



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	ME154K	Engineering Graphics (Electronics)		Nil	DSC	2	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	WS153K	Workshop Practice (Electronics)		Nil	SEC	-	-	-	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	10	-	-	2	2	4	(60)	2	-	-	25 %	25	25 %	75	
					Total	18	13	2	16	9	40	(600)	20	210	90	200	225	125	850	

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1, CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur

Diploma in Electronics & Telecommunication Engineering



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	MH103K	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	EC101K	Basic Electronics		Nil	DSC		3	-	2	1	6	(90)	3	70 %	@	30	25 %	25	25 %	175
4	EE102K	Basic Electrical Engineering		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	EC151K	Electronic Workshop		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	

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1, CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)
HOD & Chairman PBOS
Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)
Member Secretary PBOS
Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	
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

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	EC201K	Electronic Devices And Circuits	₹	EC101K	DSC		4	-	2	2	8	(120)	4	70 %	@	30	25 +	25	25 %	175
2	EC202K	Principles of Digital Electronics		Nil	DSC		3	-	2	1	6	(90)	3	70 %	@	30	25 +	25	25 %	175
3	EC203K	Basics of Communication		Nil	DSC	1	3	-	2	1	6	(90)	3	70 %	@	30	25 +	25	25 %	175
4	EC204K	Instrumentation		Nil	DSC	-	3	-	2	1	6	(90)	3	70 %	@	30	25 +	25	25 %	175
5	EC205K	Circuit Analysis		Nil	DSC	-	4	-	2		6	(90)	3	70 %	@	30	25 +	25		150
6	EC251K	Programming Fundamentals with C and Python		Nil	SEC	-	2	-	4	-	6	(90)	3	-		-	50 +	50	-	100
7	VE252K	Yoga & Meditation		Nil	VEC	30	-	-	2	-	2	(30)	1	-		-	25	25	-	50
					Total	31	19	0	16	5	40	(600)	20	350		150	200	200	100	1000

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	EC206K	Microcontroller		EC202K	DSC		4	-	2	2	8	(120)	4	70 %	30	25 %	25	25 %	175	
2	EC207K	Communication Systems		EC203K	DSC		3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
3	EC208K	Linear Integrated Circuit	₹	EC201k	DSC		3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
4	ECXXXK	Discipline Specific Elective I		-	DSE	-	3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
5	EC252K	PCB & Simulation		Nil	SEC	-	-	-	4	-	4	(60)	2	-	-	50 %	50	-	100	
6	##291K	Open Elective		Nil	OE	-	2	-	2	-	4	(60)	2	70 %	30	25 %	25	-	150	
7	IN251K	Entrepreneurship & Startup		Nil	INP	-	2	-	2	-	4	(60)	2	-	-	25 %	25	-	50	
	VE251K	Indian Constitution		Nil	VEC	-	1	-	-	1	2	(30)	1	-	-	-	-	50 %	50	
					Total	0	18	0	16	6	40	(600)	20	350	150	200	200	150	1050	

List of Discipline Specific Elective I

1	EC209K	VLSI & VHDL Programming	Nil
2	EC210K	Computer Communication Network	Nil
3	EC211K	Optical Communication	Nil

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	
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

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur

Diploma in Electronics & Telecommunication Engineering

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	IT291K	Python Programming
5	MT291K	Foundry Technology
6	TX291K	General Textile Technology
7	AE291K	Basics of Automobile
8	PK291K	Basics of Packaging Technology
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

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	EC301K	Digital Communication	₹	EC203K	DSC		4		2	2	8	(120)	4	70 %	30	25 +	25	25 %	175	
2	EC302K	Mobile Communication	₹	EC203K	DSC		3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
3	EC303K	Embedded Systems	₹	EC206K	DSC		3	-	2	1	6	(90)	3	70 %	30	25 +	25	25 %	175	
4	EC304K	Consumer Electronics	₹	EC201K	DSC	-	3	-	2	1	6	(90)	3	70 %	30	25 %	25	25 %	175	
5	ECXXXK	Discipline Specific Elective II	₹	Nil	DSE	2	4	-	2	-	6	(90)	3	70 %	30	25 %	25	-	150	
6	EC351K	Capstone Project	₹	40 Cr	SEC	-	-	-	4	-	4	(60)	2	-	-	75 +	75	-	150	
7	EC352K	Testing & Maintenance of Electronics System	₹	Nil	SEC	-	-	-	4	-	4	(60)	2	-	-	50 %	50	-	100	
					Total	2	17	0	18	5	40	(600)	20	350	150	250	250	100	1100	

List of Discipline Specific Elective II

1	EC305K	Control systems	Nil
2	EC306K	Industrial Automation	Nil
3	EC307K	Power Electronics	Nil
4	EC308K	Drone Technology (2 Hrs IKS)	Nil

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur



Diploma in Electronics & Telecommunication Engineering

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	
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

Abbreviations:

CL= Classroom Learning, TL= Tutorial Learning, LL= Laboratory Learning, SL=Self-Study Learning, NLH=Notional Learning Hours SA=Summative Assessment (At the End of Semester), FA=Formative Assessment (At the end of Unit(s) / Each LL/TL Activity) Classroom Learning FA= Average (CL_FA1,CL_FA2), Laboratory/Tutorial Learning FA= Average (LL_FA1, LL_FAn) 40% Combined passing for Classroom Learning (FA+SA), 40% individual passing for other Heads.

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, \$ Online Mode

(Dr.V.H.Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering



Government Polytechnic, Nagpur

Diploma in Electronics & Telecommunication Engineering

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	Third	EC201K	Electronic Devices And Circuits	4	175
2	Fourth	EC208K	Linear Integrated Circuit	3	175
3	Fifth	EC301K	Digital Communication	4	175
4	Fifth	EC302K	Mobile Communication	3	175
5	Fifth	EC303K	Embedded Systems	3	175
6	Fifth	EC304K	Consumer Electronics	3	175
7	Fifth	ECXXXK	Discipline Specific Elective II	3	150
8	Fifth	EC351K	Capstone Project	2	150
9	Fifth	EC352K	Testing & Maintenance of Electronics System	2	100
10	Sixth	IN351K	Internship (16 Weeks)	16	200
11	Sixth	SE351K	Seminar	2	100
			Total	45	1750

(Dr. V. H. Mankar)

HOD & Chairman PBOS

Electronics & Telecommunication Engineering

(Dr. D. A. Khandare)

Member Secretary PBOS

Electronics & Telecommunication Engineering