



SIPNA COLLEGE OF ENGINEERING & TECHNOLOGY, AMRAVATI


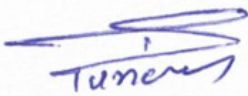

**An Autonomous Institute Affiliated to
Sant Gadge Baba Amravati University, Amravati, Maharashtra (India)
(Approved by AICTE, New Delhi and Recognized by DTE, Maharashtra)
(Accredited with 'A+' Grade by NAAC)**

Bachelor of Technology (B.Tech.) Programme Scheme of Examination (SoE)

**Department of Information Technology
B.Tech. Information Technology with Multidisciplinary Minor
(Semester Pattern)
Effective from Academic Year 2025-26**

Prepared by: Board of Studies - Information Technology

Approved by: Academic Council- Sipna COET, Amravati

			5/7/2025	1.1
Chairman Board of Studies	Dean Academics	Chairman Academic Council	Date of Release	Version



Definition of Subject Code:

1 st & 2 nd letter (Degree Program)	3 rd & 4 th letter Applicable to which students	5 th & 6 th letter (Course category)	7 th & 8 th letter (Sr. no. of Subject)	9 th & 10 th Letters Teaching Dept.	11 th letter (Semester)	12 th letter (Theory or Practical)
BT: B. Tech. MT: M. Tech. MB: MBA	AL: All branches CS: Computer Science and Engineering IT: Information Technology ME: Mechanical Engineering ET: Electronics and Telecommunication Engineering CE: Civil Engineering AD: Artificial Intelligence (AI) and Data Science For MDM 'AL' excluding Teaching Department students'	BS: Basic Science ES: Engineering Science VE: Value Education VS: Vocational and Skill Enhancement AE: Ability Enhancement IK: Indian Knowledge System CC: Cocurricular Course MD: Multidisciplinary Minor OE: Open Elective PC: Program Core PE: Program Elective FP: Field Project H: Humanities N: Entrepreneurship E: Economics M: Management II: Industry Internship RI: Research Internship EI: Entrepreneurship Internship RM: Research Methodology PS: Project and Seminar RP: Research Project and Seminar MH: Minors & Honors	Sr. no. of course in the particular Course category from 1 st to 8 th semester.	SH: Science and Humanities CS: Computer Science and Engineering IT: Information Technology ME: Mechanical Engineering ET: Electronics and Telecommunication Engineering CE: Civil Engineering AD: Artificial Intelligence (AI) and Data Science	1: First Semester 2: Second Semester 3: Third Semester 4: Fourth Semester 5: Fifth Semester 6: Sixth Semester 7: Seventh Semester 8: Eighth Semester	T: Theory P: Practical

Approved in..... **3rd**.....
Academic Council Meeting
 Dated:..... 05.01.2024.....



Category-wise Course Master List

Course Category: Basic Science Courses		
Sr. No.	Course Name	Course Code
1	Engineering Mathematics -I	BTALBS01SH1T
2	Engineering Chemistry	BTALBS02SH1T
3	Engineering Chemistry Lab	BTALBS03SH1P
4	Engineering Mathematics -II	BTALBS04SH2T
5	Engineering Physics	BTITBS05SH2T
6	Engineering Physics Lab	BTITBS06SH2P
7	Mathematics for IT	BTITBS07SH4T

Course Category: Engineering Science Course		
Sr. No.	Course Name	Course Code
1	Engineering Graphics	BTALES02ME1P
2	Engineering Graphics Lab	BTALES02ME1P
3	Basics of Python	BTITES03IT1T
4	Basics of Python Lab	BTITES04IT1P
5	Basic Electrical Engineering	BTALES05ET2T
6	Basic Electrical Engineering Lab	BTALES06ET2P
7	Programming for Problem Solving	BTALES07IT2T
8	Programming for Problem Solving	BTALES08IT2P
9	Workshop Idea lab /Fab Lab	BTALES09ME2P

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 Dated:-.....05.07.2024.....



