



Government Polytechnic, Nagpur

Diploma in Automobile 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	NLH	Cr		CL		TL/LL		SL		
														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	AE151K	Automobile Engineering Graphics		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	AE152K	Automobile Workshop Practice		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	-	-	-	2	2	4	(60)	2	-	-	25	25	25		75
					Total	6	13	2	16	9	40	(600)	20	210	90	200	225	125		850

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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, \$ Online Mode

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Government Polytechnic, Nagpur
Diploma in Automobile 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	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	AE101K	Basic Auto Electrical & Electronics		Nil	DSC	-	3	-	2	1	6	(90)	3	70	30	25 ⁺	25	25	175
4	AE102K	Auto Materials & Manufacturing		Nil	DSC	-	4	-	2	-	6	(90)	3	70	30	25	25	-	150
5	EN151K	Business Communication		Nil	AEC	-	2	-	2	-	4	(60)	2	-	-	25	25	-	50
6	AE153K	Automotive Engineering Drawing		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	17	2	14	7	40	(600)	20	280	120	175	200	100	875

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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	
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	AE201K	Applied Engine Thermodynamics		Nil	DSC	-	4	-	2	-	6	(90)	3	70	30	25	25	-	150	
2	AE202K	Therory of Machine & Design		Nil	DSC	-	4	-	2	2	8	(120)	4	70	30	25	25	25	175	
3	AE203K	Automotive Transmission		Nil	DSC	-	4	-	2	2	8	(120)	4	70	30	25 +	25	25	175	
4	AE204K	Advanced Manufacturing Processes		Nil	DSC	-	4	-	2	-	6	(90)	3	70	30	25	25	-	150	
5	AM205K	Auto Mechanics & SOM		Nil	DSC	-	3	-	2	1	6	(90)	3	70	30	25	25	25	175	
6	AE251K	CAD & Solid Modeling		AE153K	SEC	-	-	-	4	-	4	(60)	2	-	-	50 +	50	-	100	
7	VE251K	Indian Constitution		Nil	VEC	-	1	-	-	1	2	(30)	1	-	-	-	-	50	50	
					Total	0	20	0	14	6	40	(600)	20	350	150	175	175	125	975	

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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	AE205K	Automobile Engines & Systems	₹	Nil	DSC	-	4	-	2	2	8	(120)	4	70	30	25	25	25	175	
2	AE206K	Vehicle Control System	₹	Nil	DSC	-	3	-	2	1	6	(90)	3	70	30	25	25	25	175	
3	AE207K	Auto Hydraulic & Pneumatics		Nil	DSC	-	3	-	2	1	6	(90)	3	70	30	25	25	25	175	
4	AEXXXK	Discipline Specific Elective I		Nil	DSE	-	4	-	2	-	6	(90)	3	70	30	25	25	-	150	
5	AE252K	Autotronics & Vehicle Diagnostics		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	Entreprenurship & Startup		Nil	INP	-	2	-	2	-	4	(60)	2	-	-	25	25	-	50	
8	VE252K	Yog & Meditation		Nil	VEC	30	-	-	2	-	2	(30)	1	-	-	25	25	-	50	
					Total	30	18	0	18	4	40	(600)	20	350	150	225	225	75	1025	

List of Discipline Specific Elective I

1	AE208K	Automotive HVAC		Nil
2	AE209K	Automobile Body & Safety		Nil
3	AE210K	Measurements & Quality Control		Nil

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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

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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	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

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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	AE301K	Advanced Automotive Engines	₹	Nil	DSC	-	3	-	2	1	6	(90)	3	70 * [@]	30	25 ⁺	25	25		175
2	AE302K	Advanced Auto Electrical & Electronics	₹	Nil	DSC	-	4	-	2	2	8	(120)	4	70 * [@]	30	25 ⁺	25	25		175
3	AE303K	Electric Vehicle Technology	₹	Nil	DSC	-	3	-	2	1	6	(90)	3	70 * [@]	30	25 ⁺	25	25		175
4	AE304K	Vehicle Transport Management	₹	Nil	DSC	-	3	-	2	1	6	(90)	3	70 * [@]	30	25 %	25	25		175
5	AEXXXK	Discipline Specific Elective II	₹	-	DSE	-	4	-	2	-	6	(90)	3	70 * [@]	30	25 ⁺	25	-		150
6	AE351K	Capstone Project	₹	40 Cr	SEC	-	-	-	4	-	4	(60)	2	-	-	75 ⁺	75	-		150
7	AE352K	Vehicle Maintenance Practices	₹	Nil	SEC	-	-	-	4	-	4	(60)	2	-	-	50 ⁺	50	-		100
					Total	0	17	0	18	5	40	(600)	20	350	150	250	250	100		1100

List of Discipline Specific Elective II

1	AE305K	Two wheeler Technology	Nil
2	AE306K	Motor Vehicle Insurance	Nil
3	AE307K	Earth Moring & Special Purpose Vehicles	Nil

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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	IN302K	Auto Service & 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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List of Courses for Award of Diploma in Engineering



SN	Semester	Course Code	Course Title	Credits	Total Marks
1	Fourth	AE205K	Automobile Engines & Systems	4	175
2	Fourth	AE206K	Vehicle Control System	3	175
3	Fifth	AE301K	Advanced Automotive Engines	3	175
4	Fifth	AE302K	Advanced Auto Electrical & Electronics	4	175
5	Fifth	AE303K	Electric Vehicle Technology	3	175
6	Fifth	AE304K	Vehicle Transport Management	3	175
7	Fifth	AEXXXK	Discipline Specific Elective II	3	150
8	Fifth	AE351K	Capstone Project	2	150
9	Fifth	AE352K	Vehicle Maintenance Practices	2	100
10	Sixth	IN351K	Internship (16 Weeks)	16	200
11	Sixth	SE351K	Seminar	2	100
			Total	45	1750

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