

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- III (2020-21)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted					Total	Contact Hour per week			Credit
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz/Assignment	End Sem.	Lab work / Sessional					
1	HSMC301/ HSMC302	HSMC	Technical Communication /Universal Human Values	100	30	20	-	-	150	3	0	0	3
2	BMET 303	ESC	Strength of Material	100	30	20	-	-	150	3	0	0	3
3	BCHT 301	DC	Material and Energy Balance	100	30	20	-	-	150	3	1	0	4
4	BCHT 302	DC	Chemical Engineering Fluid Mechanics	100	30	20	-	-	150	3	1	0	4
5	BCHT 303	DC	Heat Transfer Operations	100	30	20	-	-	150	3	1	0	4
6	BCHP 302	DLC	Chemical Engineering Fluid Mechanics Lab				30	20	50	0	0	2	1
7	BCHP 303	DLC	Heat Transfer Operations Lab				30	20	50	0	0	2	1
8	BCHP 304	DLC	Soft Computing Lab				30	20	50	0	0	2	1
9	BCHP 305	DLC	Internship Assessment					50	50	0	0	2	1
10	NC ⁺		Computer System Security/Python Programming	50	15	10				2	0	0	
			90 hrs Intrenship based on using various software's – Intrenship-II	To be completed anytime third/fourth semester. Its evaluation/credit to be added in fifth semester									
			Total						950				22

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- IV (2020-21)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted						Contact Hour per week			Credit
				Theory			Practical		Total	L	T	P	
				End Sem.	Mid Sem.	Quiz / Assignment	End Sem.	Lab Work / Sessional					
1	BAST 401	BSC	Maths IV	100	30	20	-	-	150	3	1	0	4
2	HSMC401/ HSMC402	HSM	Technical Communication /Universal Human Values	100	30	20	-	-	150	3	0	0	3
3	BCHT 402	DC	Mechanical Operations	100	30	20	-	-	150	3	0	0	3
4	BCHT 403	DC	Chemical Reaction Engineering-I	100	30	20	-	-	150	3	1	0	4
5	BCHT 405	DC	Mass Transfer Operation -I	100	30	20	-	-	150	3	0	0	4
6	BCHP 402	DLC	Mechanical Operations Lab				30	20	50	0	0	2	1
7	BCHP 403	DLC	Chemical Reaction Engg. Lab				30	20	50	0	0	2	1
8	BCSP 403	DLC	Numerical Methods of Analysis Lab				30	20	50	0	0	2	1
9	NC ⁺		Computer System Security/Python Programming	50	15	10				2	0	0	
			Total						900				21

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- V (2020-21)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted					Total	Contact Hour per week			Credit
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work / Sessional					
1	BCHT 501	DC	Mass Transfer Operation –II	100	30	20	-	-	150	3	1	0	4
2	BCHT 502	DC	Chemical Reaction Engineering -II	100	30	20	-	-	150	3	1	0	4
3	BCHT 503	DC	Process Dynamics & Control	100	30	20	-	-	150	3	1	0	4
4	BCHT 51	DE	Department Electives-I	100	30	20	-	-	150	3	0	0	3
5	BCHT 52	DE	Department Electives -II	100	30	20	-	-	150	3	0	0	3
6	BCHP 501	DLC	Mass Transfer Operation Lab-II				30	20	50	0	0	2	1
7	BCHP 503	DLC	Process Dynamics & Control Lab				30	20	50	0	0	2	1
8	BCHP504	DLC	Process Modeling and Simulation lab				30	20	50	0	0	2	1
9	BCHP 506	IN	Mini Project or Internship Assessment					50	50	0	0	2	1
The Mini project or internship (3-4 weeks) conducted during summer break after IV Semester will be assessed during V Semester													
10		NC	Essence of Indian Traditional Knowledge/Constitution of India	50	15	10				2	0	0	
			Total	500	150	100	90	110	950				22

Department Electives-I			Department Electives-II		
BCHT 511	Process Instrumentation		BCHT521	Interfacial Science and Technology	
BCHT 512	Quality Assurance & Control		BCHT522	Process Flow Sheet Simulation	
BCHT 513	Chemical Engineering Thermodynamics		BCHT523	Numerical Methods for Chemical Engineer	

