

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

Semester wise Course Structure

B. Tech. Chemical Technology - Plastic 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	TA	Lab.	Total		
1	BSC	Chemistry	BCY 101	4	3	0	2	15	20	15	50	50	100
2	BSC	Mathematics I	BMA 101	4	3	1	0	30	20	-	50	50	100
3	ESC	Electronics & Instrumentation Engineering	EET 101	3	3	0	0	30	20	-	50	50	100
4	ESC	Engineering Graphics	ECE 101	3	0	0	6	30	20	-	50	50	100
5	ESC	Computer Concepts & Programming	ECS 101	4	3	0	2	15	20	15	50	50	100
6	ESC	Workshop Practice	EWS 101	2	0	0	4	--	20	30	50	50	100
7	MC(Non-Credit)	Environment & Ecology	ECE 103	0	2	0	0	30	20	-	50	50	100
Total Credits 20													

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Semester wise Course Structure

B. Tech. Chemical Technology - Plastic 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	TA	Lab	Total		
1	BSC	Physics	BPH 102	4	3	0	2	15	20	15	50	50	100
2	BSC	Mathematics II	BMA 102	4	3	1	0	30	20	-	50	50	100
3	ESC	Electrical Engineering	EEE 102	4	3	0	2	15	20	15	50	50	100
4	ESC	Engineering Mechanics	EME 102	3	3	0	0	30	20	-	50	50	100
5	HSMC	English Language & Composition	HHS 102	2	2	0	0	30	20	-	50	50	100
6	HSMC	Professional Communication	HHS 104	3	2	0	2	15	20	15	50	50	100
Total Credits					20								

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Semester wise Course Structure

B. Tech. Chemical Technology-Plastic Technology
(Applicable from Session 2018-2019 for new entrants)

Year II, Semester-III

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab	Total		
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	Polymer Chemistry	TPL 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	ECS 205	0	2	0	0	30	20		50	50	100
Total Credits 22													

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Semester wise Course Structure

B. Tech. Chemical Technology-Plastic Technology
(Applicable from Session 2018-2019 for new entrants)

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	PCC	Chemical Engineering Thermodynamics	TCH 204	3	3	0	0	30	20	-	50	50	100
5	PCC	Polymerization Engineering I	TPL 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	HHS 206	0	2	0	0	30	20	-	50	50	100
Total Credits					22								

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B. Tech. Chemical Technology-Plastic Technology
(Applicable from Session 2019-2020 for new entrants)

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	PCC	Mass Transfer Operations	TCH 301	4	3	1	0	30	20	-	50	50	100
2	PCC	Chemical Reaction Engineering	TCH 303	4	3	1	0	30	20	-	50	50	100
3	PCC	Polymer Processing I	TPL 301	3	3	0	0	30	20	-	50	50	100
4	PCC	Rheology & Testing of Polymers	TPL 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	30	20	-	50	50	100
Total Credits					22								

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B. Tech. Chemical Technology-Plastic Technology
(Applicable from Session 2020-2021 for new entrants)

Year III, Semester-VI

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	MSE	TA	Lab.	Total		
1	PCC	Instrumentation & Process Control	TCH 302	5	3	1	3	15	20	15	50	50	100
2	PCC	Structure & Property of Polymer	TPL 302	4	3	1	0	30	20	-	50	50	100
3	PCC	Polymer Processing II	TPL 304	5	3	0	6	15	20	15	50	50	100
4	PCC	Polymerization Engineering II	TPL 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								

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B. Tech. Chemical Technology-Plastic Technology
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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	Advanced Polymer Materials	TPL 401	4	3	0	3	15	20	15	50	50	100
2	PEC	Programme Elective Course I	TPL 403 OR TPL 405	3	3	0	0	30	20	-	50	50	100
3	PEC	Programme Elective Course II	TPL 407 OR TPL 409	2	2	0	0	30	20	-	50	50	100
4	PEC	Programme Elective Course III	TPL 411 OR TPL 413	2	2	0	0	30	20	-	50	50	100
5	OEC (Plastic Tech.)	Open Elective : Introduction to Polymer Technology	TPL 415	3	3	0	0	30	20	-	50	50	100
6		Industrial Training	TPL 461	2	0	0	4	-	50	-	50	50	100
7		Seminar	TPL 471	2	0	0	4	-	50	-	50	50	100
8		Project	TPL 497	4	0	0	8	-	50	-	50	50	100
9		Educational Tour	TPL 417	0	0	0	0	-	-	-	-	-	-
Total Credits				22									

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Semester wise Course Structure

B. Tech. Chemical Technology-Plastic Technology
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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	PEC	Programme Elective Course IV	TCH 402 OR TCH 404	3	3	0	0	30	20	-	50	50	100
2	PEC	Programme Elective Course V	TPL 402 OR TPL 404	3	3	0	0	30	20	-	50	50	100
3	PEC	Programme Elective Course VI	TPL 406 OR TPL 408	2	2	0	0	30	20	-	50	50	100
4	OEC (Chemical Engg.)	Transport Phenomenon	TCH 406	4	3	1	0	30	20	-	50	50	100
5		Project	TPL 498	10	0	0	20	-	50	-	50	50	100
Total Credits					22								

List of Elective Courses

S. No.	PEC Names	Subject Name	Subject Code
1.	Programme Elective Course I	Plastic Product & Mould Design	TPL 403
		Polymer Product Technology	TPL 405
2.	Programme Elective Course II	Technology of Elastomers	TPL 407
		Technology of Fibers	TPL 409
3.	Programme Elective Course III	Polymer Composite	TPL 411
		Polymer Blends & Alloys	TPL 413
4.	Programme Elective Course IV	Process Modeling & Simulation	TCH 402
		Process Equipment Design	TCH 404
5.	Programme Elective Course V	Plastic Packaging & waste Management	TPL 402
		Polymer Coating Technology	TPL 404
6.	Programme Elective Course VI	Polymeric Adhesives & Foams	TPL 406
		Polymer Nanocomposites	TPL 408

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Prof & Head
Plastic Tech. Dept.