



**S. B. JAIN INSTITUTE OF TECHNOLOGY, MANAGEMENT  
& RESEARCH, NAGPUR.**

(An Autonomous Institute, Affiliated to RTMNU, Nagpur)



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

*“To become a center for quality education in the field of computer science & engineering and to create competent professionals.”*

**CURRICULUM SCHEME**

**FOR**

**B.TECH. COMPUTER SCIENCE AND ENGINEERING**

**2<sup>nd</sup> YEAR / SEMESTER-III (NEP COMPLIANT)**

Scheme of Teaching & Examination of Bachelor of Technology III Semester B.Tech. (Computer Science and Engineering)											
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-PCCCS301T	Computer Architecture and Organization	3	0	0	3	40	60	100	3	
2	N-PCCCS302T	Data Structures and Algorithms	3	0	0	3	40	60	100	3	
3	N-PCCCS302P	Data Structures and Algorithms Lab	0	0	2	1	25	25	50	-	
4	N-PCCCS303T	Discrete Mathematics and Graph Theory	3	1	0	4	40	60	100	3	
5	N-PCCCS304P	Software Lab	0	0	2	1	25	25	50	-	
6	N-MDM	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	-	
		<b>OR</b>									
		Multidisciplinary Minor Course-1	3	0	0	3	40	60	100	3	
7	N-OEC	Open Elective Course-1	3	0	0	3	40	60	100	3	
8	N-HSSMCS301T	Entrepreneurship Development	2	0	0	2	50	-	50	-	
9	N-VECCS301T	Environmental Studies	2	0	0	2	50	-	50	-	
10	N-CEPCS301	Community Engagement Project (CEP)	0	0	4	2	50	-	50	-	
	<b>OR</b>										
	N-FPCS301	Field Project (FP)									
<b>TOTAL</b>			<b>18</b>	<b>1</b>	<b>10</b>	<b>24</b>	<b>405</b>	<b>345</b>	<b>750</b>		
			<b>OR</b>								
			<b>19</b>	<b>1</b>	<b>8</b>	<b>24</b>	<b>400</b>	<b>350</b>	<b>750</b>		

<b>Revision</b>	<b>BOS Meeting</b>	<b>Date</b>	<b>W. E. F.</b>
-	8 <sup>th</sup>	03-05-2024	2024-25



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### 2<sup>nd</sup> YEAR / SEMESTER-IV (NEP COMPLIANT)

Scheme of Teaching & Examination of Bachelor of Technology IV Semester B.Tech. (Computer Science and Engineering)										
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-PCCCS401T	Object Oriented Programming	3	0	0	3	40	60	100	3
2	N-PCCCS401P	Object Oriented Programming Lab	0	0	2	1	25	25	50	-
3	N-PCCCS402T	Operating Systems	3	0	0	3	40	60	100	3
4	N-PCCCS402P	Operating Systems Lab	0	0	2	1	25	25	50	-
5	N-PCCCS403T	Statistics & Probability	3	1	0	4	40	60	100	3
6	N-MDM	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	-
		<b>OR</b>								
		Multidisciplinary Minor Course-2	3	0	0	3	40	60	100	3
7	N-OEC	Open Elective Course-2	3	0	0	3	40	60	100	3
8	N-SECCS401P	Python Programming	0	0	4	2	25	25	50	-
9	N-AECCS401T	Business Communication	2	0	0	2	20	30	50	2
10	N-VECCS401T	Universal Human Values	2	0	0	2	50	-	50	-
11	N-MCCS401	Indian Constitution	2	0	0	-	50	-	50	-
<b>TOTAL</b>			<b>20</b>	<b>1</b>	<b>10</b>	<b>24</b>	<b>400</b>	<b>400</b>	<b>800</b>	
<b>OR</b>										
<b>TOTAL</b>			<b>21</b>	<b>1</b>	<b>8</b>	<b>24</b>	<b>395</b>	<b>405</b>	<b>800</b>	

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### 3<sup>rd</sup> YEAR / SEMESTER-V (NEP COMPLIANT)

Scheme of Teaching & Examination of Bachelor of Technology V Semester B.Tech. (Computer Science and Engineering)											
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-PCCCS501T	Design & Analysis of Algorithms	3	0	0	3	40	60	100	3	
2	N-PCCCS501P	Design & Analysis of Algorithms Lab	0	0	2	1	25	25	50	-	
3	N-PCCCS502T	Computer Networks	3	0	0	3	40	60	100	3	
4	N-PCCCS502P	Computer Networks Lab	0	0	2	1	25	25	50	-	
5	N-PCCCS503T	Database Management System	3	0	0	3	40	60	100	3	
6	N-PCCCS503P	Database Management System Lab	0	0	2	1	25	25	50	-	
7	N-PEC	Program Elective-1	3	0	0	3	40	60	100	3	
8	N-PEC	Program Elective-1 Lab	0	0	2	1	25	25	50	-	
9	N-MDM	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	-	
		<b>OR</b>									
		Multidisciplinary Minor Course-3	3	0	0	3	40	60	100	3	
10	N-OEC	Open Elective Course-3	2	0	0	2	20	30	50	2	
<b>TOTAL</b>			<b>16</b>	<b>0</b>	<b>10</b>	<b>21</b>	<b>325</b>	<b>425</b>	<b>750</b>		
<b>OR</b>											
<b>TOTAL</b>			<b>17</b>	<b>0</b>	<b>8</b>	<b>21</b>	<b>320</b>	<b>430</b>	<b>750</b>		

