

Total Credits

B.Tech. Computer Science & Information Technology [REGULAR Students]

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
Semester - I			Total Academic Engagement and Credits	13	1	10	19
Semester – II				13	1	14	21
Semester – III				8	4	14	19
Semester – IV				11	4	14	22
Semester – V				14	2	14	23
Semester – VI				13	4	12	23
Semester – VII				13	2	16	23
Semester – VIII				6	-	20	16
Total				91	18	114	166

Total Credits

[LATERAL ENTRY Students]

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
Semester – III			Total Academic Engagement and Credits	8	4	14	19
Semester – IV				11	4	14	22
Semester – V				14	2	14	23
Semester – VI				13	4	12	23
Semester – VII				13	2	16	23
Semester – VIII				6	-	20	16
Total				65	16	90	126

COURSE DISTRIBUTION: SEMESTER WISE

COURSE DISTRIBUTION: SEMESTER WISE												
Sr No	Type of Course	Abbreviations	No. of Courses/Semester								Total	
			1	2	3	4	5	6	7	8	Regular	Lateral Entry from SEM III onwards
1	Basic Science Courses	BSC	3	3	1	1	-	-	-	-	8	2
2	Engineering Science Courses	ESC	5	7	-	-	-	-	-	-	12	-
3	Humanities and Social Sciences including Management Courses	HSMC	2	1	1	1	1	1	-	-	7	4
4	(a) Professional Core Courses	PCC	-	-	3	3	4	3	2	-	25	25
	(b) Professional Core Laboratory Courses	LC	-	-	3	3	2	1	1	-		
5	Professional Elective Courses	PEC	-	-	-	-	-	1	2	2	5	5
6	Inter-disciplinary Foundation Courses	IFC	-	-	-	1	1	-	-	-	2	2
7	Skill Based Courses	SBC	1	1	1	1	1	-	-	1	6	4
8	Liberal Learning Courses	LLC	1	-	1	-	1	-	-	-	3	2
9	Inter-disciplinary Open Courses	IOC	-	-	-	-	-	1	1	-	2	2
10	Project	PROJ	-	-	-	-	2	2	2	1	7	7
11	Mandatory Learning Courses	MLC	-	-	1	1	1	1	-	-	4	4
Total			12	12	11	11	12	11	8	4	81	57

CREDIT DISTRIBUTION: SEMESTER WISE

CREDIT DISTRIBUTION: SEMESTER WISE												
1 Lecture hour = 1 Credit			2 Lab Hours = 1 Credit			1 Tutorial Hour = 1 Credit						
Sr No	Type of Course	Abbreviations	No. of Credits/Semester								Total Credits	
			1	2	3	4	5	6	7	8	Regular	Lateral Entry from SEM III onwards
1	Basic Science Courses	BSC	7	7	3	3	-	-	-	-	20	6
2	Engineering Science Courses	ESC	8	11	-	-	-	-	-	-	19	-
3	Humanities and Social Sciences including Management Courses	HSMC	3	1	1	1	2	2	-	-	10	6
4	(a) Professional Core Courses	PCC	-	-	9	9	12	9	6	-	58	58
	(a) Professional Core Laboratory Courses	LC	-	-	4	4	3	1	1	-		
5	Professional Elective Courses	PEC	-	-	-	-	-	3	6	6	15	15
6	Inter-disciplinary Foundation Courses	IFC	-	-	-	2	2	-	-	-	4	4
7	Skill Based Courses	SBC	1	1	2	2	1	-	-	2	9	7
8	Liberal Learning Courses	LLC	-	1	-	1	-	1	-	-	3	2
9	Inter-disciplinary Open Courses	IOC	-	-	-	-	-	3	3	-	6	6
10	Project	PROJ	-	-	-	-	3	4	7	8	22	22
11	Mandatory Learning Courses	MLC	-	-	0	0	0	0	-	-	Audit	Audit
Total			20	20	20	21	23	23	23	16	166	126

