



Government Polytechnic, Nagpur

Diploma in Packaging Technology

NEP 2020 Align Curriculum 2026 Program Structure



Semester: First

Sem Duration: 16 Weeks

NCrF Entry Level: 3.0

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH		Cr	SA	FA	SA	FA	SA		
1	MH101K	Basic Mathematics		Nil	DSC	4	4	2	-	2	8	(120)	4	70 %	30	-	25	25 %	150	
2	PH101K	Applied Physics		NIL	DSC	2	4	-	2	2	8	(120)	4	70 %	30	25 %	25	25 %	175	
3	PK101K	Engineering Drawing and CAD		NIL	DSC	-	2	-	4	-	6	(90)	3	-	-	50 %	50	-	100	
4	EN101K	Communication Skills		NIL	AEC	-	3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
5	WS151K	Engineering Workshop Practice		NIL	SEC	2	-	-	4	-	4	(60)	2	-	-	50 %	50	-	100	
6	CM151K	Basics of Computer		NIL	SEC	-	-	-	2	2	4	(60)	2	-	-	25 %	25	25 %	75	
7	VE151K	Integrated Personality Development		NIL	VEC	-	-	-	2	2	4	(60)	2	-	-	25 %	25	25 %	75	
					Total	8	13	2	16	9	40	(600)	20	210	90	200	225	125	850	

Abbreviations:

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Symbols: Classroom Learning Summative Assessment: ** Objective Type Online 1 Hour Duration, *@ 3 Hour Duration, *# 4 Hour Duration, + Laboratory Learning Summative Assessment: + External Examiner, % Internal Examiner Only . ₹ Course for Award of Diploma. \$ Teaching and assessment: Online Mode

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HOD & Chairman PBOS

Packaging Technology

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Packaging Technology



Government Polytechnic, Nagpur

Diploma in Packaging Technology

NEP 2020 Align Curriculum 2026 Program Structure



Semester: Second

Sem Duration: 16 Weeks

NCrF Entry Level: 3.0

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)					Total Marks
														CL		TL/LL		SL	
							CL	TL	LL	SL	NLH		Cr	SA	FA	SA	FA	SA	
1	MH102K	Applied Mathematics		NIL	DSC	4	4	2	-	2	8	(120)	4	70 *@	30	-	25	25 %	150
2	CH101K	Applied Chemistry		NIL	DSC	2	4	-	2	2	8	(120)	4	70 *@	30	25 %	25	25 %	175
3	EE103K	Basic Electrical and Electronics		NIL	DSC	-	3	-	2	1	6	(90)	3	70 **	30	25 %	25	25 %	175
4	AM101K	Engineering Mechanics		NIL	DSC	-	3	-	2	1	6	(90)	3	70 *@	30	25 %	25	25 %	175
5	EN151K	Business Communication		NIL	AEC	-	2	-	2	-	4	(60)	2	-	-	25 %	25	-	50
6	PK151K	Packaging Label Design Software		NIL	SEC	-	-	-	4	-	4	(60)	2	-	-	50 %	50	-	100
7	VE152K	Environmental Sustainability		NIL	VEC	10	-	-	2	2	4	(60)	2	-	-	25 %	25	25 %	75
					Total	16	16	2	14	8	40	(600)	20	280	120	175	200	125	900

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NEP 2020 Align Curriculum 2026 Program Structure

Scheme: First Year Exit

Duration: 4 Weeks

NCrF Entry Level: 3.5

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH			Cr	SA	FA	SA	FA	SA	
1	IN151K	Internship (Basic Skills)			40 Cr	INP	-	-	-	-	8	8	(120)	4	-	-	-	-	50 +	50
						Total	0	0	0	0	8	8	(120)	4	0	0	0	0	50	50

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NEP 2020 Align Curriculum 2026 Program Structure



