

B.N.M. Institute of Technology

An Autonomous Institution under VTU
Department of Information Science and Engineering

Scheme of Teaching 2025-2029 Batch

III Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching Hour/week				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	BSC	25MAC131	Fourier Transform, Mathematical logic and Advanced Linear Algebra	Mathematics	2	2			4	3	50	50	100
2	PCC	25ISE132	Computer Organization	ISE	3				3	3	50	50	100
3	PCC	25ISE133	Operating Systems	ISE	3				3	3	50	50	100
4	PCI	25ISE134	Data Structures and Applications	ISE	3		2		5	4	50	50	100
5	PCI	25ISE135	Object Oriented Programming using Java	ISE	3		2		5	4	50	50	100
6	PBL	25ISE136	Web Technology	ISE			2	2	4	2	50	50	100
7	IPL	25ISE137	Innovative Project Lab	ISE				2	2	1	100		100
8	AEC	25SFT138	Softskill-1	ISE			2		2	1	100		100
					14	2	8	4	28	21	500	300	800

Note: **BSC:** Basic Science Course, **PCC:** Professional Core Course, **HUM:** Humanity and Social Science & Management Courses, **PCI:** Professional Core Integrated **PBL** – Project Based Learning **AEC** –Ability Enhancement Courses, **UHV** – Universal Human Values, **PE:** Professional Elective, **OE:** Open Elective, **INT:** Summer Internship.

L –Lecture, **T** – Tutorial, **P**- Practical/ Drawing, **J** – Project Component, **CIE:** Continuous Internal Evaluation, **SEE:** Semester End Examination

Credit definition: 1 hour Lecture (L) per week = 1 Credit

2 hours Tutorial (T) per week = 1 Credit

2 hours Practical /Drawing (P) per week = 1 Credit

2 hours Project Component (J) per week = 1 Credit

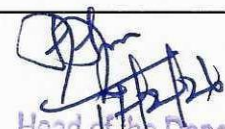
(a) Four credit courses are to be designed for 50 hours Teaching – Learning process.

(b) Three credit courses are to be designed for 40 hours Teaching – Learning process.

(c) Two credit courses are to be designed for 25 hours Teaching – Learning process.

(d) One credit course are to be designed for 12-15 hours Teaching – Learning process

The course prescribed to lateral entry Diploma holders admitted to III semester of Engineering programs


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IV Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	BSC	25MAC141	Statistics, Probability and Graph Theory	Mathematics	2	2			4	3	50	50	100
2	PCC	25ISE142	Microcontroller and Embedded System	ISE	3	1	1		5	4	50	50	100
3	PCI	25ISE143	DataBase Management System	ISE	3		1	1	5	4	50	50	100
4	PCI	25ISE144	Design and Analysis of Algorithms	ISE	3		2		5	4	50	50	100
5	PBL	25ISE145	Robotic Process Automation	ISE			2	2	4	2	50	50	100
6	INT	25ISE146	Internship - I/ Innovative Project Lab	ISE			2	2	2	2	100		100
7	UHV	25CIP147	Constitution of India and Professional Ethics	HSS		2			2	1	100		100
8	AEC	25SFT148	Softskills - 2	ISE			2		3	1	100		100
					11	5	10	5	30	21	550	250	800

Internship - I (25ISE146): All the students admitted shall have to undergo a mandatory summer internship of 04 weeks during the intervening vacation of II and III semesters. Summer Internship shall include Inter / Intra Institutional activities, VTU approved skill enhancement courses. A Viva-voce examination shall be conducted during IV semesters and the prescribed credit shall be included in IV semesters. The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up / complete the internship shall be declared fail and shall have to complete during subsequent examination after satisfying the internship requirements. (The faculty coordinator or mentor has to monitor the students' internship progress and interact to guide them for the successful completion of the internship.)



