

I Year BE Programs of 2022 Scheme (Components and Credit structure)

I SEMESTER: CHEMISTRY CYCLE (CS STREAM) AI, BT, CS, CD, CY & IS														
Sl. No.	Course Code	Course Title	BoS	Credit Allocation				Category	CIE Duration (H)	Max Marks CIE		SEE Duration (Hrs)	Max Marks SEE	
				L	T	P	Total			Theory	Lab		Theory	Lab
1	22MA11C	Fundamentals of Linear Algebra, Calculus and Statistics	MA	3	1	0	4	Theory	1.5	100	***	3	100	***
2	22CHY12A	Chemistry Of Smart Materials And Devices	CHY	2	1	1	4	Theory+Lab	1.5	100	***	3	100	***
3	22MECD13	Computer Aided Engineering Graphics	ME	1	0	2	3	Lab	1.5	***	50	3	***	50
4	22ES14X	Engineering Science Course - I	XX	3	0	0	3	Theory	1.5	100	***	3	100	***
5	22PL15X	Programming Languages Course	XX	2	0	1	3	Theory+Lab	1.5	100	***	3	100	***
6	22HSE16	Communicative English-I	HSS	0	0	1	1	Lab	1	***	50	2	***	50
7	22HSI17	Fundamentals of Indian Constitution	HSS	1	0	0	1	Theory	1	50	***	2	50	***
8	22HSY18	Scientific Foundations of Health-Yoga Practice	HSS	0	0	1	1	Lab	1	***	50	2	***	50
				12	2	6	20							

II SEMESTER: PHYSICS CYCLE (CS STREAM) AI, BT, CS, CD, CY & IS														
Sl. No.	Course Code	Course Title	BoS	Credit Allocation				Category	CIE Duration (H)	Max Marks CIE		SEE Duration (Hrs)	Max Marks SEE	
				L	T	P	Total			Theory	Lab		Theory	Lab
1	22MA21C	Number Theory, Vector Calculus and Computational Methods	MA	3	1	0	4	Theory	1.5	100	***	3	100	***
2	22PHY22B	Quantum Physics for Engineers	PHY	2	1	1	4	Theory+Lab	1.5	100	***	3	100	***
3	22CS23	Principles of Programming Using C	CS	2	0	1	3	Theory+Lab	1.5	100	***	3	100	***
4	22ES24X	Engineering Science Course-II	XX	3	0	0	3	Theory	1.5	100	***	3	100	***
5	22EM2XX	Emerging Technology Course	XX	3	0	0	3	Theory	1.5	100	***	3	100	***
6	22HSE26	Communicative English-II	HSS	0	0	1	1	Lab	1	***	50	2	***	50
7	22HSSK17/ 22HSBK17	Samskrutika Kannada / Balake Kannada	HSS	1	0	0	1	Theory	1	50	***	2	50	***
8	22ME28	IDEA LAB (Idea Development, Evaluation & Application)	ME	0	0	1	1	Lab	2	***	50	2	***	50
				14	2	4	20							

III SEMESTER														
Sl. No.	Course Code	Course Title	Credit Allocation				BoS	Category	CIE Duration (H)	Max Marks CIE		SEE Duration (H)	Max Marks SEE	
			L	T	P	Total				Theory	Lab		Theory	Lab
1	21MA31A*	Linear Algebra, Integral Transforms and Number Theory (Common to CS & IS)	3	1	0	4	MA	Theory	1.5	100	****	3	100	****
2	21BT32A**	Environmental Technology	2	0	0	2	BT	Theory	1	50	****	2	50	****
3	21IS33	Data Structures and Applications (Common to CS & IS)	3	0	1	4	IS	Theory+Lab	1.5	100	50	3	100	50
4	21CS34	Foundations of Computer Systems Design	3	0	1	4	CS	Theory+Lab	1.5	100	50	3	100	50
5	21CS35	Operating Systems (Common to CS, IS & AI)	2	0	1	3	CS	Theory+Lab	1.5	100	50	3	100	50
6	21CS36	Discrete Mathematical Structures (Common to CS, IS & AI)	3	0	0	3	CS	Theory	1.5	100	****	3	100	****
7	21DCS37**	Bridge Course: C Programming	2(A)	0	0	AUDIT	CS	Theory	1	50	****	2	****	****
8	21HS38A / 21HS38V	Kannada Course: AADALITHA KANNADA (18HS38A) / VYAVAHARIKA KANNADA (18HS38V)	1	0	0	1	HSS	Theory	1	50	****	2	50	****
9	21HSAE39 A/B/C/D/E	Ability Enhancement course	0	0	1	1	HSS	Lab	1	****	50	2	****	50
10	21CSI310	Summer Internship- I	0	0	1	1	CS	Internship	1	****	50	2	****	50
				23										