#### Program Elective – 1 and Program Elective – 1 Lab

Sr. No	Course Code	Course Title
1	N-PECCS501T	Cryptography & Network Security
	N-PECCS501P	Cryptography & Network Security Lab
2	N-PECCS502T	Image Processing
	N-PECCS502P	Image Processing Lab
3	N-PECCS503T	Cloud Computing
	N-PECCS503P	Cloud Computing Lab

Revision	BOS Meeting	Date	W. E. F.
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### 3<sup>rd</sup> YEAR / SEMESTER-VI (NEP COMPLIANT)

Scheme of Teaching & Examination of Bachelor of Technology VI Semester B.Tech. (Computer Science and Engineering)										
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-PCCCS601T	Artificial Intelligence	3	0	0	3	40	60	100	3
2	N-PCCCS601P	Artificial Intelligence Lab	0	0	2	1	25	25	50	-
3	N-PCCCS602T	Theory of Computation	3	1	0	4	40	60	100	3
4	N-PEC	Program Elective-2	3	0	0	3	40	60	100	3
5	N-PEC	Program Elective-2 Lab	0	0	2	1	25	25	50	-
6	N-PEC	Program Elective-3	3	0	0	3	40	60	100	3
7	N-PEC	Program Elective-3 Lab	0	0	2	1	25	25	50	-
8	N-MDM	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	-
		<b>OR</b>								
		Multidisciplinary Minor Course-4	3	0	0	3	40	60	100	3
9	N-SECCS601P	Animation & Multimedia	0	0	2	1	25	25	50	-
10	N-SECCS602P	Strategic Digital Marketing	0	0	2	1	25	25	50	-
<b>TOTAL</b>			<b>14</b>	<b>1</b>	<b>12</b>	<b>21</b>	<b>330</b>	<b>420</b>	<b>750</b>	
			<b>OR</b>							
			<b>15</b>	<b>1</b>	<b>10</b>	<b>21</b>	<b>325</b>	<b>425</b>	<b>750</b>	

#### Program Elective – 2 and Program Elective – 2 Lab

Sr. No.	Course Code	Course Title
1	N-PECCS601T	Ethical Hacking
	N-PECCS601P	Ethical Hacking Lab
2	N-PECCS602T	Machine Learning
	N-PECCS602P	Machine Learning Lab
3	N-PECCS603T	Design Patterns
	N-PECCS603P	Design Patterns Lab

#### Program Elective – 3 and Program Elective – 3 Lab

Sr. No.	Course Code	Course Title
1	N-PECCS604T	Cyber Forensic & Investigation
	N-PECCS604P	Cyber Forensic & Investigation Lab
2	N-PECCS605T	Information Retrieval
	N-PECCS605P	Information Retrieval Lab
3	N-PECCS606T	Parallel Computing
	N-PECCS606P	Parallel Computing Lab

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### 4<sup>th</sup> YEAR / SEMESTER-VII (NEP COMPLIANT)

Scheme of Teaching & Examination of Bachelor of Technology VII Semester B.Tech. (Computer Science and Engineering)										
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-PCCCS701T	Software Engineering and Quality Assurance	2	0	0	2	20	30	50	2
2	N-PCCCS701P	Software Engineering and Quality Assurance Lab	0	0	2	1	25	25	50	-
3	N-PCCCS702T	Compiler Design	3	0	0	3	40	60	100	3
4	N-PCCCS702P	Compiler Design Lab	0	0	2	1	25	25	50	-
5	N-PEC	Program Elective-4	3	0	0	3	40	60	100	3
6	N-PEC	Program Elective-4 Lab	0	0	2	1	25	25	50	-
7	N-PEC	Program Elective-5	3	0	0	3	40	60	100	3
8	N-PEC	Program Elective-5 Lab	0	0	2	1	25	25	50	-
9	N-MDM	Multidisciplinary Minor Course-5	2	0	0	2	20	30	50	2
10	N-PROJCS701	Project-I	0	0	8	4	75	75	150	-
<b>TOTAL</b>			<b>13</b>	<b>0</b>	<b>16</b>	<b>21</b>	<b>335</b>	<b>415</b>	<b>750</b>	

#### Program Elective – 4 and Program Elective – 4 Lab

Sr. No.	Course Code	Course Title
1	N-PECCS701T	Cyber Security
	N-PECCS701P	Cyber Security Lab
2	N-PECCS702T	Deep Learning
	N-PECCS702P	Deep Learning Lab
3	N-PECCS703T	Embedded Systems
	N-PECCS703P	Embedded Systems Lab

#### Program Elective – 5 and Program Elective – 5 Lab

Sr. No.	Course Code	Course Title
1	N-PECCS704T	Blockchain Technology
	N-PECCS704P	Blockchain Technology Lab
2	N-PECCS705T	Natural Language Processing
	N-PECCS705P	Natural Language Processing Lab
3	N-PECCS706T	Distributed Operating Systems
	N-PECCS706P	Distributed Operating Systems Lab

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### 4<sup>th</sup> YEAR / SEMESTER-VIII (NEP COMPLIANT)

Scheme of Teaching & Examination of Bachelor of Engineering VIII Semester B.Tech. (Computer Science and Engineering)										
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-RMCS801T	Research Methodology	3	0	0	3	40	60	100	3
3	N-PROJCS801	Project-II	0	0	12	6	100	100	200	-
<b>TOTAL</b>			<b>6</b>	<b>0</b>	<b>12</b>	<b>12</b>	<b>180</b>	<b>220</b>	<b>400</b>	<b>-</b>
<b>OR</b>										
1	N-ELCCS801	Internship/On Job Training (OJT)	One Semester			12	100	100	200	-

#### Program Elective –6

Sr. No.	Course Code	Course Title
1	N-PECCS801T	Privacy and Security in Online Social-Media
2	N-PECCS802T	Big-Data Analysis
3	N-PECCS803T	Social Network Analysis

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