Course Category: Vocational and Skill Enhancement Courses (VSEC)

Sr. No.	Course Name	Course Code
1	Web Development - Lab	BTITVS01IT1P
2	Design Thinking	BTALVS02IT1T
3	Fundamentals of Network Design	BTITVS03IT2P
4	Digital Marketing	BTITVC04IT4P

Course Category: Humanities & Social Sciences Courses [HSSMC]

Sr. No.	Course Name	Course Code
1	Professional Communication	BTALAE01SH1P
2	Values and Ethics	BTALVE01SH1T
3	Environmental Studies	BTALVE02SH1T
4	Indian Knowledge System	BTALIK01SH2T
5	MIS (Management Information System)	BTITHM01IT3T
6	Innovation and Technology in Entrepreneurship and Management	BTITHN01IT4T
7	Modern Indian Language	BTALAE02SH6T

Course Category: Experiential Learning Courses

Sr. No.	Course Name	Course Code
1	Comm. Engg. Project/ Field project	BTITFP01IT5P
2	Project and Seminar/ Research Project and Seminar	BTITPS01IT7P/ BTITRP01IT7P
3	Industry Internship/ Research Internship/ Entrepreneurship	BTITHI01IT8P/ BTITRI01IT8P/ BTITEI01IT8P
4	Research Methodology	BTALRM01IT8T

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 Dated: 25/07/2024



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SoE No.
24BTIT-1.1

Course Category: Programme Core Course (PCC)

Sr. No.	Course Name	Course Code
1	Foundations of Networking Essentials	BTITPC01IT2T
2	Discrete Structures & Graph Theory	BTITPC02IT3T
3	Data Structures & Algorithm	BTITPC03IT3T
4	Data Structures & Algorithm – Lab	BTITPC04IT3P
5	Object Oriented Programming	BTITPC05IT3T
6	Object Oriented Programming – Lab	BTITPC06IT3P
7	Computer Architecture & Organization	BTITPC07IT3T
8	Computer Architecture & Organization – Lab	BTITPC08IT3P
9	Operating System	BTITPC09IT4T
10	Operating System Lab	BTITPC10IT4P
11	Database Management System	BTITPC11IT4T
12	Database Management System Lab	BTITPC12IT4P
13	Theory of Computation	BTITPC13IT4T
14	Compiler Design	BTITPC14IT5T
15	Compiler Design Lab	BTITPC15IT5P
16	Cloud Computing	BTITPC16IT5T
17	Cloud Computing Lab	BTITPC17IT5P
18	Artificial Intelligence and Machine Learning	BTITPC18IT5T
19	Artificial Intelligence and Machine Learning Lab	BTITPC19IT5P
20	Design & Analysis of Algorithm	BTITPC20IT6T
21	Design & Analysis of Algorithm Lab	BTITPC21IT6P
22	Cryptography & Network Security	BTITPC22IT6T
23	Cryptography & Network Security Lab	BTITPC23IT6P
24	Software Engineering	BTITPC24IT7T
25	Software Engineering Lab	BTITPC25IT7P
26	Data Warehousing and Mining	BTITPC26IT7T
27	Data Warehousing and Mining Lab	BTITPC27IT7P
28	Mobile Computing	BTITPC28IT7T

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SoE No.
24BTIT-1.1

Course Category: Programme Elective Courses (PEC)		
Sr. No.	Course Name	Course Code
1	Introduction to Data Science	BTITPE01IT5T
2	Introduction to Data Science Lab	BTITPE02IT5P
3	Computer Graphics & Science Image Processing	BTITPE03IT5T
4	Computer Graphics & Image Processing Lab	BTITPE04IT5P
5	Advance JavaScript Programming with Framework	BTITPE05IT5T
6	Advance JavaScript Programming with Framework Lab	BTITPE06IT5P
7	Big Data Analytics	BTITPE07IT6T
8	Big Data Analytics Lab	BTITPE08IT6P
9	Computer Vision	BTITPE09IT6T
10	Computer Vision Lab	BTITPE10IT6P
11	Intermediate Java Programming	BTITPE11IT6T
12	Intermediate Java Programming Lab	BTITPE12IT6P
13	Advanced Machine Learning	BTITPE13IT6T
14	Advanced Machine Learning Lab	BTITPE14IT6P
15	Blockchain Technology	BTITPE15IT6T
16	Blockchain Technology Lab	BTITPE16IT6P
17	Natural Language Processing	BTITPE17IT6T
18	Natural Language Processing Lab	BTITPE18IT6P
19	Business Intelligence	BTITPE19IT7T
20	Business Intelligence Lab	BTITPE20IT7P

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SoE No.
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21	Augmented Reality & Virtual Reality	BTITPE21IT7T
22	Augmented Reality & Virtual Reality Lab	BTITPE22IT7P
23	Advance Java Programming	BTITPE23IT7T
24	Advance Java Programming Lab	BTITPE24IT7P
25	Deep Learning	BTITPE25IT7T
26	Digital Forensics	BTITPE26IT7T
27	Introduction to Generative AI	BTITPE27IT7T

For the detailed list of Multidisciplinary Minor (MDM) courses, click here.

