

Semester wise Credit Structure for B. Tech-IT

Category / Semesters	I	II	III	IV	V	VI	VII	VIII	Total
Basic Sciences & Maths (BSM)	4	5	5	4	-	-	-	-	18
Engineering Fundamentals (EF)	7	7	4	-	-	-	-	-	18
Professional Skill (PS)	2	2	-	-	-	-	-	-	4
Program Core (PC)	-	-	9	18	14	12	12	-	65
Management (M)	-	-	-	-	2	2	-	-	4
Humanities & Social Science (HSS)	4	4	-	-	-	-	-	-	8
Project (P)	-	-	-	-	-	2	3	-	5
Seminar (S)	-	-	-	-	-	2	-	-	2
Industrial Practice (IP) / Industrial Elective (IE)+Minor Project (MP)	-	-	-	-	-	-	-	12/(8+4)	12/12
Program link basic science and engineering courses (PLBSE) (To be decided by the department)	2	4	4	-	5	-	-	-	15
Program Electives (PE)	-	-	-	-	4	4	4	-	12
Open Electives (OE) (Other Departments)	-	-	-	-	-	-	3	-	3
Humanities & Social Science Elective (HSSE)	2	-	-	-	-	-	-	-	2
Total	21	22	22	22	25	22	22	12	168

Curriculum for B.Tech. (Information Technology)

(Newly admitted students from Session 2021-2022)

First Year, Semester I

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-104	Linear Algebra and Differential Equations	3	1	0	4
2.	EF	BIT-101	Fundamentals of Information Technology	3	1	0	4
3.	HSS*	BHM-102/152	Communication Skill-1	2	1	2	4
4.	PS	BIT-102	Software Tools-I	0	1	2	2
5.	PLBSE	BEC-105	Fundamentals of Electronics Engineering	2	0	0	2
6.	EF	BEE-105	Basic Concepts of Electrical Engineering	2	0	2	3
7.	HSSE**	BHM-104	Human Values & Professional Ethics-1	2	0	0	2
			Total	14	4	6	21
8.	ECA-I	ECA-100	Induction Program	-	-	-	0

First Year, Semester II

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	EF	BIT-151	Programming Fundamentals	3	1	2	5
2.	BSM	BSM-157	Graph Theory and Discrete Mathematics	3	1	2	5
3.	PS	BIT-152	Software Tools-II	0	1	2	2
4.	EF	BIT-153	Linux Lab	0	1	2	2
5.	HSS*	BHM-103/153	Communication Skill-2	2	1	2	4
6.	PLBSE	BSM-156	Applied Probability and Statistics	3	1	0	4
			Total	11	6	10	22
7.	ECA-II			-	-	-	0

Second Year, Semester III

S. N.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-204	Applied computational Methods	3	1	2	5
2.	EF	BIT-201	Switching Theory & Logic Design	3	1	0	4
3.	PC	BIT-202	Data Structures	3	1	2	5
4.	PC	BIT-203	Object-Oriented Programming	3	0	2	4
5.	PLBSE	BIT-204	Software Engineering	3	0	2	4
			Total	15	3	8	22
6.	ECA-III			-	-	-	0
7.	AC			1/2	-	-	0

Second Year, Semester IV

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-253	Optimization Techniques	3	0	2	4
2.	PC	BIT-251	Database Management System	3	0	2	4
3.	PC	BIT-252	Computer Organization & Architecture	3	0	2	4
4.	PC	BIT-253	Computer Network	3	1	2	5
5.	PC	BIT-254	Python Programming	3	1	2	5
			Total	15	2	10	22
6.	ECA-IV			-	-	-	0
7.	AC			1/2	-	-	0
8.	DM			3	1	0/2	4/5

Third Year, Semester V

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-301/351	Engineering & Managerial Economics	2	0	0	2
2.	PC	BIT-301	AI and Machine Learning	3	1	2	5
3.	PC	BIT-302	Operating System	3	0	2	4
4.	PC	BIT-303	Design & Analysis of Algorithm	3	1	2	5
5.	PE1	BIT 326-328	Program Elective-1	3	1/0	0/2	4
6.	PLBSE	BIT-304	Java Programming	3	1	2	5
			Total	17	4/3	8/10	25
7.	ECA-V			-	-	-	0
8.	DM			3	1	0/2	4/5

Third Year, Semester VI

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-354	Business Management	2	0	0	2
2.	PC	BIT-351	Wireless Sensor Network & IoT	3	0	2	4
3.	PC	BIT-352	Cryptography & Cyber Security	3	0	2	4
4.	PC	BIT-353	Cloud Computing	3	0	2	4
5.	PE2	BIT 376-378	Program Elective-2	3	1/0	0/2	4
6.	P	BIT-370	Project Part-I	0	0	4	2
7.	S	BIT-380	Seminar	0	0	4	2
			Total	14	1/0	14/16	22
8.	ECA-VI			-	-	-	0
9.	DM			3	1	0/2	4/5

Final Year, Semester VII

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	PC	BIT-401	Data Science and Analytics	3	1	0	4
2.	PC	BIT-402	Distributed Systems	3	0	2	4
3.	PC	BIT-403	Blockchain Technology and its Applications	3	0	2	4
4.	PE3	BIT 426-428	Program Elective-3	3	1/0	0/2	4
5.	OE [#]		Open Elective	2	1	0	3
6.	P	BIT-440	Project Part-II	0	0	6	3
			Total	14	3/2	10/12	22
7.	ECA-VII			-	-	-	0
8.	DM			3	1/0	0/2	4/5

#To be taken from the other department.

Final Year, Semester VIII

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	IP	IIT-400	Industrial Practices	0	0	24	12
	Without Industrial Practices (IP)						
2.	MP	BIT-480	Minor project	0	0	8	4
	IE-1	IIT 401-402	Industrial Elective-1	3	1/0	0/2	4
	IE-2	IIT 405-406	Industrial Elective-2	3	1/0	0/2	4
			Total	0/6	0/2	24/8	12
3.	DM	SIT-421	Research Project*	0	0	4	2

*For Theory based Department Minor only

Note: Department may consider PE1, PE2, PE3 to be taught through MOOCs. The MOOC courses may replace any Program Core (PC) subject if the course content of MOOCs courses matches more than 75% with the course content of PC subject.

Programme Electives (PE-I)

Sr.	Paper Code	Subject Name	L	T	P	Cr.
1	BIT-326	Android Programming	3	0	2	4
2	BIT-327	Computer Vision	3	0	2	4
3	BIT-328	Mobile Computing	3	1	0	4

Programme Electives (PE-II)

Sr.	Paper Code	Subject Name	L	T	P	Cr.
1	BIT-376	Compiler Design	3	1	0	4
2	BIT-377	Deep Learning	3	1	0	4
3	BIT-378	Data Mining & Warehousing	3	1	0	4

Programme Electives (PE-III)

Sr.	Paper Code	Subject Name	L	T	P	Cr.
1	BIT-426	Social Networks	3	1	0	4
2	BIT-427	Digital Forensics	3	0	2	4
3	BIT-428	Reinforcement Learning	3	1	0	4

Industrial Elective (IE-1)

Sr.	Paper Code	Subject Name	L	T	P	Cr.
1	IIT-401	Full Stack Development	3	0	2	4
2	IIT-402	Getting Started with Competitive Programming	3	0	2	4

Industrial Elective (IE-2)

Sr.	Paper Code	Subject Name	L	T	P	Cr.
1	IIT-405	Arduino Programming	3	0	2	4