

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	21MA31C	Integral Transforms and Advanced Numerical Methods *	3	1	0	4	MA	Theory	1.5	100	****	3	100	****
2	21BT32B	Bioinspired Engineering **	2	0	0	2	BT	Theory	1	50	****	2	50	****
3	21BT33	Cell and Molecular Biology	3	0	1	4	BT	Theory+Lab	1.5	100	50	3	100	50
4	21BT34	Biochemistry	3	0	1	4	BT	Theory+Lab	1.5	100	50	3	100	50
5	21BT35	Bioprocess Calculations	3	1	0	4	BT	Theory	1.5	100	****	3	100	****
6	21BT36	Biochemical Thermodynamics	2	0	0	2	BT	Theory	1	50	****	2	50	****
7	21DCS37***	Bridge Course: Mathematics ***	2(A)	0	0	AUDIT	MA	Theory	1.5	50	****	****	****	****
8	21BT39	Design thinking Lab	0	0	2	2	BT	Lab	1	****	50	2	****	50
9	21BT310	Summer Internship I	0	0	1	1	BT	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	21BT41	Biostatistics	2	1	0	3	BT	Theory	1.5	100	****	3	100	****
2	21BT42A	Environmental Technology **	2	0	0	2	BT	Theory	1	50	****	2	50	****
3	21BT43	Unit Operations	2	1	1	4	BT	Theory + Lab	1.5	100	50	3	100	50
4	21BT44	Programming for Computational Biology	2	1	1	4	BT	Theory + Lab	1.5	100	50	3	100	50
5	21BT45	Biophysics	3	0	1	4	BT	Theory	1.5	100	50	3	100	50
6	21BT4AX	Professional Elective – Group A MOOC Courses	2	0	0	2	BT	MOOC	1.5	50	****	2	50	****
7	21HS46A/ 21HS46V	Kannada Course: AADALITHA KANNADA (18HS38A)VYAVAHARIKA KANNADA (18HS38V)	1	0	0	1	HSS	Theory	1	50	****	2	50	****
	21HSA46A /B/C/D/E ***	Ability Enhancement course	0	0	1	1	HSS	Lab	1	****	50	2	****	50
8	21DCS47	Bridge Course: C Programming	2 (A)	1	0	AUDIT	C'S	Theory	1.5	50	****	****	****	****
9	21HSU48	Universal Human Values and Professional Ethics	2	0	0	2	HSS	Theory	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 & Entrepreneurship***	HSS	3	0	0	3
2	18BT52	Biophysics and Instrumentation (Theory & Practice)	BT	3	0	1	4
3	18BT53	Genetic Engineering and Applications (Theory & Practice)	BT	3	0	1	4
4	18CH54	Process Dynamics and Control (Common to BT & CH)	CH	3	0	1	4
5	18BT55	Reaction Engineering	BT	3	0	0	3
6	18BT5AX	Elective A (PE)	BT	3	0	0	3
7	18G5BXX	Elective B (OE)*	Respective BOS	3	0	0	3
Total Number of Credits				21		3	24
Total number of Hours/Week				21	0	6+2	29

SIXTH SEMESTER CREDIT SCHEME							
Sl. No.	Course Code	Course Title	BOS	Credit Allocation			Total Credits
				L	T	P	
1	18HEM61	Introduction to Management and Economics***	HSS	3	0	0	3
2	18BT62	Microbial Biotechnology (Theory & Practice)	BT	3	0	1	4
3	18BT63	Plant and Animal Biotechnology (Theory & Practice)	BT	3	1	1	5
4	18BT64	Minor Project**	BT	0	0	2	2
5	18BT6CX	Elective C (PE)	BT	3	0	0	3
6	18BT6DX	Elective D (PE)	BT	3	0	0	3
7	18G6EXX	Elective E (OE)*	Respective BOS	3	0	0	3
8	18HSE68	Professional Practice-II (Employability Skills and Professional Development of Engineers)	HSS	0	0	1	1
Total Number of Credits				18	1	5	24
Total number of Hours/Week				18	2	8+2	30

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	18BT72	Downstream Process and Product Recovery (Theory and Practice)	BT	4	0	1	5
3	18BT73	Genomics, Proteomics and Nanotechnology	BT	4	1	0	5
4	18BT74	Internship / Course	BT	0	0	2	2
5	18BT7FX	Elective F (PE)	BT	3	0	0	3
6	18BT7GX	Elective G (PE)	BT	3	0	0	3
7	18G7HXX	Elective H (OE)*	Res. BOS	3	0	0	3
Total Number of Credits				20	1	3	24
Total number of Hours/Week				20	2	7.5	

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.	18BTP81	Major Project	BT	0	0	16	16
Total Number of Credits				0	0	16	16
Total number of Hours/Week						32	