



**CURRICULUM SCHEME OF FIRST YEAR ENGINEERING
SEMESTER-I (Group-II: CD, CM, EE and ME) [NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology

Sr. No.	Course Code	Course Title	Hours Per Week			Credits	Maximum Marks			ESE Duration (Hrs)
			L	T	P		Continuous Evaluation	End Sem. Exam	Total	
1	N-BSC101T	Successive Differentiation and Differential Equation	3	1	0	4	40	60	100	3
2	N-BSC103T	Chemistry for Engineering	2	0	0	2	20	30	50	2
3	N-BSC103P	Engineering Chemistry Lab	0	0	2	1	25	25	50	-
4	N-ESC101T	Electrical Engineering	2	1	0	3	40	60	100	3
5	N-ESC101P	Electrical Engineering Lab	0	0	2	1	25	25	50	-
6	N-VSC	Vocational Skill Course-1*	0	0	4	2	25	25	50	-
7	N-ESC102T	Programming for Problem Solving	3	0	0	3	40	60	100	3
8	N-ESC102P	Programming for Problem Solving Lab	0	0	4	2	25	25	50	-
9	N-AEC101T	Communicative English	1	0	0	1	20	30	50	2
10	N-AEC101P	Communicative English Lab	0	0	2	1	25	25	50	-
11	N-CC102	Liberal Learning Course - 2	1	0	2	2	50	-	50	-
TOTAL			12	2	16	22	335	365	700	

* Vocational Skill Course shall be from the major discipline.

AD Signe
Dr. P. Shinde
(Dr. P. Shinde)
(Dr. S. Kemdoo)

H.S. Rong
(Dr. H.S. Rong)

R. K. Kulkarni
(Dr. R. K. Kulkarni)

Y. N. Patil
(Dr. Y. N. Patil)

B. B. Kondhure
(Dr. B. B. Kondhure)

S. A. Anwar
(Dr. S. A. Anwar)

Revision	BoS Meeting	Date	w. e. f.
-	7 th	13-07-2023	2023-24

V. H. Asudani
(Dr. V. H. Asudani)



**S. B. JAIN INSTITUTE OF TECHNOLOGY,
MANAGEMENT AND RESEARCH, NAGPUR**
(An Autonomous Institute, Affiliated to RTMNU, Nagpur)



FIRST YEAR ENGINEERING DEPARTMENT

"Emerge as a leading Institute for developing competent and creative Professionals"

**CURRICULUM SCHEME OF FIRST YEAR ENGINEERING
SEMESTER-II (Group-II: CD, CM, EE and ME) [NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology

Sr. No.	Course Code	Course Title	Hours Per Week			Credits	Maximum Marks			ESE Duration (Hrs)
			L	T	P		Continuous Evaluation	End Sem Exam	Total	
1	N-BSC104T	Integral Calculus and Linear Algebra	3	1	0	4	40	60	100	3
2	N-BSC102T	Applied Physics	2	0	0	2	20	30	50	2
3	N-BSC102P	Applied Physics Lab	0	0	2	1	25	25	50	-
4	N-ESCI03T	Engineering Graphics and Design	1	0	0	1	40	60	100	4
5	N-ESCI03P	Engineering Graphics and Design Lab	0	0	4	2	25	25	50	-
6	N-VSC	Vocational Skill Course-2*	0	0	4	2	25	25	50	-
7	N-IKS101T	Indian Knowledge System	2	0	0	2	50	-	50	-
8	N-PCC	Program Core Course*	2	0	0	2	20	30	50	2
9	N-PCC	Program Core Course*	0	0	2	1	25	25	50	-
10	N-CC101	Liberal Learning Course - I	1	0	2	2	50	-	50	-
TOTAL			11	1	14	19	320	280	600	

* Program Core Course and Vocational Skill Course shall be from the major discipline.