For the detailed list of Open Elective (OE) courses, click here.

For the detailed list of Co-curricular (CC) courses, click here.

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SoE No.
24BTIT-1.1

Scheme Semester - I

Scheme for First Year B. Tech. In Information Technology (Semester -I)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE-I	MSE-II	TA	ESE	INT	EXT		
Basic Science Courses															
1	Engineering Mathematics -I	BTALBS01SH1T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Engineering Chemistry	BTALBS02SH1T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
3	Engineering Chemistry Lab	BTALBS03SH1P	0	2	0	2	1	-	-	-	-	30	20	50	-
Engineering Science Courses(ESC)															
4	Engineering Graphics	BTALES01ME1T	3	0	0	3	3	15	15	10	60	-	-	100	3.0
5	Engineering Graphics Lab	BTALES02ME1P	0	2	0	2	1	-	-	-	-	30	20	50	-
6	Basics of Python	BTITES03IT1T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
7	Basics of Python Lab	BTITES04IT1P	0	2	0	2	1	-	-	-	-	30	20	50	-
Vocational and Skill Enhancement Courses(VSEC)															
8	Web Development - Lab	BTITVS01IT1P	0	2	0	2	1	-	-	-	-	50	-	50	-
9	Design Thinking	BTITVS02IT1T	1	0	0	1	1	-	-	50	-	-	-	50	-
Ability Enhancement Courses (AEC)															
10	Professional Communication	BTALAE01SH1P	0	2	1	3	2	-	-	-	-	30	20	50	-
Value Education Courses (VEC)															
11	Values and Ethics	BTALVE01SH1T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
12	Environmental Studies	BTALVE02SH1T	1	0	0	1	1	-	-	50	-	-	-	50	2.0
13	Co-curricular course (CC1)	--	-	2	-	2	1	-	-	-	-	50	-	50	-
TOTAL			15	12	1	28	22	75	75	150	300	220	80	900	-

L: Lecture P: Practical T : Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of CC Courses, Refer the link given on page no.7

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**SoE No.
24BTIT-1.1**

Scheme Semester – II

Scheme for First Year B. Tech. In Information Technology (Semester -II)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE- I	MSE-II	TA	ESE	INT	EXT		
Basic Science Courses (BSC)															
1	Engineering Mathematics -II	BTALBS04SH2T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Engineering Physics	BTITBS05SH2T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
3	Engineering Physics Lab	BTITBS06SH2P	0	2	0	2	1	-	-	-	-	30	20	50	-
Engineering Science Courses (ESC)															
4	Basic Electrical Engineering	BTALES05ET2T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
5	Basic Electrical Engineering Lab	BTALES06ET2P	0	2	0	2	1	-	-	-	-	30	20	50	-
6	Programming for Problem Solving	BTITES07IT2T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
7	Programming for Problem Solving Lab	BTITES08IT2P	0	2	0	2	1	-	-	-	-	30	20	50	-
8	Workshop Practice Lab	BTALES09ME2P	0	2	0	2	1	-	-	-	-	30	20	50	-
Vocational and Skill Enhancement Courses (VSEC)															
9	Fundamentals of Network Design Lab	BTITVS03IT2P	0	2	0	2	1	-	-	-	-	50	-	50	-
Program Core Courses (PCC)															
10	Foundations of Networking Essentials	BTITPC01IT2T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
Indian Knowledge System (IKS)															
11	Indian Knowledge System	BTALIK01SH2T	2	0	0	2	2	-	-	50	-	-	-	50	2.5
Co-curricular Courses (CC)															
12	Co-curricular course (CC2)	--	-	2	-	2	1	-	-	-	-	50	-	50	-
TOTAL			16	12	0	28	22	75	75	100	300	220	80	850	-

L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of CC Courses, Refer the link given on page no.7

Scheme for Multiple Entry and Exit

Exit option 1(L4.5): Award of One Year UG Certificate in Major with 44 credits and an additional 8 credits.		
Exit Courses		
Minimum two online/offline certification course of 4 credits each suggested by BOS of the department	Online/offline certification Course	8

Approved in..... **3rd**
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 Dated:.....**25.07.2024**.....