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- VI (2020-21)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted					Total	Contact Hour per week			Credit
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz /Assignment	End Sem.	Lab work / Sessional					
1	BCHT 601	DC	Transport Phenomena	100	30	20	-	-	150	3	1	0	4
2	BCHT 602	DC	Chemical Technology	100	30	20	-	-	150	3	1	0	4
3	BCHT 603	DC	Energy Resource & Utilization	100	30	20	-	-	150	3	1	0	4
4	BCHP 63	DE	Department Electives-III	100	30	20	-	-	150	3	0	0	3
5	HSMC 601	HSMC	Principles of management	100	30	20	-	-	150	3	0	0	3
6	BCHP 602	DLC	Chemical Technology Lab				30	20	50	0	0	2	1
7	BCHP 603	DLC	Energy Resource lab				30	20	50	0	0	2	1
8	BCHP605	DLC	Seminar					50	50	0	0	2	1
9		NC	Essence of Indian Traditional	50	15	10				2	0	0	

			Knowledge/Constitution of India										
			Total	500	150	100	90	60	900				21

Department Electives	
BCHT631	Computational Fluid Dynamics
BCHT632	Nanotechnology
BCHT633	Sustainable Engineering

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- VII (2021-22)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted					Total	Contact Hour per week			Credit
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz/ Assignment	End Sem.	Lab work / Sessional					
1	BCHT 701	DC	Process Equipment Design	100	30	20	-	-	150	3	1	0	4
2	BCHT 71	DE	Department Elective-IV	100	30	20	-	-	150	3	0	0	3
3	BCHT 72	DE	Department Elective -V	100	30	20	-	-	150	3	0	0	3
4		OE	Open Elective-I	100	30	20	-	-	150	3	0	0	3
6	BCHP 701	DLC	Minor Project				100	100	200	0	0	2	5
8	BCHP 702	DLC	Virtual Lab				30	20	50	0	0	2	1

9	BCHP7 03	IN	Intrenship-III*					50	50	0	0	2	1
*Internship-III (4-6 weeks) conducted during summer break after VI Semester and will be assessed during VII Semester													
			Total	400	120	80	130	170	900				20

Department Electives-IV		Department Electives-V	
BCHT 741	Fertilizer Technology	BCHT 751	Safety & Hazard Analysis
BCHT 742	Industrial Pollution abatement and waste management	BCHT 752	Hazardous Waste Management
BCHT 743	Energy Engineering & management	BCHT753	Advance separation Technique

****Open Elective**

TOE011: Process Utilities & Safety	TOE012: Polymer Science and Engineering
TOE013: Renewable Energy	

**** Open Elective course:** Offered for other departments.

**B.TECH (CHEMICAL ENGINEERING)
SEMESTER- VIII (2021-22)**

S. No.	Sub. code	Category	Subject	Maximum marks allotted					Total	Contact Hour per week			Credit
				Theory			Practical			L	T	P	
				End Sem.	Mid Sem.	Quiz /Assignment	End Sem.	Lab work / Sessional					
1	HSMC 801	HSC	HSMC-I	100	30	20	-	-	150	3	0	0	3
2	BCHT 801	DC	Plant Design & Economics	100	30	20	-	-	150	3	1	0	4
3	BCHT 86	DE	Department Elective-VI	100	30	20	-	-	150	3	0	0	3
4	BCHT 87	DE	Department Elective - VII	100	30	20	-	-	150	3	0	0	3
5	BCHP 801	DLC	Project				100	150	250	0	0	8	6
6	BCHP 801	DLC	CAD Lab				30	20	50	0	0	2	1
			Total	500	150	100	90	60	900				19

Department Electives	
BCHT861	Petroleum Refining Technology
BCHT862	Fuel Cell Technology
BCHT863	Finite Elements Methods

Department Electives	
BCHT871	Process Utility and Piping Design
BCHT872	Fluidization Engineering
BCHT873	Multiphase Reactor Design

HSMC-I	Rural Development: Administration and Planning
	Project Management & Entrepreneurship