AD Sage
Dr. P. Shinde
Dr. S. Komde
Dr. A.K. Kelkar

Dr. H.S. Raj
Dr. Y.B. Patil

Dr. S.B. Kondhar

Revision	BoS Meeting	Date	w. e. f.
-	7 th	13-07-2023	2023-24

Dr. S. Anand

Dr. V.H. Asudani



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LIST OF PROGRAM CORE COURSE [THEORY]

Sr. No.	Course Code	Course Title
1	N-PCCCD101T/ N-PCCCM101T/ N-PCCCS101T	Advanced C Programming
2	N-PCCEE101T	Electrical Measurement and Instrumentation
3	N-PC CET101T	Basic Electronics Engineering
4	N-PCCME101T	Basics of Mechanical Engineering

LIST OF PROGRAM CORE COURSE [PRACTICAL]

Sr. No.	Course Code	Course Title
1	N-PCCCD101P/ N-PCCCM101P/ N-PCCCS101P	Advanced C Programming Lab
2	N-PCCEE101P	Electrical Measurement and Instrumentation Lab
3	N-PC CET101P	Basic Electronics Engineering Lab
4	N-PCCME101P	Basics of Mechanical Engineering Lab

LIST OF VOCATIONAL SKILL COURSE-1

Sr. No.	Course Code	Course Title
1	N-VSCCD101P/ N-VSCCM101P/ N-VSCCS101P	Hardware & Networking
2	N-VSCEE101P	Electrical Workshop Practice-1
3	N-VSCET101P	Electronic Workshop-1
4	N-VSCME101P	Workshop Practices

LIST OF VOCATIONAL SKILL COURSE-2

Sr. No.	Course Code	Course Title
1	N-VSCCD102P/ N-VSCCM102P/ N-VSCCS102P	Web Designing
2	N-VSCEE102P	Electrical Workshop Practice-2
3	N-VSCET102P	Electronic Workshop-2
4	N-VSCME102P	Computer Aided Drafting

Revision	BoS Meeting	Date	w. e. f.
-	7 th	13-07-2023	2023-24

ADTape
Dr. P. Roha
Dr. S. Kumbhar

AKella
(Dr. R.K. Kulkarni)

Dr. S. Anand
Dr. Y. B. Patil
Dr. V. H. Patil

Dr. S. B. Kumbhar



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DEPARTMENT OF EMERGING TECHNOLOGIES CSE (AI&ML) and CSE (DS)

"Become an excellent center for Emerging Technologies in Computer Science to create competent professionals"

**CURRICULUM SCHEME
FOR
B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)
2nd YEAR
SEMESTER-III
[NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology III Semester B.Tech.CSE (Artificial Intelligence and Machine Learning)										
Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs)
1	N-PCCCM301T	Data Structures and Algorithms	3	0	0	3	40	60	100	3
2	N-PCCCM301P	Data Structures and Algorithms Lab	0	0	2	1	25	25	50	-
3	N-PCCCM302T	Object Oriented Programming	3	0	0	3	40	60	100	3
4	N-PCCCM302P	Object Oriented Programming Lab	0	0	2	1	25	25	50	-
5	N-PCCCM303T	Mathematics for Machine Learning	3	1	0	4	40	60	100	3
6	N-PCCCM304P	Python Programming Lab	0	0	2	1	25	25	50	-
7	N-MDM	Multidisciplinary Minor Course -1	3	0	0	3	40	60	100	3
		OR								
		Multidisciplinary Minor Course -1 [Engineering][Th.]	2	0	0	2	20	30	50	2
		Multidisciplinary Minor Course -1 [Engineering][Pr.]	0	0	2	1	25	25	50	-
8	N-OEC	Open Elective Course-1	3	0	0	3	40	60	100	3
9	N-VECCM301T	Universal Human Values	2	0	0	2	50	-	50	-
10	N-CEPCM301	Community Engagement Project (CEP)	0	0	4	2	50	-	50	-
	OR									
	N-FPCM301	Field Project (FP)								
11	N-MCCM301	Indian Constitution	2	0	0	-	50	-	50	-
		TOTAL	19	1	10	23	425	375	800	-
		OR								
			18	1	12	23	430	370	800	-