Scheme Semester – III

Scheme for Second Year B. Tech. In Information Technology (Semester-III)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE I	MSE II	TA	ESE	INT	EXT		
Program Core Courses (PCC)															
1	Discrete Structures & Graph Theory	BTITPC02IT3T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Data Structures & Algorithm	BTITPC03IT3T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
3	Data Structures & Algorithm – Lab	BTITPC04IT3P	0	2	0	2	1	-	-	-	-	30	20	50	-
4	Object Oriented Programming	BTITPC05IT3T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
5	Object Oriented Programming – Lab	BTITPC06IT3P	0	2	0	2	1	-	-	-	-	30	20	50	-
6	Computer Architecture & Organization	BTITPC07IT3T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
7	Computer Architecture & Organization – Lab	BTITPC08IT3P	0	2	0	2	1	-	-	-	-	30	20	50	-
Multidisciplinary Minor Courses (MDM)															
8	Multidisciplinary Minor -I	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
Open Elective Courses (OEC)															
9	Open Elective-I	--	2	0	0	2	2	15	15	10	60	-	-	100	2.5
HSSMC (Entrepreneurship/ Economics/ Management Course)															
10	MIS (Management Information System)	BTITHM01IT3T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
TOTAL			19	06	0	25	22	105	105	70	420	90	60	850	

L: Lecture P: Practical T : Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of OE/MDM Courses, Refer the link given on page no.7.

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Scheme Semester - IV

Scheme for Second Year B. Tech. In Information Technology (Semester -IV)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE-I	MSE-II	TA	ESE	INT	EXT		
Basic Science Courses (BSC)															
1	Mathematics for IT	BTITBS07SH4T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
Program Core Courses (PCC)															
2	Operating System	BTITPC09IT4T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
3	Operating System -Lab	BTITPC10IT4P	0	2	0	2	1	-	-	-	-	30	20	50	-
4	Database Management System	BTITPC11IT4T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
5	Database Management System -Lab	BTITPC12IT4P	0	2	0	2	1	-	-	-	-	30	20	50	-
6	Theory of Computation	BTITPC13IT4T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
Multidisciplinary Minor Courses (MDM)															
7	Multidisciplinary Minor -II	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
Vocational and Skill Enhancement Courses (VSEC)															
8	Digital Marketing	BTITVC04IT4P	0	2	1	3	2	-	-	-	-	50	-	50	-
Open Elective Courses															
9	Open Elective-II	--	2	0	0	2	2	15	15	10	60	-	-	100	2.5
HSSMC (Entrepreneurship/ Economics/ Management Course)															
10	Innovation and Technology in Entrepreneurship and Management	BTITHN01IT4T	2	0	0	2	2	15	15	10	60	-	-	100	2.5
TOTAL			18	06	1	25	22	105	105	70	420	110	40	850	-

L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of OE/MDM Courses, Refer the link given on page no.7.

Scheme for Multiple Entry and Exit

Exit option 2 (L 5.0): Award of Two Years UG Diploma in Major with 88 credits and an additional 8 credits		
Exit Courses		
Minimum two online/offline certification course of 4 credits each suggested by BOS of the department	Online/offline certification Course	8 credits

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Scheme Semester - V

Scheme for Third Year B. Tech. In Information Technology (Semester -V)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE- I	MSE-II	TA	ESE	INT	EXT		
Program Core Courses (PCC)															
1	Compiler Design	BTITPC14IT5T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Compiler Design Lab	BTITPC15IT5P	0	2	0	2	1	-	-	-	-	30	20	50	-
3	Cloud Computing	BTITPC16IT5T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
4	Cloud Computing Lab	BTITPC17IT5P	0	2	0	2	1	-	-	-	-	30	20	50	-
5	Artificial Intelligence	BTITPC18IT5T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
6	Artificial Intelligence Lab	BTITPC19IT5P	0	2	0	2	1	-	-	-	-	30	20	50	-
7	Program Elective Course	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
8	Program Elective Course - Lab	--	0	2	0	2	1	-	-	-	-	30	20	50	-
9	Comm. Engg. Project/ Field project	BTITFP01IT5P	0	2	0	2	1	-	-	-	-	50	-	50	-
Multidisciplinary Minor Courses (MDM)															
10	Multidisciplinary Minor -III	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
Open Elective Courses (OEC)															
11	Open Elective-III	--	2	0	0	2	2	15	15	10	60	-	-	100	2.5
TOTAL			17	10	0	27	22	90	90	60	360	170	80	850	-

L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of OE/MDM Courses, Refer the link given on page no.7.

