applications Development using Android Lab	PC	0	3	1.5	30	70	100
7	**69331**	**Emerging Web Technologies Lab**	PC	0	3	1.5	30	70	100
8	68331	Advance English Communications & Soft Skills Lab	HS	0	2	1	30	70	100
9	68332	Effective Technical Communication Lab	HS	0	2	1	30	70	100
		Total		**15**	**10**	**20**	**270**	**630**	**900**
		Total Hours		**25**					
10	68302	Universal Human Values	**MC**	**1**	**0**	**0**	**100**	**-**	**-**

3rd Year B.Tech. Computer Science and Information Technology
2nd Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per		Credits	Scheme of Examination		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
1	65352	Internet of Things	PC	3	0	3	30	70	100
2	**69351**	**Big Data Analytics & Platforms**	PC	3	0	3	30	70	100
3	**69352**	**Machine Learning**	PC	3	0	3	30	70	100
4	**69353**	**Modern Artificial Intelligence**	PC	3	0	3	30	70	100
5	**Professional Elective - I:**								
	67359	Distributed Computing	PE	3	0	3	30	70	100
	69354	**Business Intelligence**							
	65359	Digital Image Processing and Pattern Recognition							
	69355	**Probabilistic Reasoning in Intelligent Systems**							
6	**69381**	**Internet of Things Lab**	PC	0	3	1.5	30	70	100
7	**69382**	**Artificial Intelligence & Machine Learning Lab**	PC	0	3	1.5	30	70	100
8	**69383**	**Big Data Analytics Lab**	PC	0	2	1	30	70	100
9	68381	Quantitative Ability Lab	BS	0	2	1	30	70	100
		Total		**15**	**10**	**20**	**270**	**630**	**900**
		Total Hours		**25**					
10	68351	Essence of Indian Knowledge Tradition	**MC**	**1**	**0**	**0**	**100**	**-**	**-**

Note: Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

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6. SDC : SKILL DEVELOPMENT COURSE
7. BS: BASIC SCIENCES
8. MANDATORY COURSES

4th Year B.Tech. - Computer Science and Information Technology
1st Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per		Credits	Scheme of Examination		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
1	67401	Introduction to Linux Programming	PC	3	0	3	30	70	100
2	67402	Cryptography & Network Security	PC	3	0	3	30	70	100
3	**Professional Elective - II:**								
	67404	Cloud Computing	PE	3	0	3	30	70	100
	69401	**NoSQL Databases**							
	69402	**Computational Intelligence**							
	67412	Wireless Adhoc & Sensor Networks							
4	**Professional Elective - III:**								
	69403	**SOA and Micro Services**	PE	3	0	3	30	70	100
	69404	**Social Media Analytics**							
	65415	Computer Vision							
	69405	**Cyber Security**							
	69406	**Digital Forensics**							
5	**Open Elective - I**		OE	3	0	3	30	70	100
6	67431	Linux Programming Lab	PC	0	2	1	30	70	100
7	69431	**Advanced Web Engineering Lab**	PC	0	2	1	30	70	100
8	69432	Industry Oriented Mini Project	PC	0	0	2	30	70	100
9	69433	Technical Seminar - I	PC	0	2	1	100		100
Total Hours				**15**	**6**	**20**	**340**	**560**	**900**
Total Hours				**21**					

4th Year B.Tech. - Computer Science and Information Technology
2nd Semester Course Structure

Sl. No.	Course Code	Course	Category	Periods per		Credits	Scheme of Examination		
				L	T/P /D		CIE (Continuous Internal Evaluation)	SEE (Semester End Examination)	Total
	Professional Elective - IV:								
	69451	**High Performance Computing**							
	69452	**Cognitive Analytics**							
	69453	**Generative Deep Learning**							
1	69454	**IOT Security**	PE	3	0	3	30	70	100
	Professional Elective - V:								
	67452	GPU Computing							
	69455	**Realtime Analytics**							
	69456	**Reinforcement Learning**							
2	**69457**	**Mastering Blockchain**	PE	3	0	3	30	70	100
3	**Open Elective - II**		OE	3	0	3	30	70	100
4	**69481**	Technical Seminar - II	PC	0	2	1	100		100
5	**69482**	Project Work	PC	0	20	10	30	70	100
Total				**9**	**22**	**20**	**220**	**280**	**500**
Total Hours				**31**					

Note: Lecture Hours (L), Tutorials (T), Practicals (P), Drawing (D) & Credits (C)

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3. PC : PROFESSIONAL CORE **4. PE : PROFESSIONAL ELECTIVE**
5. OE : OPEN ELECTIVE **6. SDC : SKILL DEVELOPMENT COURSE**
7. BS: BASIC SCIENCES **8. MANDATORY COURSES**