Course and Credit Distribution

Sr. No.	Type of Course	Abbreviation	REGULAR		LATERAL ENTRY From SEM III onwards	
			No. of Courses	Total credits	No. of Courses	Total credits
1.	Basic Science Courses	BSC	8	20	2	6
2.	Engineering Science Courses	ESC	12	19	-	-
3.	Humanities and Social Sciences including Management Courses	HSMC	7	10	4	6
4.	(a) Professional Core Courses	PCC	25	58	25	58
	(b) Professional Core Laboratory Courses	LC				
5.	Professional Elective Courses	PEC	5	15	5	15
6.	Inter-disciplinary Foundation Courses	IFC	2	4	2	4
7.	Skill Based Courses	SBC	6	9	4	7
8.	Liberal Learning Courses	LLC	3	3	2	2
9.	Inter-disciplinary Open Courses	IOC	2	6	2	6
10.	Project	PROJ	7	22	7	22
11.	Mandatory Learning Courses	MLC	4	Audit	4	Audit
Total			81	166	57	126

First Semester

S.No.	Course Type	Course Code	Course Title	Hrs./ Week			Credits
				L	T	P	
1	BSC	MA01	Linear Algebra	2	1	-	3
2	BSC	CH01	Applied Chemistry	3	-	-	3
3	ESC	ME02	Fundamentals of Mechanical Engineering	2	-	-	2
4	ESC	CE02	Engineering Mechanics	2	-	-	2
5	ESC	EE01	Basic Electrical Engineering	2	-	-	2
6	HSMC	HS02	English	2	-	-	2
7	BSC	CH01(P)	Applied Chemistry Lab	-	-	2	1
8	ESC	CE02(P)	Engineering Mechanics Lab	-	-	2	1
9	ESC	EE01(P)	Basic Electrical Engineering Lab	-	-	2	1
10	HSMC	HS02(P)	Language Lab	-	-	2	1
11	LLC	LLC01	Liberal Learning Course-I	Credit to be added in Second Semester			
12	SBC	ME01(P)	Tech. Shop Lab	-	-	2	1
Total Credits							19

Note:

- **Liberal Learning Course-II, LLC-01 (Any One Course from NCC/NSO/NCA)**
 - A. NCC**
 - B. NSO**
 - Anyone Sports at State Level
 - C. NCA**
 - Music
 - Dance
 - Photography
 - Cinematography
 - Interior Design
 - Podcasting
 - Theatre
 - Painting etc.

Second Semester

S.No.	Course Type	Course Code	Course Title	Hrs./ Week			Credits
				L	T	P	
1	BSC	MA02	Calculus	2	1	-	3
2	BSC	PY01	Optics and Modern Physics	3	-	-	3
3	ESC	ME01	Engineering Graphics and Visualization	2	-	-	2
4	ESC	CE01	Basic Civil Engineering	2	-	-	2
5	ESC	EC01	Basic Electronics Engineering	2	-	-	2
6	ESC	CS01	Programming for Problem Solving	2	-	-	2
7	BSC	PY01(P)	Optics and Modern Physics Lab	-	-	2	1
8	ESC	ME01(P)	Engineering Graphics Lab	-	-	2	1
9	ESC	CE01(P)	Basic Civil Engineering Lab	-	-	2	1
10	ESC	CS01(P)	Programming for Problem Solving Lab	-	-	2	1
11	LLC	LLC01	Liberal Learning Course-I	-	-	2	1
12	SBC	EC01(P)	Electronics and Computer Workshop	-	-	2	1
13	HSMC	HS01	Design Thinking	-	-	2	1
Total Credits							21

Note:

- **Liberal Learning Course-II, LLC-01 (Any One Course from NCC/NSO/NCA)**
 - A. NCC
 - B. NSO
 - Anyone Sports at State Level
 - C. NCA
 - Music
 - Dance
 - Photography
 - Cinematography
 - Interior Design
 - Podcasting
 - Theatre
 - Painting etc.