Revision	BoS Meeting	Date	W. E. F.
	6 th	03/05/2024	2024-25



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**B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)
2nd YEAR
SEMESTER-IV
[NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology IV Semester B.Tech. CSE (Artificial Intelligence and Machine Learning)										
Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs)
1	N-PCCCM401T	Operating System	3	0	0	3	40	60	100	3
2	N-PCCCM401P	Operating System Lab	0	0	2	1	25	25	50	-
3	N-PCCCM402T	Database Management System	3	0	0	3	40	60	100	3
4	N-PCCCM402P	Database Management System Lab	0	0	2	1	25	25	50	-
5	N-PCCCM403T	Fundamentals of Artificial Intelligence	3	0	0	3	40	60	100	3
6	N-MDM	Multidisciplinary Minor Course -2	3	0	0	3	40	60	100	3
		OR								
		Multidisciplinary Minor Course -2 [Engineering][Th.]	2	0	0	2	20	30	50	2
		Multidisciplinary Minor Course -2 [Engineering][Pr.]	0	0	2	1	25	25	50	-
7	N-OEC	Open Elective Course-2	3	0	0	3	40	60	100	3
8	N-SECCM401P	Advance Data Analysis using Spreadsheet Lab	0	0	4	2	25	25	50	-
9	N-AECCM401T	Business Communication	2	0	0	2	20	30	50	2
10	N-HSSMCM401T	Entrepreneurship Development	2	0	0	2	50	-	50	-
11	N-VECCM401T	Environmental Studies	2	0	0	2	50	-	50	-
		TOTAL	21	0	8	25	395	405	800	-
			OR							
			20	0	10	25	400	400	800	-

Revision	BoS Meeting	Date	W. E. F.
	6 th	03/05/2024	2024-25



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**B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)**

3rd YEAR

SEMESTER-V

[NEP-COMPLIANT]

Scheme of Teaching & Examination of Bachelor of Technology V Semester B.Tech. CSE (Artificial Intelligence and Machine Learning)											
Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE Duration (Hrs)	
			L	T	P		Continuous Evaluation	End Sem Exam	Total		
1	N-PCCCM501T	Design Analysis and Algorithms	3	0	0	3	40	60	100	3	
2	N-PCCCM501P	Design Analysis and Algorithms Lab	0	0	2	1	25	25	50	-	
3	N-PCCCM502T	Foundation of Machine Learning	3	0	0	3	40	60	100	3	
4	N-PCCCM502P	Foundation of Machine Learning Lab	0	0	2	1	25	25	50	-	
5	N-PCCCM503T	Theory of Computation	3	0	0	3	40	60	100	3	
6	N-PEC	Program Elective-1	3	0	0	3	40	60	100	3	
7	N-PEC	Program Elective-1 Lab	0	0	2	1	25	25	50	-	
8	N-MDM	Multidisciplinary Minor Course -3	3	0	0	3	40	60	100	3	
		OR									
		Multidisciplinary Minor Course -3 [Engineering][Th.]	2	0	0	2	20	30	50	2	
		Multidisciplinary Minor Course -3 [Engineering][Pr.]	0	0	2	1	25	25	50	-	
9	N-OEC	Open Elective Course-3	2	0	0	2	20	30	50	2	
		TOTAL	17	0	6	20	295	405	700	-	
			OR								
			16	0	8	20	300	400	700	-	

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Program Elective – 1 and Program Elective – 1 Lab

Sr. No	Course Code	Course Title
1	N-PECCM501T	Cryptography
	N-PECCM501P	Cryptography Lab
2	N-PECCM502T	Soft Computing
	N-PECCM502P	Soft Computing Lab
3	N-PECCM503T	Exploratory Data Analysis
	N-PECCM503P	Exploratory Data Analysis Lab

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Revision	BoS Meeting	Date	W. E. F.
	6 th	03/05/2024	2025-26



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**B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)
3rd YEAR
SEMESTER-VI
[NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology VI Semester B.Tech.CSE(Artificial Intelligence and Machine Learning)											
Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE	
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs)	
1	N-PCCCM601T	Natural Language Processing	3	0	0	3	40	60	100	3	
2	N-PCCCM601P	Natural Language Processing Lab	0	0	2	1	25	25	50	-	
3	N-PCCCM602T	Software Engineering and Project Management	2	0	0	2	20	30	50	2	
4	N-PCCCM603T	Computer Networks	3	0	0	3	40	60	100	3	
5	N-PEC	Program Elective-2	3	0	0	3	40	60	100	3	
6	N-PEC	Program Elective-2 Lab	0	0	2	1	25	25	50	-	
7	N-PEC	Program Elective-3	4	0	0	4	40	60	100	3	
8	N-MDM	Multidisciplinary Minor Course -4	3	0	0	3	40	60	100	3	
		OR									
		Multidisciplinary Minor Course -4 [Engineering][Th.]	2	0	0	2	20	30	50	2	
		Multidisciplinary Minor Course -4 [Engineering][Pr.]	0	0	2	1	25	25	50	-	
9	N-SECCM601P	Data Visualization Tools Lab	0	0	2	1	25	25	50	-	
10	N-SECCM602P	Machine Learning Tools Lab	0	0	2	1	25	25	50	-	
		TOTAL	18	0	8	22	320	430	750	-	
			OR								
			17	0	10	22	325	425	750	-	

