SEMESTER WISE COURSE STRUCTURE & EVALUATION SCHEME

B. TECH. CHEMICAL TECHNOLOGY- PAINT TECHNOLOGY

Semester-I

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab.	Total		
1	BSC	Engineering Chemistry	BCY 151	4	3	0	2	15	20	15	50	50	100
2	BSC	Mathematics I	BMA 151	4	3	1	0	30	20	-	50	50	100
3	ESC	Electronics & Instrumentation Engineering	EET 151	3	3	0	0	30	20	-	50	50	100
4	ESC	Engineering Graphics	ECE 151	3	0	0	6	30	20	-	50	50	100
5	ESC	Computer Concepts & Programming	ECS 151	4	3	0	2	15	20	15	50	50	100
6	ESC	Workshop Practice	EWS 151	2	0	0	4	--	20	30	50	50	100
7	MC (Non-Credit)	Environment & Ecology	ECE 153	0	2	0	0	30	20	-	50	50	100
		Total Credits 20											**600**

Semester-II

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks ESE					Total Marks
					L	T	P	CT	TA	Lab	Total		
1	BSC	Physics	BPH 152	4	3	0	2	15	20	15	50	50	100
2	BSC	Mathematics II	BMA 152	4	3	1	0	30	20	-	50	50	100
3	ESC	Electrical Engineering	EEE 152	4	3	0	2	15	20	15	50	50	100
4	ESC	Engineering Mechanics	EME 152	3	3	0	0	30	20	-	50	50	100
5	HSMC	English Language & Composition	HHS 152	2	2	0	0	30	20	-	50	50	100
6	HSMC	Professional Communication	HHS 154	3	3	0	2	15	20	15	50	50	100
		Total Credits 20											**600**

BSC- Basic Science Course; ESC-Engineering Science Course; PCC-Program Core course; PEC-Program Elective Course; OEC-Open Elective Course; MC-Mandatory Course; HSMC-Humanities, Social Science & Management Course

Semester-III

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab	Total		
1	BSC	Mathematics III	BMA 251	4	3	1	0	30	20	-	50	50	100
2	PCC	Introduction to Surface Coatings and their Components	TPT 251	4	3	1	0	30	20	-	50	50	100
3	PCC	Introduction to Surface Coatings and their Components Lab	TPT 253	2	0	0	4	-	20	30	50	50	100
4	ESC	Fluid Mechanics and Mechanical operations	TPT 255	5	3	1	2	15	20	15	50	50	100
5	PCC	Materials & Energy Balance	TPT 257	4	3	1	0	30	20	-	50	50	100
	HSMC	Organizational Behavior	HHS 253	3	3	0	0	30	20	-	50	50	100
7	MC (Non Credit)	Cyber Security	ECS 255	0	2	0	0	30	20	-	50	50	100
	Total Credits 22												**600**

Semester IV

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab	Total		
1	BSC	Modern Analytical Techniques	BCY 252	4	3	0	2	15	20	15	50	50	100
2	BSC	Computer Oriented Numerical Methods	BMA 252	4	2	1	2	15	20	15	50	50	100
3	PCC	Technology of Natural Resins, Alkyds and Polyesters	TPT 252	5	3	1	2	15	20	15	50	50	100
4	ESC	Heat Transfer Operations	TPT 254	3	2	1	0	30	20	-	50	50	100
5	PCC	Chemical Engineering Thermodynamics	TPT 256	3	2	1	0	30	20	-	50	50	100
6	HSMC	Engg Economics & Management	HHS 252	3	3	0	0	30	20	-	50	50	100
7	MC (Non Credit)	Indian Constitution	HHS 256	0	2	0	0	30	20	-	50	50	100
	Total Credits 22												**600**

Semester-V

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab	Total		
1	PCC	Technology of Inorganic Pigments and Extenders	TPT 351	4	3	1	0	30	20	-	50	50	100
2	PCC	Pigments and Extenders Lab	TPT 353	2	0	0	4	-	20	30	50	50	100
3	PCC	Technology of Synthetic Resins and Polymers	TPT 355	5	3	1	2	15	20	15	50	50	100
4	PCC	Mass Transfer Operations	TPT 357	4	3	1	0	30	20	-	50	50	100
5	PCC	Chemical Reaction Engineering	TPT 359	4	3	1	0	30	20	-	50	50	100
6	OEC (Humanities)	Open Elective Course –I	HHS 351	3	3	0	0	30	20	-	50	50	100
	Total Credits 22												**600**