List of Program Elective (PEC) Semester-V (Choose course and its associated lab if any)

Sr. No.	Course Name	Course Code
1	Data Science	BTITPE01IT5T
2	Data Science Lab	BTITPE02IT5P
3	Computer Graphics & Image Processing	BTITPE03IT5T
4	Computer Graphics & Image Processing Lab	BTITPE04IT5P
5	Advance JavaScript Programming with Framework	BTITPE05IT5T
6	Advance JavaScript Programming with Framework Lab	BTITPE06IT5P

Program Elective Course	Track I- Data Science	Track II- Computer Graphics & Image Processing	Track III- Advance JavaScript Programming with Framework
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 Academic Council Meeting
 Dated:.....05.07.2024.....



Scheme Semester - VI

Scheme for Third Year B. Tech. In Information Technology (Semester -VI)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE-I	MSE-II	TA	ESE	INT	EXT		
Program Core Courses (PCC)															
1	Design & Analysis of Algorithm	BTITPC20IT6T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Design & Analysis of Algorithm Lab	BTITPC21IT6P	0	2	0	2	1	-	-	-	-	30	20	50	-
3	Cryptography & Network Security	BTITPC22IT6T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
4	Cryptography & Network Security Lab	BTITPC23IT6P	0	2	0	2	1	-	-	-	-	30	20	50	-
5	Program Elective Course - I	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
6	Program Elective Course - I Lab	--	0	2	0	2	1	-	-	-	-	30	20	50	-
7	Program Elective Course - II	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
8	Program Elective Course - II Lab	--	0	2	0	2	1	-	-	-	-	30	20	50	-
Ability Enhancement Courses (AEC)															
9	Modern Indian Language	BTALAE02SH6T	1	0	0	1	1	-	-	50	-	-	-	50	2.0
Multidisciplinary Minor Courses (MDM)															
10	Multidisciplinary Minor - IV	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
Vocational and Skill Enhancement Courses (VSEC)															
11	Mobile App Development	BTITVC05IT6P	0	2	1	3	2	-	-	-	-	50	-	50	2.5
TOTAL			16	10	1	27	22	75	75	100	300	170	80	800	-

L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of MDM Courses, Refer the link given on page no.7.

List of Program Elective I (PEC) Semester-VI (Choose course and its associated lab if any)

Sr. No.	Course Name	Course Code
1	Big Data Analytics	BTITPE07IT6T
2	Big Data Analytics Lab	BTITPE08IT6P
3	Computer Vision	BTITPE09IT6T
4	Computer Vision Lab	BTITPE10IT6P
5	Intermediate Java Programming	BTITPE11IT6T
6	Intermediate Java Programming Lab	BTITPE12IT6P

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List of Program Elective II (PEC) Semester-VI (Choose course and its associated lab if any)

Sr. No.	Course Name	Course Code
1	Foundation of Machine Learning	BTITPE13IT6T
2	Foundation of Machine Learning Lab	BTITPE14IT6P
3	Blockchain Technology	BTITPE15IT6T
4	Blockchain Technology Lab	BTITPE16IT6P
5	Natural Language Processing	BTITPE17IT6T
6	Natural Language Processing Lab	BTITPE18IT6P

Program Elective Course - I	Track I- Big Data Analytics	Track II- Computer Vision	Track III- Intermediate Java Programming
Program Elective Course - II	Track I- Foundation of Machine Learning	Track II- Blockchain Technology	Track III- Natural Language Processing

Scheme for Multiple Entry and Exit

Exit option 3 (L 5.5): Award of Three Years Bachelor's Degree (B. Voc. or B.Sc.) in Major with 132 credits and an additional 8 credits		
Exit Courses		
Minimum two online/offline certification course of 4 credits each suggested by BOS of the department	Online/Offline Certification Course	8

