

HARCOURT BULTER TECHNICAL UNIVERSITY KANPUR
SCHOOL OF CHEMICAL TECHNOLOGY
DEPARTMENT OF CHEMICAL TECHNOLOGY - PAINT TECHNOLOGY

Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2017-2018 for new entrants)

Year I, Semester-I

Sl. No	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks					ESE	Total Marks
					L	T	P	MSE	AT	TA	Lab.	Total		
1	BSC	Chemistry	BCY 101	4	3	0	2	15	10	10	15	50	50	100
2	BSC	Mathematics I	BMA 101	4	3	1	0	30	10	10	-	50	50	100
3	ESC	Electronics Engineering	EET 101	3	3	0	0	30	10	10	-	50	50	100
4	ESC	Engineering Graphics	ECE 101	3	0	0	6	30	10	10	-	50	50	100
5	ESC	Computer Concept & Programming	ECS 101	4	3	0	2	15	10	10	15	50	50	100
6	ESC	Workshop Practice	EWS 101	2	0	0	4	00	10	10	30	50	50	100
7	MC (Non-Credit)	Environment & Ecology	ECE 103	0	2	0	0	30	10	10	-	50	50	100*
Total Credits 20														600

* 100 marks will not be added as given on Sr. No. 7(Non-Credit)

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Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2017-2018 for new entrants)

Year I, Semester-II

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks					ESE	Total Marks	
					L	T	P	MSE	AT	TA	Lab	Total			
1	BSC	Physics	BPH 102	4	3	0	2	15	10	10	15	50	50	100	
2	BSC	Mathematics II	BMA 102	4	3	1	0	30	10	10	-	50	50	100	
3	ESC	Electrical Engineering	EEE 102	4	3	0	2	15	10	10	15	50	50	100	
4	ESC	Engineering Mechanics	EME 102	3	3	0	0	30	10	10	-	50	50	100	
5	HSMC	English Language & Composition	HHS 102	2	2	0	0	30	10	10	-	50	50	100	
6	HSMC	Professional Communication	HHS 104	3	2	0	2	15	10	10	15	50	50	100	
Total Credits								20							600

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Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2018-2019)

Year II, Semester-III

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks		Lab.	Total	ESE	Total Marks
					L	T	P	MSE	TA				
1	BSC	Mathematics III	BMA 201	4	3	1	0	30	20	-	50	50	100
2	ESC	Materials & Energy Balance	TCH 201	5	3	2	0	30	20	-	50	50	100
3	PCC	Fluid Flow & Unit operation	TCH 203	5	3	1	3	15	20	15	50	50	100
4	PCC	Introduction to Surface Coatings and Their Components	TPT 201	5	3	0	6	15	20	15	50	50	100
5	HSMC	Organisational Behaviour	HHS 203	3	3	0	0	30	20	-	50	50	100
6	MC (Non-Credit)	Cyber Security (Audit course)	ECS 205	0	2	0	0	30	20		50	50	100
Total Credits 22												600*	

* 100 marks will not be added as given in Sr. No. 6 (Non-Credit)

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Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology

(Applicable from Session 2018-2019)

Year II, Semester-IV

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab.	Total		
1	BSC	Modern Analytical Techniques	BCY 202	4	3	0	3	15	20	15	50	50	100
2	BSC	Computer Oriented Numerical Methods	BMA 206	5	3	1	3	15	20	15	50	50	100
3	ESC	Heat Transfer Operations	TCH 202	3	3	0	0	30	20	-	50	50	100
4	ESC	Chemical Engineering Thermodynamics	TCH 204	3	3	0	0	30	20	-	50	50	100
5	PCC	Technology of Inorganic Pigments and Extenders	TPT 202	4	3	0	3	15	20	15	50	50	100
6	HSMC	Engg Economics & Management	HHS 202	3	3	0	0	30	20	-	50	50	100
7	MC (Non-Credit)	Indian Constitution (Audit course)	HHS 206	0	2	0	0	30	20		50	50	100*
Total Credits					22								600

