

B.Tech. in Computer Science and Engineering (167 credits)

SEMESTER -1	Sl no	Course Code	Subjects	Credits	L-T-P
	1	EE101	Fundamentals of Electrical and Electronics	4	3-0-2
	2	ES101	Engineering Physics	4	3-0-2
	3	ES102	Engineering Mathematics	4	3-1-0
	4	EE102	Engineering Design Principles	3	2-0-2
	5	CS101	Principles of Computer Programming	4	3-0-2
	6	HS101	Freshman Skills	2	2-0-0
	7	HS102	Sports and Physical Education	2	0-1-2
Total				23 Credits	

SEMESTER -2	Sl no	Course Code	Subjects	Credits	L-T-P
	1	EE103	Digital Electronics	4	3-0-2
	2	ES103	Probability and Statistics	4	3-1-0
	3	CS102	Data Structures	4	3-0-2
	4	EE104	Hardware Workshop	3	2-0-2
	5	CS103	Object Oriented Programming	4	3-0-2
	6	HS103	Ecology and Environment Sciences	2	2-0-0
	7	CS104	Mobile Application Technologies	2	0-1-2
Total				23 credits	
				MO-1 (Optional)	2/3-0-0

EXIT AFTER YEAR – 1

Certificate in Engineering Sciences (46 credits)

SEMESTER -3	Sl no	Course Code	Subjects	Credits	L-T-P
	1	HS201	Indian Culture, Ethics and Moral Values	2	2-0-0
	2	CS201	Discrete Structures	4	3-1-0
	3	CS202	Computer Organization and Architecture	4	3-0-2
	4	CS203	Design and Analysis of Algorithms	4	3-0-2
	5	CS204	Database Systems	4	3-0-2
	6	CS205	Paradigms of Programming Languages	4	3-0-2
Total				22 credits	

SEMESTER -4	Sl no	Course Code	Subjects	Credits	L-T-P
	1	HS202	Entrepreneurship and Innovation	2	2-0-0
	2	CS206	Theory of Computation	3	3-0-0
	3	CS207	Operating Systems	4	3-0-2
	4	CS208	Computer Networks	4	3-0-2
	5	CS209	Mathematical Foundations of Computing	4	3-1-0
	6	CS210	Software Engineering	4	3-0-2
Total				21 credits	
				MO-2 (Optional)	2/3-0-0

EXIT AFTER YEAR - 2

Diploma in Computer Science and Engineering (89 credits)

SEMESTER -5	Sl no	Course Code	Subjects	Credits	L-T-P
	1	MS301	Business Economics	3	3-0-0
	2	CS0XX	Department Elective-1	3	3-0-0
	3	CS304	Data Analytics and Visualisation	3	3-0-0
	4	CS301	Compiler Design	4	3-0-2
	5	CS302	Computer Graphics	4	3-0-2
	6	CS303	Trustworthy Artificial Intelligence	4	3-0-2
	Total			21 credits	

SEMESTER -6	Sl no	Course Code	Subjects	Credits	L-T-P
	1	EN301	Art of Engineering Research	2	2-0-0
	2		Multidisciplinary/Open Elective- 1/MOOC 1	3	3-0-0
	3	CS0XX	Department Elective-2	3	3-0-0
	4	CS305	Nature Inspired Computing	3	3-0-0
	5	CS306	Machine Learning	4	3-0-2
	6	CS307	Information Security Systems	4	3-0-2
	Total			19 credits	

Colloquium of 3 credits in summer semester (MOOC, NPTEL etc. in lieu of colloquium)

EXIT AFTER YEAR - 3

BSc in Computer Science and Engineering (129 credits)

SEMESTER -7	Sl no	Course Code	Subjects	Credits	L-T-P
	1		Multidisciplinary/Open Elective- 2/MOOC 2	3	3-0-0
	2	CS0XX	Department Elective -3	3	3-0-0
	3	CS401	Natural Language Processing	4	3-0-2
	4	CS402	Digital Image Processing	4	3-0-2
	5	CS403	Cloud Computing	3	3-0-0
	6	CS404	Big Data Analytics	3	3-0-0
	7	CS498	Colloquium (Based on industrial training)/MOOC	3	0-0-6
	Total			23 credits	

SEMESTER -8	Sl no	Course Code	Subjects	Credits	L-T-P
	1	CS499	BTech Project/Internship	12	0-0-24
	2		Multidisciplinary/Open Elective- 3/MOOC 3	3	3-0-0
	Total			15 credits	

FINAL EXIT AFTER YEAR - 4

BTech. In Computer Science and Engineering (167 credits)

Courses for the Minor in CSE (Total 23 credits required)

Sl no.	Subject	Code	L-T-P	Credits
1	Design and Analysis of Algorithms	CS203	3-0-2	4
2	Database Systems	CS204	3-0-2	4
3	Operating Systems	CS207	3-0-2	4
4	Computer Networks	CS208	3-0-2	4
5	Software Engineering	CS210	3-0-2	4
6	CSE Elective Course	CS0XX	3-0-0	3

B.Tech (CSE) Department Elective Courses

Sl no.	Subject	Code	L-T-P	Credits
1	Graph Theory	CS001	3-0-0	3
2	Software, System Analysis and Design	CS002	3-0-2	4
3	Digital Signal Processing	CS003	3-0-0	3
4	Microprocessor and Interfacing	CS004	3-0-2	4
5	Cryptography and Network Security	CS005	3-0-0	3
6	Control System Engineering	CS006	3-0-0	3
7	System Simulation and Modeling	CS007	3-0-0	3
8	IoT Protocols	CS008	3-0-0	3
9	Game Programming	CS009	3-0-0	3
10	Formal languages and Automata	CS010	3-0-0	3
11	Advanced Network Technologies	CS011	3-0-0	3
12	Empirical Techniques in Software Engineering	CS012	3-0-0	3
13	Digital Water Marking and Steganalysis	CS013	3-0-0	3
14	Deep Learning	CS014	3-0-0	3
15	Blockchain Technology	CS015	3-0-0	3
16	Introduction to Robotics	CS016	3-0-0	3
17	Stochastic Processes and Queuing Theory	CS017	3-0-0	3
18	Advanced Competitive Programming	CS018	3-0-0	3
19	Network Programming	CS019	3-0-0	3
20	Combinatorial Mathematics	CS020	3-0-0	3
21	Network Design and Optimization	CS021	3-0-0	3
22	Software reliability	CS022	3-0-0	3
23	Computer Vision	CS023	3-0-0	3
24	Recommender Systems	CS024	3-0-0	3
25	Modern Cryptography	CS025	3-0-0	3
26	Robot Motion Planning	CS026	3-0-0	3
27	Optimization Techniques	CS027	3-1-0	4
28	Game Theory and Applications	CS028	3-0-0	3
29	Human – Computer Interaction	CS029	3-0-0	3
30	Randomized Algorithms	CS030	3-0-0	3