Third Semester

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	BSC	MA04	Discrete Structure	2	1	-	3
2.	PCC	CI01	Analog and Digital Communication	2	1	-	3
3.	PCC	CI02	Data Structure and Algorithm	2	1	-	3
4.	PCC	CI03	Computer System Organization	2	1	-	3
5.	HSMC	HS03	Innovation and Creativity	-	-	2	1
6.	LC	CI01(P)	Analog and Digital Communication Lab	-	-	2	1
7.	LC	CI02(P)	Data Structure and Algorithm Lab	-	-	4	2
8.	LC	CI03(P)	Computer System Organization Lab	-	-	2	1
9.	SBC	CI01(P)	IT Workshop (C++)	-	-	4	2
10.	LLC	LLC02	Liberal Learning Course – II	Credit to be added in Fourth Semester			
11.	MLC	MLC01	Professional Laws, Ethics, Gender, Human Values and Harmony	*1	-	-	Audit
Total Credits							19

- **Liberal Learning Course-II, LLC02 (Any One Course from NCC/NSO/NCA)**

A. NCC

B. NSO

➤ Any one Sports at State Level

C. NCA

(A) Music

(B) Dance

(C) Photography

(D) Cinematography

(E) Podcasting

(F) Theatre

(G) Painting

Fourth Semester

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	BSC	MA03	Probability and Statistics	2	1	-	3
2.	PCC	CI04	Computer Network	2	1	-	3
3.	PCC	CI05	Analysis and Design of Algorithm	2	1	-	3
4.	PCC	CI06	Object Oriented Programming System	2	1	-	3
5.	HSMC	HS04	Entrepreneurship and Principles of Management	1	-	-	1
6.	IFC	EC01	Interdisciplinary Foundation Course-I	2	-	-	2
7.	LC	CI04(P)	Computer Network Lab	-	-	2	1
8.	LC	CI05(P)	Analysis and Design of Algorithm Lab	-	-	4	2
9.	LC	CI06(P)	Object Oriented Programming System Lab	-	-	2	1
10.	SBC	CI02(P)	Programming in PYTHON	-	-	4	2
11.	LLC	LLC02	Liberal Learning Course – II	-	-	2	1
12.	MLC	MLC02	Constitution of India	*1	-	-	Audit
Total Credits							22

- **Interdisciplinary Foundation Course (IFC)-I, IFC-EC01**

(Offered by Electronics and Communication Department.)

- **Sensors and Automation**

- **Liberal Learning Course-II, LLC02 (Any One Course from NCC/NSO/NCA)**

A. NCC

B. NSO

➤ Any one Sports at State Level

C. NCA

(A) Music

(B) Dance

(C) Photography

(D) Cinematography

(E) Podcasting

(F) Theatre

(G) Painting

Fifth Semester

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PCC	CI07	Database Management System	2	1	-	3
2.	PCC	CI08	Operating System	2	1	-	3
3.	PCC	CI09	Formal Languages and Automata	3	-	-	3
4.	PCC	CI10	Software Engineering and Project Management	3	-	-	3
5.	HSMC	HS05	Humanities and Social Sciences Open Courses – I	2	-	-	2
6.	IFC	CB01	Interdisciplinary Foundation Course-II	2	-	-	2
7.	LC	CI07(P)	Database Management System Lab	-	-	4	2
8.	LC	CI08(P)	Operating System Lab	-	-	2	1
9.	SBC	CI03(P)	Basics of Web Development	-	-	2	1
10.	PROJ	CI01	Mini Project	-	-	4	2
11.	PROJ	CI02	Seminar	-	-	2	1
12.	LLC	LLC03	Liberal Learning Course –III	Credit to be added in Sixth Semester			
13.	MLC	MLC03	Environmental Studies	*1	-	-	Audit
14.	PROJ	-	Internship-I	Credit to be added in sixth semester			
Total Credits							23

- Humanities and Social Sciences Open Courses (HSMC) – I, HS05 (Any One Course)**
 - (A) English Language Proficiency
 - (B) German Language
 - (C) French Language
 - (D) Japanese Language
 - (E) Soft Skills and Interpersonal Communication
- Interdisciplinary Foundation Course-II, IFC-CB01**
 (Offered by Cyber Security IOT including Blockchain Technology Branch.)
 - Blockchain Technology
- Liberal Learning Course-III, LLC03 (Any One Course from NCC/NSO/NCA)**
Note: pool of choices will be the same as in LLC01 and LLC02.

