

BACHELOR OF TECHNOLOGY (COMPUTER SCIENCE)

First Year (Autumn Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	MAN-001	Mathematics-I	BSC	4	3	1	0	3	0	25	-	25	50	-
2	PHN-005	Electrodynamics and Optics	BSC	4	3	0	2	3	2	15	25	20	40	-
3	CEN-105	Introduction to Environmental Studies	GSC	3	3	0	0	3	0	25	-	35	50	-
4	HSN-101B	Communication Skills (Advance)	HSSC	2	-	-	-	-	-	-	-	-	-	-
	HSN-101A	Communication Skills (Basic)	HSSC	2	1	0	2	2	0	25	-	25	50	-
5	HSN-002	Ethics and Self Awareness	HSSC	2	2	0	0	2	0	25	-	25	50	-
6	CSN-101	Introduction to Computer Science and Engineering	PCC	2	2	0	0	2	0	15	-	35	50	-
7	CSN-103	Fundamentals of Object Oriented Programming	ESC	4	3	0	2/2	3	0	20	20	20	40	-

First Year (Spring Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	MAN-010	Optimization Techniques	BSC	4	3	1	0	3	0	25	-	25	50	-
2	PHN-006	Quantum Mechanics and Statistical Mechanics	BSC	4	3	0	2	3	0	15	25	20	40	-
3	ECN-104	Digital Logic Design	PCC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-102	Data Structures	PCC	4	3	1	0	3	0	25	-	25	50	-
5	CSN-106	Discrete Structures	PCC	4	3	1	0	3	0	25	-	25	50	-
6	ECN-102	Fundamentals of Electronics	ESC	4	3	1	0	3	0	25	-	25	50	-

Second Year (Autumn Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	MIN-106	Engineering Thermodynamics	ESC	4	3	1	0	3	0	25	-	25	50	-
2	ECN-203	Signals and Systems	PCC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-221	Computer Architecture and Microprocessors	PCC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-261	Data Structures Laboratory	PCC	2	0	0	3	0	3	-	50	-	-	50
5	CSN-291	Object Oriented Analysis and Design	PCC	4	3	0	2	3	0	15	25	20	40	-
6	HSN-ELE	HSS Elective Course	HSSMEC	3	3	0	0	3	0	25	-	25	50	-

Second Year (Spring Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	MTN-105	Electrical and Electronic Materials	ESC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-212	Design and Analysis of Algorithms	PCC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-252	System Software	PCC	3	2	1	0	2	0	25	-	25	50	-
4	CSN-254	Software Engineering	PCC	4	3	1	0	3	0	25	-	25	50	-
5	CSN-232	Operating Systems	PCC	4	3	1	0	3	0	25	-	25	50	-
6	ECN-252	Digital Electronic Circuits Laboratory	PCC	2	0	0	3	0	3	-	50	-	-	50
7	HSN-ELE	HSS Elective Course	HSSMEC	3	3	0	0	3	0	25	-	25	50	-

Third Year (Autumn Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-341	Computer Networks	PCC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-351	Data Base Management Systems	PCC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-353	Theory of Computation	PCC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-361	Computer Networks Laboratory	PCC	2	0	0	3	0	0	-	100	-	-	-
5	CSN-ELE1	Departmental Elective Course-I	PEC	4	3	1	0	3	0	25	-	25	50	-
6	OEC/ BM-ELE	Open Elective Course/Management Studies Elective Course	OEC/HSSM EC	3	3	0	0	3	0	25	-	25	50	-
7	CSN-391	Technical Communication	PCC	2	0	2	0	0	0	-	-	-	100	-

Third Year (Spring Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-300	Lab-based Project	PCC	4	0	0	6	0	0	-	100	-	-	-
2	CSN-312	Principles of Programming Languages	PCC	3	3	0	0	3	0	25	-	25	50	-
3	CSN-352	Compiler Design	PCC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-362	Compiler Laboratory	PCC	2	0	0	3	0	0	-	100	-	-	-
5	CSN-ELE2	Departmental Elective Course-II	PEC	4	3	1	0	3	0	25	-	25	50	-
6	OEC/ BM-ELE	Open Elective Course/Management Studies Elective Course	OEC/HSSM EC	3	3	0	0	3	0	25	-	25	50	-
7	MSC1/ DHC1	Minor Specialization Course-I / Departmental Honours Course-I	MSC / DHC	4	3	1	0	3	0	25	-	25	50	-
8	CSN-399	Educational Tour	PCC	0	-	-	-	-	-	-	-	-	-	-