Semester: Third

Sem Duration: 16 Weeks

NCrF Entry Level: 3.5

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH			Cr	SA	FA	SA	FA	SA	
1	PK201K	Fundamentals of Packaging		NIL	DSC		3	-	2	1	6	(90)	3	70 *@	30	25 +	25	25 %	175	
2	PK202K	Traditional Packaging Materials		NIL	DSC	1	3	-	2	1	6	(90)	3	70 *@	30	25 +	25	25 %	175	
3	PK203K	Packaging Papers & Products		NIL	DSC		3	-	4	1	8	(120)	4	70 *@	30	25 +	25	25 %	175	
4	PK204K	Plastic Materials in Packaging		NIL	DSC		3	-	2	1	6	(90)	3	70 **	30	25 +	25	25 %	175	
5	PK205K	Packaging Printing: Offset, Screen, and Digital Technology		NIL	DSC		2	-	4	-	6	(90)	3	70 *@	30	25 +	25	-	150	
6	PK251K	Packaging Development		NIL	SEC		2	-	4	-	6	(90)	3	-	-	50 +	50	-	100	
7	VE251K	Indian Constitution		NIL	VEC		1	-	-	1	2	(30)	1	-	-	-	-	50 %	50	
					Total	1	17	0	18	5	40	(600)	20	350	150	175	175	150	1000	

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NEP 2020 Align Curriculum 2026 Program Structure



Semester: Fourth

Sem Duration: 16 Weeks

NCrF Entry Level: 3.5

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH			Cr	SA	FA	SA	FA	SA	
1	PK206K	Plastic Package Manufacturing		PK204K	DSC		3	-	2	1	6	(90)	3	70 *@	30	25 +	25	25 %	175	
2	PK207K	Folding Cartons & Corrugated Boxes	₹	PK203K	DSC		3	-	4	1	8	(120)	4	70 *@	30	25 +	25	25 %	175	
3	PK208K	Packaging of Food & Beverages	₹	PK201K	DSC	1	3	-	2	1	6	(90)	3	70 *@	30	25 +	25	25 %	175	
4	PKXXXK	Discipline Specific Elective I		-	DSE		3	-	2	1	6	(90)	3	70 *@	30	25 +	25	25 %	175	
5	PK252K	Packaging Processes		PK201K	SEC		-	-	4	-	4	(60)	2	-	-	50 +	50	-	100	
6	##291K	Open Elective		NIL	GE		2	-	2	-	4	(60)	2	70 **	30	25 %	25	-	150	
7	IN201K	Entrepreneurship & Startup		NIL	INP		2	-	2	-	4	(60)	2			25 %	25	-	50	
8	VE251K	Yog & Meditation		NIL	VEC	30	-	-	2	-	2	(30)	1	-	-	25 %	25	-	50	
					Total	31	16	0	20	4	40	(600)	20	350	150	225	225	100	1050	

List of Discipline Specific Elective I

1	PK209K	Packaging of Chemicals, Garments & Handicrafts		PK201K
2	PK210K	Refrigeration in Packaging		VE152K
3	PK211K	Production Management and Q.A.		PK201K

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Diploma in Packaging Technology

NEP 2020 Align Curriculum 2026 Program Structure

Scheme: Second Year Exit

Duration: 4 Weeks

NCrF Entry Level: 4.0

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH		Cr	SA	FA	SA	FA	SA		
1	IN252K	Internship (Vocational Skills)			80 Cr	INP	-	-	-	-	8	8	(120)	4	-	-	-	-	50 +	50
						Total	0	0	0	0	8	8	(120)	4	0	0	0	0	50	50

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NEP 2020 Align Curriculum 2026 Program Structure



Semester: Fourth

List of Open Elective Courses

SN	Course Code	Course Title
1	CE291K	Civil Engineering Practice
2	ME291K	Elements of Mechanical Engineering
3	EE291K	Electrical Generation, Transmission and Distribution
4	EC291K	Microcontroller And Applications
5	IT291K	Python Programming
6	MT291K	Foundry Technology
7	TX291K	General Textile Technology
8	AE291K	Basics of Automobile
9	CM291K	Web Development
10	MK291K	Basic Mechatronics
11	AI291K	Basics of Artificial Intelligence
12	TR291K	Adventure Tourism
13	NP291K	Any one NPTEL Course of more than 8 week duration