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Program Elective – 2 and Program Elective – 2 Lab

Sr. No	Course Code	Course Title
1	N-PECCM601T	Information Retrieval
	N-PECCM601P	Information Retrieval Lab
2	N-PECCM602T	Distributed Computing System
	N-PECCM602P	Distributed Computing System Lab
3	N-PECCM603T	Text processing
	N-PECCM603P	Text processing Lab

Program Elective – 3

Sr. No	Course Code	Course Title
1	N-PECCM604T	Data and Internet Security
2	N-PECCM605T	Compiler Design
3	N-PECCM606T	Semantic Web & Social Networks

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Revision	BoS Meeting	Date	W. E. F.
-	6 th	03/05/2024	2025-26



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**B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)
4th YEAR
SEMESTER-VII
[NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology VII Semester B.Tech. CSE (Artificial Intelligence and Machine Learning)										
Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs)
1	N-PCCCM701T	Neural Networks and Deep Learning	3	0	0	3	40	60	100	3
2	N-PCCCM702T	Machine Vision	3	0	0	3	40	60	100	3
3	N-PCCCM702P	Machine Vision Lab	0	0	2	1	25	25	50	-
4	N-PEC	Program Elective-4	3	0	0	3	40	60	100	3
5	N-PEC	Program Elective-4 Lab	0	0	2	1	25	25	50	-
6	N-PEC	Program Elective-5	4	0	0	4	40	60	100	3
7	N-MDM	Multidisciplinary Minor Course -5	2	0	0	2	20	30	50	2
8	N-PROJCM701	Project-I	0	0	8	4	75	75	150	-
		TOTAL	15	0	12	21	305	395	700	-

Program Elective – 4 and Program Elective – 4 Lab

Sr. No.	Course Code	Course Title
1	N-PECCM701T	Introduction To Cyber Security
	N-PECCM701P	Introduction To Cyber Security Lab
2	N-PECCM702T	Cloud Computing
	N-PECCM702P	Cloud Computing Lab
3	N-PECCM703T	Pattern Recognition
	N-PECCM703P	Pattern Recognition Lab

Program Elective – 5

Sr. No.	Course Code	Course Title
1	N-PECCM704T	Cyber Forensics and Investigation
2	N-PECCM705T	Parallel Computing
3	N-PECCM706T	Explainable AI

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Revision	BoS Meeting	Date	W. E. F.
	6 th	03/05/2024	2026-27

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**B. TECH. COMPUTER SCIENCE AND ENGINEERING (ARTIFICIAL
INTELLIGENCE AND MACHINE LEARNING)
4th YEAR
SEMESTER-VIII
[NEP-COMPLIANT]**

Scheme of Teaching & Examination of Bachelor of Technology VIII Semester B.Tech.CSE (Artificial Intelligence and Machine Learning)

Sr. No.	Course Code	Course Title	Hours per week			Credits	Maximum Marks			ESE
			L	T	P		Continuous Evaluation	End Sem Exam	Total	Duration (Hrs)
1	N-PEC	Program Elective-6	3	0	0	3	40	60	100	3
2	N-RMCM801T	Research Methodology	3	0	0	3	40	60	100	3
3	N-PROJCM801	Project-II	0	0	12	6	100	100	200	-
		TOTAL	6	0	12	12	180	220	400	-
OR										
1	N-ELCCM801	Internship/On Job Training (OJT)	One Semester			12	100	100	200	-

Program Elective –6

Sr. No.	Course Code	Course Title
1	N-PECCM801T	Ethical Hacking
2	N-PECCM802T	Mobile Computing
3	N-PECCM803T	CNN For Visual Recognition

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