Fourth Year (Autumn Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-ELE3	Departmental Elective Course-III	PEC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-ELE4	Departmental Elective Course-IV	PEC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-499	Training Seminar	PCC	2	0	2	0	0	0	100	-	-	-	-
4	CSN-400A	B.Tech. Project	PCC	4	0	0	3	0	0	-	-	-	-	-
5	MSC2/ DHC2	Minor Specialization Course-II / Departmental Honours Course-II (optional)	MSC/DHC	4	3	1	0	3	0	25	-	25	50	-
6	MSC3/ DHC3	Minor Specialization Course-III / Departmental Honours Course-III (optional)	MSC / DHC	4	3	1	0	3	0	25	-	25	50	-

Fourth Year (Spring Semester)

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-ELE5	Departmental Elective Course-V	PEC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-ELE6	Departmental Elective Course-VI	PEC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-400B	B.Tech. Project (Contd. from Autumn Semester)	PCC	8	0	0	12	0	0	100	-	-	-	-
4	MSC4/ DHC4	Minor Specialization Course-IV / Departmental Honours Course-IV (optional)	MSC / DHC	4	3	1	0	3	0	25	-	25	50	-
5	MSC5/ DHC5	Minor Specialization Course-V / Departmental Honours Course-V (optional)	MSC / DHC	4	3	1	0	3	0	25	-	25	50	-

Department Electives

Category I:

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-371	Artificial Intelligence	PEC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-372	Computer Graphics	PEC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-373	Probability Theory for Computer Engineers	PEC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-381	Information Retrieval	PEC	4	3	1	0	3	0	25	-	25	50	-
5	CSN-382	Machine Learning	PEC	4	3	1	0	3	0	25	-	25	50	-
6	CSN-521	Mobile and Pervasive Computing	PEC	4	3	1	0	3	0	25	-	25	50	-
7	CSN-510	Network Programming	PEC	4	3	1	0	3	0	25	-	25	50	-
8.	ECN-212	Principles of digital Communication	PCC	4	3	1	0	3	0	25	-	25	50	-
9.	ECN-344	Embedded Engineering Design	PEC	4	3	1	0	3	0	25	-	25	50	-

Category II:

S.No.	Code	Title	Area	Cr	L	T	P	TH	PH	CWS	PRS	MTE	ETE	PRE
1	CSN-471	Computer Vision	PEC	4	3	1	0	3	0	25	-	25	50	-
2	CSN-475	Parallel and Distributed Algorithms	PEC	4	3	1	0	3	0	25	-	25	50	-
3	CSN-476	Software Project Management	PEC	4	3	1	0	3	0	25	-	25	50	-
4	CSN-481	Bioinformatics	PEC	4	3	1	0	3	0	25	-	25	50	-
5	CSN-483	Intrusion Detection Systems	PEC	4	3	1	0	3	0	25	-	25	50	-
6	CSN-484	Multimedia Technologies	PEC	4	3	1	0	3	0	25	-	25	50	-
7	CSN-485	Quantum Computation	PEC	4	3	1	0	3	0	25	-	25	50	-
8	CSN-513	Information and Network Security	PEC	4	3	1	0	3	0	25	-	25	50	-
9	CSN-515	Data Mining	PEC	4	3	1	0	3	0	25	-	25	50	-
10	CSN-516	Modeling and Simulation	PEC	4	3	1	0	3	0	25	-	25	50	-
11	CSN-519	Social Network Analysis	PEC	4	3	1	0	3	0	25	-	25	50	-
12	CSN-520	Cloud Computing	PEC	4	3	1	0	3	0	25	-	25	50	-
13	CSN-524	Algorithms and Foundations of Chip Design	PEC	4	3	0	2	3	0	25	-	25	50	-

Department of Computer Science Minor Specialization Course

S. No.	Subject Code	Course Title	Semester		Credit
			Autumn	Spring	
1	CSN-102	Data Structures		√	4
2	CSN-106	Discrete Structures		√	4
3	CSN-221	Computer Architecture and Microprocessors	√		4
4	CSN-353	Theory of Computation	√		4
5	CSN-212	Design and Analysis of Algorithms		√	4
6	CSN-232	Operating Systems		√	4
7	CSN-341	Computer Networks	√		4
8	CSN-351	Database Management Systems	√		4