Sixth Semester

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PCC	CI11	Internet of Things	2	1	-	3
2.	PCC	CI12	Foundation of Artificial Intelligence and Machine Learning	2	1	-	3
3.	PCC	CI13	Compiler Design	2	1	-	3
4.	PEC	CI01	Professional Elective Course -I	3	-	-	3
5.	HSMC	HS06	Humanities and Social Sciences Open Courses – II	2	-	-	2
6.	IOC	-	Interdisciplinary Open Course-I	2	1	-	3
7.	LC	CI12(P)	Foundation of Artificial Intelligence and Machine Learning Lab	-	-	2	1
8.	PROJ	CI03	Minor Project	-	-	4	2
9.	PROJ	CI04	Internship-I	-	-	4	2
10.	LLC	LLC03	Liberal Learning Course –III	-	-	2	1
11.	MLC	MLC04	Intellectual Property Rights	*1	-	-	Audit
12.	PROJ	-	Internship-II	Credit to be added in seventh semester			
Total Credits							23

Note:

Professional Elective Course-I	Interdisciplinary Open Course-I
CI01(A) Data Mining and Warehousing	MA01(A) Scientific Aptitude
CI01(B) Advanced Java Programming	Operation Research
CI01(C) Natural Language Processing	Green Technology
CI01(D) Information Storage Management	Industrial Electronics

- Humanities and Social Sciences Open Courses (HSMC) – III, HS06 (Any One Course)**
 - (A) Industrial Safety Psychology
 - (B) Project Management
 - (C) Business Communication

Seventh Semester

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PCC	CI14	Data Science	3	-	-	3
2.	PCC	CI15	Cryptography and Network Security	3	-	-	3
3.	PEC	CI02	Professional Elective Course-II	2	1	-	3
4.	PEC	CI03	Professional Elective Course-III	2	1	-	3
5.	LC	CI14(P)	Data Science Lab	-	-	2	1
6.	IOC	-	Interdisciplinary Open Course-II	3	-	-	3
7.	PROJ	CI05	Major Project-I	-	-	8	4
8.	PROJ	CI06	Internship-II	-	-	6	3
Total Credits							23

Note:

Professional Elective Course-II	Professional Elective Course-III	Interdisciplinary Open Course-II
CI02(A) Mobile Application Development	CI03(A) Information Theory and Coding	CS-01 Digital Marketing and SEO
CI02(B) Cloud Computing	CI03(B) Pattern Recognition	Robotics
CI02(C) Software Vulnerabilities and Security	CI03(C) Computational Intelligence	FT (A) Fundamentals of Fire and Safety
CI02(D) Data Visualization	CI03(D) Deep and Reinforcement Learning	3D Printing and Application

Semester VIII (Scheme A)

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PEC	CI04	Professional Elective Course-IV	3	-	-	3
2.	PEC	CI05	Professional Elective Course-V	3	-	-	3
3.	SBC	CI04(P)	Data Analytics (Tableau/PowerBi)	-	-	4	2
4.	PROJ	CI07 (A)	Major Project-II	-	-	16	8
Total Credits							16

Semester VIII (Scheme B)

Sr. No.	Course Type	Course Code	Course Name	Teaching Scheme			Credits
				L	T	P	
1.	PEC	CI04	Professional Elective Course-IV	3	-	-	3
2.	PEC	CI05	Professional Elective Course-V	3	-	-	3
3.	SBC	CI04(P)	Data Analytics (Tableau/PowerBi)	-	-	4	2
4.	PROJ	CI07 (B)	Internship and Project (Industry/Corporate/Academia)	-	-	16	8
Total Credits							16

Note:

➤ In Eighth Semester, students may opt for 'SCHEME A' or 'SCHEME B'.

Professional Elective Course-IV	Professional Elective Course-V
CI04(A) Wireless and Mobile Computing	CI05(A) Big Data and Hadoop
CI04(B) Bio Informatics	CI05(B) Soft Computing
CI04(C) Digital Image Processing	CI05(C) Quantum Computing
CI04(D) Agile Software Development	CI05(D) Semantic Web and Ontologies