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NEP 2020 Align Curriculum 2026 Program Structure



Semester: Fifth

Sem Duration: 16 Weeks

NCrF Entry Level: 4.0

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks		
														CL		TL/LL		SL				
							CL	TL	LL	SL	NLH			Cr	SA	FA	SA	FA	SA			
1	PK301K	Package Design Engineering	₹	AM101K	DSC		3	-	4	1	8	(120)	4	70	*#	30	25	+	25	25	%	175
2	PK302K	Packaging of Pharmaceuticals	₹	PK201K	DSC	1	4	-	2	2	8	(120)	4	70	*@	30	25	+	25	25	%	175
3	PK303K	Packaging Printing: Gravure and Flexography	₹	PK205K	DSC		3	-	2	1	6	(90)	3	70	*@	30	25	+	25	25	%	175
4	PK304K	Logistics & Supply Chain Management	₹	PK207K	DSC		3	-	2	1	6	(90)	3	70	*@	30	25	+	25	25	%	175
5	PKXXXK	Discipline Specific Elective II	₹	-	DSE		2	-	2		4	(60)	2	70	*@	30	25	%	25			150
6	PK351K	Capstone Project	₹	40 Cr	SEC		-	-	4	-	4	(60)	2	-		-	75	+	75	-		150
7	PK352K	Maintenance in Packaging	₹	PK252K	SEC		-	-	4	-	4	(60)	2	-		-	50	%	50	-		100
					Total	1	15	0	20	5	40	(600)	20	350		150	250		250	100		1100

List of Discipline Specific Elective II

1	PK305K	Packaging of Engineering Goods	Nil
2	PK306K	Green Packaging	Nil
3	PK307K	Smart Packaging and Emerging Technologies	Nil

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Diploma in Packaging Technology

NEP 2020 Align Curriculum 2026 Program Structure



Semester: Sixth

Sem Duration: 16 Weeks

NCrF Entry Level: 4.0

SN	Course Code	Course Title		Pre-requisite Course/ Credits	Course Category	Total IKS Hours	Learning Scheme (Hours/Week)				Notional Hours/ Week (Total Notional Hours)		Credits	Assessment Scheme (Marks)						Total Marks
														CL		TL/LL		SL		
							CL	TL	LL	SL	NLH		Cr	SA	FA	SA	FA	SA		
1	IN351K	Internship (16 Weeks)	₹	50 Cr	INP	-	-	-	2	30	32	(480)	16	-	-	100 +	-	100 %	200	
2	SE351K	Seminar	₹	50 Cr	AEC	-	-	-	2	2	4	(60)	2	-	-	50 %	-	50 %	100	
3	IN301K	Industrial Management	\$	Nil	INP	1	4	-	-	-	4	(60)	2	70 **	30	-	-	-	100	
					Total	1	4	0	4	32	40	600	20	70	30	150	0	150	400	

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NEP 2020 Align Curriculum 2026 Program Structure

List of Courses for Award of Diploma in Engineering



SN	Semester	Course Code	Course Title	Credits	Total Marks
1	Fourth	PK207K	Folding Cartons & Corrugated Boxes	4	175
2	Fourth	PK208K	Packaging of Food & Beverages	3	175
3	Fifth	PK301K	Package Design Engineering	4	175
4	Fifth	PK302K	Packaging of Pharmaceuticals	4	175
5	Fifth	PK303K	Packaging Printing: Gravure and Flexography	3	175
6	Fifth	PK304K	Logistics & Supply Chain Management	3	175
7	Fifth	PKXXXK	Discipline Specific Elective II	2	150
8	Fifth	PK351K	Capstone Project	2	150
9	Fifth	PK352K	Maintenance in Packaging	2	100
10	Sixth	IN351K	Internship (16 Weeks)	16	200
11	Sixth	SE351K	Seminar	2	100
			Total	45	1750

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