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Scheme Semester - VII

Scheme for Fourth Year B. Tech. In Information Technology (Semester -VII)															
Sr No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE-I	MSE-II	TA	ESE	INT	EXT		
Program Core Courses															
1	Software Engineering	BTITPC24IT7T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
2	Software Engineering Lab	BTITPC25IT7P	0	2	0	2	1	-	-	-	-	30	20	50	-
3	Data Warehousing and Mining	BTITPC26IT7T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
4	Data Warehousing and Mining Lab	BTITPC27IT7P	0	2	0	2	1	-	-	-	-	30	20	50	-
5	Mobile Computing	BTITPC28IT7T	3	0	0	3	3	15	15	10	60	-	-	100	2.5
6	Program Elective Course - I	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
7	Program Elective Course-I Lab	--	0	2	0	2	1	-	-	-	-	30	20	50	-
8	Program Elective Course - II	--	3	0	0	3	3	15	15	10	60	-	-	100	2.5
9	Project and Seminar/ Research Project and Seminar	BTITPS01IT7P/ BTITRP01IT7P	0	8	0	8	4	-	-	-	-	30	20	50	-
TOTAL			15	14	0	29	22	75	75	50	300	120	80	700	-

L: Lecture P: Practical T: Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External

Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

List of Program Elective I (PEC) Semester-VII (Choose course and its associated lab if any)

Sr. No.	Course Name	Course Code
1	Business Intelligence	BTITPE19IT7T
2	Business Intelligence Lab	BTITPE20IT7P
3	Augmented Reality & Virtual Reality	BTITPE21IT7T
4	Augmented Reality & Virtual Reality Lab	BTITPE22IT7P
5	Advance Java Programming	BTITPE23IT7T
6	Advance Java Programming Lab	BTITPE24IT7P

List of Program Elective II (PEC) Semester-VII (Choose course and its associated lab if any)

Sr. No.	Course Name	Course Code
1	Deep Learning	BTITPE25IT7T
2	Digital Forensics	BTITPE26IT7T
3	Introduction to Generative AI	BTITPE27IT7T

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 Dated:.....25.11.24.....

Program Elective Course - I	Track I- Business Intelligence	Track II- Augmented Reality & Virtual Reality	Track III- Advance Java Programming
Program Elective Course - II	Track I- Deep Learning	Track II- Digital Forensics	Track III- Introduction to Generative AI



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Scheme Semester – VIII

Scheme for Fourth Year B. Tech. In Information Technology (Semester -VIII)															
Sr. No.	Course Name	Code	Course Plan per Week (Hrs)				Credits	Theory Evaluation				Practical Evaluation		Total	ESE Time (Hrs)
			L	P	T	Hrs		MSE-I	MSE-II	TA	ESE	INT	EXT		
Program Core Courses															
1	Industry Internship/ Research Internship/ Entrepreneurship	BTITII01IT8P/ BTITRI01IT8P/ BTITEI01IT8P	0	24	0	24	12	-	-	-	-	20	80	100	-
2	Research Methodology	BTITRM01IT8T	3	0	1	4	4	15	15	10	60		-	100	2.5
Multidisciplinary Minor Courses (MDM)															
3	Multidisciplinary Minor -V	--	0	2	0	4	2	-	-	-	-	50	-	50	-
TOTAL			3	26	1	32	18	15	15	10	60	70	80	250	-
L: Lecture P: Practical T : Tutorial MSE: Mid Semester Exam ESE: End Semester Exam TA: Teacher Assessment INT: Internal EXT: External															

Note - Suitable number of hours per week are allotted for continuous evaluation process of all subjects (Total contact hours per week = 42 Hrs).

For the details of MDM Courses, Refer the link given on page no.7.

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Program Elective I & II

Semester	Program Elective Course - I			Program Elective Course - II		
	Track - I	Track - II	Track - III	Track - I	Track - II	Track - III
Sem - V	Data Science	Computer Graphics & Image Processing	Advance JavaScript Programming with Framework			
Sem - VI	Big Data Analytics	Computer Vision	Intermediate Java Programming	Foundation of Machine Learning	Blockchain Technology	NLP
Sem - VII	Business Intelligence	Augmented Reality & Virtual Reality	Advance Java Programming	Deep Learning	Digital Forensics	Introduction to Generative AI


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