* Summer Internship-1 will be done after the II sem for 03 Weeks

IV SEMESTER														
Sl. No.	Course Code	Course Title	Credit Allocation				BoS	Category	CIE Duration (H)	Max Marks CIE		SEE Duration (H)	Max Marks SEE	
			L	T	P	Total				Theory	Lab		Theory	Lab
1	21MA41A*	Statistics and Probability for Data Science	2	1	0	3	MA	Theory	1.5	100	****	3	100	****
2	21BT42B**	Bioinspired Engineering	2	0	0	2	BT	Theory	1	50	****	2	50	****
3	21CS43	Design And Analysis of Algorithms (Common to CS, IS & AI)	3	0	1	4	CS	Theory+Lab	1.5	100	50	3	100	50
4	21CS44	Microcontrollers and Embedded Systems	3	0	1	4	CS	Theory+Lab	1.5	100	50	3	100	50
5	21CS45	Computer Networks (Common to CS, IS & AI)	3	0	0	3	CS	Theory	1.5	100	****	3	100	****
6	21CS4AX	Professional Core Elective – Group A	2	0	0	2	CS	MOOC	1	50	****	2	50	****
7	21CS46	Design Thinking Lab	0	0	2	2	CS	Lab	1	****	50	2	****	50
8	21DMA47***	Bridge Course: Mathematics	2 (A)	0	0	AUDIT	MA	Theory	1	50	****	2	50	****
9	21HSU48	Universal Human Values and Professional Ethics	2	0	0	2	HSS	Theory	1	50	****	2	50	****
10	21CS49	Object Oriented Programming Using JAVA (Common to CS & AI)	0	0	1	1	CS	Lab	1	****	50	2	****	50
23														

* Summer Internship-II will be done after the IV sem for 04 Weeks

FIFTH SEMESTER CREDIT SCHEME							
Sl. No	Course Code	Course Title	BoS	Credit Allocation			Total Credits
				L	T	P	
1.	18HSI51	Intellectual Property Rights and Entrepreneurship	HSS	3	0	0	3
2.	18CS52	Finite Automata Formal Languages	CS	3	0	0	3
3.	18CS53	Database Design (Common to CS & IS)	CS	3	0	1	4
4.	18CS54	Network Programming and Security	CS	3	0	1	4
5.	18IS55	Software Engineering (Common to CS & IS)	IS	3	0	1	4
6.	18CS5AX	Group A: Professional Electives (MOOC Courses)	CS	3	0	0	3
7.	18G5BXX	Group B: Global Elective	Resp. BoS	3	0	0	3
Total Number of Credits				21	0	3	24
Total number of Hours/Week				21	0	7.5	

SIXTH SEMESTER CREDIT SCHEME							
Sl. No.	Course Code	Course Title	BoS	Credit Allocation			Total Credits
				L	T	P	
1.	18HEM61	Introduction to Management & Economics	HSS	3	0	0	3
2.	18CS62	Artificial Intelligence and Machine Learning (Common to CS & IS)	CS	3	1	1	5
3.	18CS63	Compiler Design	CS	3	0	1	4
4.	18CS64	Minor Project	CS	0	0	2	2
5.	18CS6CX	Group C: Professional Electives	CS	3	0	0	3
6.	18CS6DX	Group D: Professional Electives	CS	3	0	0	3
7.	18G6EXX	Group E: Global Elective	Resp. BoS	3	0	0	3
8.	18HS68	Professional Practice-II (Employability Skills and Professional Development of Engineers)	HSS	0	0	1	1
Total Number of Credits							24
Total number of Hours/Week				18	2	10+2.5	

SEVENTH SEMESTER CREDIT SCHEME							
Sl. No.	Course Code	Course Title	BoS	Credit Allocation			Total Credits
				L	T	P	
1.	18HS71	Constitution of India and Professional Ethics	HSS	3	0	0	3
2.	18CS72	Computer Graphics and Virtual Reality	CS	3	0	1	4
3.	18CS73	Parallel Architecture and Distributed Programming	CS	3	1	1	5
4.	18CS74	Internship *	CS	0	0	2	2
5.	18CS7FX	Elective F (PE)	CS	3	0	0	3
6.	18CS7GX	Elective G (PE)	CS	3	0	0	3
7.	18G7HXX	Elective H (GE) **	Res. BOS	3	0	0	3
Total Number of Credits				18	1	4	23
Total number of Hours/Week				18	2	10	

Note: * Internship (6 weeks) is to be carried during the vacation after 6th semester and evaluation shall be conducted during 7th semester for 2 credits.

** Students should take other department Global Elective courses.

EIGHT SEMESTER CREDIT SCHEME							
Sl. No.	Course Code	Course Title	BoS	Credit Allocation			Total Credits
				L	T	P	
1.	18CSP81	Major Project	CS	0	0	16	16
Total Number of Credits				0	0	16	16
Total number of Hours/Week						32	