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	Characterization, Analysis and Evaluation of Coatings	TPT 352	3	2	0	2	15	20	15	50	50	100
2	PCC	Technology of Organic, Functional and Effect Pigments	TPT 354	3	2	1	0	30	20	-	50	50	100
3	PCC	Technology of Formulation and Manufacture of Coatings	TPT 356	4	3	0	2	15	20	15	50	50	100
4	PCC	Technology of Printing Inks and Coatings	TPT 358	3	2	1	0	30	20	0	50	50	100
5	PCC	Technology of Paint and Coating Additives	TPT 360	3	3	0	0	30	20	0	50	50	100
6	PCC	Instrumentation & Process Control	TPT 362	3	2	1	0	30	20	-	-	50	100
7	OEC (Maths)	Open Elective Course -II	BMA 352	3	3	0	0	30	20	-	50	50	100
		Total Credits 22											**700**

Semester-VII

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab	Total		
1	PCC	Technology of Industrial and Specialty Coatings	TPT 451	2	2	0	0	30	20	-	50	50	100
2	PCC	Technology of Surface Preparation, Treatments and Coating Applications	TPT 453	3	2	0	2	15	20	15	50	50	100
3	PEC	**Program Elective Course I** (Technology of Architectural & Eco-friendly Coatings OR Corrosion Control Technology)	TPT 455 OR TPT 457	3	3	0	0	30	20	-	50	50	100
4	PEC	**Program Elective Course II** (Technology of Industrial and Automotive Coatings OR Nanotechnology in Surface Coatings)	TPT 459 OR TPT 461	3	3	0	0	30	20	-	50	50	100
5	OEC (Paint Tech.)	**Open Elective Course –III** Basic Paint Technology	OPT 433	3	3	0	0	30	20	-	50	50	100
6		Industrial Training	TPT 493	2	0	0	4	-	50	-	50	50	100
7		Seminar	TPT 495	2	0	0	4	-	50	-	50	50	100
8		Project	TPT 497	4	0	0	8	-	50	-	50	50	100
	Total Credits 22												**800**

Semester-VIII

Sl. No.	Course Type	Course Title	Subject Code	Credits	Periods			Sessional Marks				ESE	Total Marks
					L	T	P	CT	TA	Lab	Total		
1	PEC	***Program Elective Course III** (High Polymeric Engineering OR Technology of Packaging & Waste Management)	TPT 452 OR TPT 454	4	3	1	0	30	20	-	50	50	100
2	PEC	***Program Elective Course IV** (Process Modeling & Simulation OR Computer Aided Equipment Design)	TPT 456 OR TPT 458	4	3	1	0	30	20	-	50	50	100
3	OEC (Chemical Engg.)	***Open Elective Course –IV** (Transport Phenomena)	OCH 444	4	3	1	0	30	20	-	50	50	100
4		Project	TPT 498	10	0	0	20	-	50	-	50	50	100
		Total Credits 22											**400**

*** Online Courses**

List of Program Elective Courses

S. No.	PEC Names	Subject Name	Subject Code	C (L-T-P)
1.	Program Elective Course I	Technology of Architectural & Eco-friendly Coatings	TPT 455	3 (3-0-0)
		Corrosion Control Technology	TPT 457	
2.	Program Elective Course II	Technology of Industrial and Automotive Coatings	TPT 459	3 (3-0-0)
		Nanotechnology in Surface Coatings	TPT 461	
3.	Program Elective Course III	High Polymeric Engineering	TPT 452	4 (3-1-0)
		Technology of Packaging & Waste Management	TPT 454	
4.	Program Elective Course IV	Process Modeling & Simulation	TPT 456	4 (3-1-0)
		Computer Aided Equipment Design	TPT 458	

List of Open Elective Courses

S. No.	OEC Names	Subject Name	Subject Code	C (L-T-P)
1.	Open Elective Course II (Humanities)	Entrepreneurship Development	HHS 491	3 (3-0-0)
2.	Open Elective Course II (Maths)	Operations Research	BMA 492	3 (3-0-0)
3.	Open Elective Course III (Paint Technology)	Basic Paint Technology	OPT 433	3 (3-0-0)
4.	Open Elective Course IV (Chemical Engg.)	Transport Phenomenon	OCH 444	4 (3-1-0)