

Semester wise Credit Structure for B. Tech. CSE

Category / Semesters	I	II	III	IV	V	VI	VII	VIII	Total
Basic Sciences & Maths (BSM)	4	8	4	4	-	-	-	-	20
Engineering Fundamentals (EF)	7	7	4	-	-	-	-		18
Professional Skill (PS)	2	2	-	-	-	-	-		4
Program Core (PC)	-	-	10	17	13	12	12		64
Management (M)	-	-	-	-	2	2	-		4
Humanities & Social Science (HSS)	2	-	2	-	-	-	-		4
Humanities & Social Science Elective (HSSE)	2	-	-	-	-	-	-		2
Project (P)	-	-	-	-	-	2	3	4	5/9
Seminar (S)	-	-	-	-	-	2	-		2
Industrial Practice (IP)/ Industrial Elective (IE)	-	-	-	-	-	-	-	12/8	12/8
Program link basic science and engineering courses (PLBSE) (To be decided by the department)	2	4	2	4	5	0	-		17
Program Electives (PE)	-	-	-	-	4	4	4		12
Open Electives (OE) (Other Departments)	-	-	-	-	-	-	3		3
Total	19	21	22	25	24	22	22	12	167

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	BEE 101	Fundamental of Electrical Engineering	3	1	2	5
3.	HSS	BHM-101	Professional Communication	2	0	0	2
4.	PS	BCS-102	Web Designing-1	1	0	2	2
5.	EF	BCS-103	Computer Troubleshooting & Maintenance	0	0	4	2
6.	PLBSE	BSM-144	Environment and Ecology	2	0	0	2
7.	HSSE	BHM-113	Industrial Psychology	2	0	0	2
			Total	13	2	8	19
8.	ECA-I	ECA-100	Induction Program	-	-	-	0

First Year, Semester II

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-156	Applied Probability and Statistics	3	1	0	4

2.	EF	BCS-151	Introduction to C Programming	3	1	2	5
3.	BSM	BSM-179	Quantum Physics and Nanomaterials	3	1	0	4
4.	PS	BCS-152	Web Designing-2	1	0	2	2
5.	EF	BCS-153	IT Tools and Workshop-1	0	0	4	2
6.	PLBSE	BEC-154	Basic Electronic Components and Circuits	3	0	2	4
			Total	13	3	10	21
7.	ECA-II		Induction Program	-	-	-	0

Second Year, Semester III

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	BSM	BSM-202	Discrete Mathematics	3	1	0	4
2.	EF	BCS-201	Digital Logic and Design	3	0	2	4
3.	HSS***	BHM-202	Cyber Ethics and IPR	2	0	0	2
4.	PC	BCS-202	Principles of Data Structures	3	1	2	5
5.	PC	BCS-203	Object Oriented Programming	3	1	2	5
6.	PLBSE	BCS-204	IT Tools and Workshop-2	0	0	4	2
			Total	14	3	10	22
7.	AC	AUC-01- AUC-15	Audit Course	1/2	-	-	0
8.	ECA-III			-	-	-	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	BCS-251	Database Management Systems	3	0	2	4
3.	PC	BCS-252	Theory of Computation	3	1	0	4
4.	PC	BCS-253	Design & Analysis of Algorithms	3	1	2	5
5.	PC	BCS-254	Computer Organization and Architecture	3	0	2	4
6.	PLBSE	BEC-256	Signal and Systems	3	1	0	4
			Total	18	3	8	25
7.	ECA-IV			-	-	-	0
8.	AC	AUC-01-AUC- 15	Audit Course	1/2	-	-	0
9.	DM1	SCS-211	Subject-1 Introduction to Data Science	3	0	0	3
	DM2	SCS-221	Subject-1	3	0	0	3

			Introduction to Security of Cyber-Physical Systems				
	DM3	SCS-231	Subject-1 Computer Graphics for Virtual Reality	3	0	0	3

Third Year, Semester V

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-301	Engineering & Managerial Economics	2	0	0	2
2.	PC	BCS-301	Principles of Operating Systems	3	0	2	4
3.	PC	BCS-302	Principle of Compiler Design	3	1	2	5
4.	PC	BCS-303	Computer Networks	3	0	2	4
5.	PE1	BCS-326-329	Program Elective-1	3	1	0	4
6.	PLBSE	BEC-305	Microprocessor and Microcontroller	3	1	2	5
			Total	17	3	8	24
7.	ECA-V			-	-	-	0
8.	DM1	SCS-312	Subject-2 Computational Data analytics	3	0	2	4
	DM2	SCS-322	Subject-2 Ubiquitous Sensing, Computing and Communication	3	0	2	4
	DM3	SCS-232	Subject-2 Concepts of Virtual and Augmented Reality	3	0	2	4

Third Year, Semester VI

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	M	BHM-351	Business Management	2	0	0	2
2.	PC	BCS-351	Artificial Intelligence	3	1	0	4
3.	PC	BCS-352	Software Engineering	3	1	0	4
4.	PC	BCS-353	Parallel & Distributed Programming	3	0	2	4
5.	PE2	BCS-376-379	Program Elective-2	3	1	0	4
6.	P	BCS-370	Project Part-I	0	0	4	2
7.	S	BCS-380	Seminar	0	0	4	2
			Total	14	3	10	22
8.	ECA-VI			-	-	-	0
9.	DM1	SCS-313	Subject-3 Web Data Mining	3	0	2	4
	DM2	SCS-323	Subject-3 Embedded Systems for IoT	3	0	2	4
	DM3	SCS-333	Subject-3 Scientific and Engineering Data Visualisation	3	0	2	4

Final Year, Semester VII

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	PC	BCS-401	Fault Tolerance Analysis	3	1	0	4
2.	PC	BCS-402	Cryptography and Information Security	3	1	0	4
3.	PC	BCS-403	Introduction to Functional and Logic Programming	3	0	2	4
4.	PE3	BCS-426-429	Program Elective-3	3	1	0	4
5.	OE	OCS-401-405	OE (PYTHON Programming) (This course is for students of other departments. However, CSE students will go through open elective run by other department as per their choices)	2	1	0	3
6.	P	BCS-440	Project Part-II	0	0	6	3
			Total	14	4	8	22
7.	ECA-VII			-	-	-	0
8.	DM-1	SCS 415	Subject-4 Analysing, Visualizing and Applying data science with python	3	1/0	0/2	4/5
	DM-2	SCS-425	Subject-4 IoT with Arduino, ESP, and Raspberry Pi	3	1/0	0/2	4/5
	DM-3	SCS-435	Subject-4 Mobile VR and AI in Moduley	3	1/0	0/2	4/5

Final Year, Semester VIII

S. No.	Category	Paper Code	Subject	L	T	P	Credit
1.	IP	ICS-400	Industrial Practices	0	0	24	12
	Without Industrial Practices (IP)						
2.	MP	BCS-480	Minor project	0	0	8	4
3.	IE	ICS-401-ICS 404	Industrial Elective-1	3	1	0	4
4.	IE	ICS-405-ICS 409	Industrial Elective-2	3	1	0	4
			Total	6	2	8/24	12
5.	DM-1	SCS-415	Research Project*	0	0	4	2
	DM-2	SCS-425	Research Project*	0	0	4	2
	DM-3	SCS-435	Research Project*	0	0	4	2

Paper Code BCS-326	Program Elective-1 1. Digital Image Processing
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