* 100 marks will not be added as given in Sr. No. 7(Non-Credit)

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Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2019-2020)

Year III, Semester-V

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab.	Total		
1	ESC	Mass Transfer Operations	TCH 301	4	3	1	0	30	20	-	50	50	100
2	ESC	Chemical Reaction Engineering	TCH 303	4	3	1	0	30	20	-	50	50	100
3	PCC	Technology of Natural Resins, Alkyds and Polyesters	TPT 301	3	3	0	0	30	20	-	50	50	100
4	PCC	Technology of Synthetic Resins and Polymers	TPT 303	5	3	0	6	15	20	15	50	50	100
5	OEC (Mechanical)	Energy Conversion Systems and Devices	EME 325	3	3	0	0	30	20	-	50	50	100
6	OEC (Humanities)	Entrepreneurship Development	HHS 341	3	3	0	0	15		15	50	50	100
Total Credits				22									600

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B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2019-2020)

Year III, Semester-VI

Sl. No	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
								MSE	TA	Lab.	Total		
1	ESC	Instrumentation & Process Control	TCH 302	5	3	1	3	15	20	15	50	50	100
2	PCC	Technology of Organic, Functional and Effect Pigments	TPT 302	4	3	1	0	30	20	-	50	50	100
3	PCC	Characterization, Analysis and Evaluation of Coatings	TPT 304	5	3	0	6	15	20	15	50	50	100
4	PCC	Technology of Formulation and Manufacture of Coatings	TPT 306	5	3	0	6	15	20	15	50	50	100
5	OEC (Maths)	Operations Research	BMA 302	3	3	0	0	30	20	-	50	50	100
Total Credits					22							500	

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B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2020-2021)

Year IV, Semester-VII

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab.	Total		
1	PCC	Technology of Surface Preparation, Treatments and Coating Applications	TPT 401	4	3	0	3	15	20	15	50	50	100
2	PEC	Technology of Printing Inks	TPT 403	3	3	0	0	30	20	-	50	50	100
3	PEC	Programme Elective Course I Technology of Industrial and Specialty Coatings	TPT 405	2	2	0	0	30	20	-	50	50	100
4	PEC	Programme Elective Course II Technology of Architectural and Eco-friendly Coatings	TPT 407	2	2	0	0	30	20	-	50	50	100
5	OEC (Paint Tech.)	Basic Paint Technology	TPT 409	3	3	0	0	30	20	-	50	50	100
6		Industrial Training Presentation	TPT 461	2	0	0	4		25		25	25	50
7		Seminar	TPT 471	2	0	0	4		25		25	25	50
8		Project (Dissertation Report)	TPT 497	4	0	0	8		50		50	50	100
9		Educational Tour	TPT 417	0	0	0	0						
Total Credits				22									700

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Semester wise Course Structure

B. Tech. (Chemical Technology)- Paint Technology
(Applicable from Session 2020-2021)

Year IV, Semester-VIII

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab	Total		
1	ESC	Transport Phenomena*	TCH 402	3	3	0	0	30	20	-	50	50	100
2	ESC	Programme Elective Course III*		3	3	0	0	30	20	-	50	50	100
		Process Modeling & Simulation	TCH 404										
		Process Equipment Design	TCH 406										
3	PEC	Programme Elective Course IV*		4	3	1	0	30	20	-	50	50	100
		Technology Of Packaging And Waste Management	TPT 402										
		High Polymeric Engineering	TPT 404										
4	PEC	Programme Elective Course V*		4	3	1	0	30	20	-	50	50	100
		Corrosion Control Technology	TPT 406										
		Nanotechnology in Surface Coatings	TPT 408										
5		Project (Techno-commercial Feasibility Report)	TPT 498	8	0	0	16	-	50	-	50**	-	100
Total Credits					22								600

*These courses are either MOOC/ NPTEL online courses of equal weightage and similar title available at the start of the semester

OR regular courses in case students do not opt industry based project.

* Project Viva-Voice will be conducted by External Examiner.