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 V Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	PCC	25ISE151	Software Engineering Project Management and Finance	ISE	2	2			4	3	50	50	100
2	PCC	25ISE152	Automata Theory and Computability	ISE	2	2			4	3	50	50	100
3	PCI	25ISE153	Data Science using Python	ISE	2	1	1		5	3	50	50	100
4	PCI	25ISE154	Computer Networks	ISE	2	2	2		6	4	50	50	100
5	PBL	25ISE155	Computer Graphics and Animation	ISE			2	2	2	2	50	50	100
6	OE	25ISE156x	Open Elective 1	ISE	3				3	3	50	50	100
7	AEC	25ISE157	Employability Skill -1 (Technical)	P&T		2			2	1	50		100
8	INT	25ISE158	Internship - II	ISE			4		4	2	100		100
					11	9	9	2	30	21	450	300	800

Summer Internship - II (25ISE158): All the students admitted shall have to undergo a mandatory summer internship of 04 weeks during the intervening vacation of IV semesters. Summer Internship shall include Inter / Intra Institutional activities. A Viva-voce examination shall be conducted during IV semesters and the prescribed credit shall be included in IV semesters. The internship shall be considered as a head of passing and shall be considered for the award of degree. Those, who do not take up / complete the internship shall be declared fail and shall have to complete during subsequent examination after satisfying the internship requirements. (The faculty coordinator or mentor has to monitor the students' internship progress and interact to guide them for the successful completion of the internship.)

AICTE Activity Points to be earned by students admitted to BE day college programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines): Over and above the academic grades, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other institutions and Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to BNMIT. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, anytime during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

Open Elective 1			
25ISE1561	Introduction to Web Technologies	25ISE1563	Design and Analysis of Algorithms
25ISE1562	Software Engineering	25ISE1564	Cloud Computing

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VI Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	PCC	25ISE161	Cryptography and Information Security	ISE	2	2			4	3	50	50	100
3	PCI	25ISE162	Cloud Computing and its Application	ISE	2		1		3	3	50	50	100
3	PCI	25ISE163	Artificial Intelligence and Machine Learning	ISE	2	1	1		5	4	50	50	100
4	PBL	25ISE164	Virtual and Augmented Reality	ISE			2	2	4	2	50	50	100
5	PE	25ISE165x	Professional Elective 1	ISE	3				3	3	50	50	100
6	PE	25ISE166x	Professional Elective 2	ISE	3				3	3	50	50	100
7	OE	25ISE167x	Open Elective 2	ISE	3				3	3	50	50	100
8	AEC	25ISE168	Employability Skill - 2 (Technical)	P&T		2			2	1	100		100
					15	5	4	2	27	22	450	350	800

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Professional Elective 1

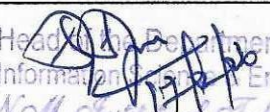
25ISE1651	Data Mining	25ISE1654	Data Visualization
25ISE1652	Blockchain Technologies: Platforms and Applications	25ISE1655	UI Framework
25ISE1653	Cybersecurity	25ISE1656	Strategic Management

Professional Elective 2 (MOOC Course)

25ISE1661	Natural Language Processing	25ISE1664	Deep Learning
25ISE1662	No SQL	25ISE1665	Agile Software Development
25ISE1663	Operation Research	25ISE1666	Knowledge Management

Open Elective 2

25ISE1671	Introduction to Data science	25ISE1673	Introduction to Block chain
25ISE1672	Software Testing	25ISE1674	Introduction to Big Data


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VII Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	PCI	25ISE171	Big Data Analytics	ISE	2	2	2		5	4	50	50	100
2	CPE	25ISE172x	Professional elective 3	ISE	3				3	3	50	50	100
3	CPE	25ISE173x	Professional elective 4	ISE	3				3	3	50	50	100
4	AEC	25ISE174	Research Methodology and IPR	ISE	1	2			3	2	50	50	100
5	PROJECT	25ISE175	Project Phase - I	ISE				10	10	5	100		100
					9	4	2	10	24	17			500

Project work: Based on the abilities of the students and recommendations of the mentor, a single discipline or a multidisciplinary project can be assigned to an individual student or to a group having not more than 4 students. In extraordinary cases, like the funded projects requiring students from different disciplines, the project student strength can be 5 or 6.


AICTE Activity Points to be earned by students admitted to BE day college programme (For more details refer to Chapter 6, AICTE Activity Point Programme, Model Internship Guidelines): Over and above the academic grades, every Day College regular student admitted to the 4 years Degree programme and every student entering 4 years Degree programme through lateral entry, shall earn 100 and 75 Activity Points respectively for the award of degree through AICTE Activity Point Programme. Students transferred from other institutions and Universities to the fifth semester are required to earn 50 Activity Points from the year of entry to BNMIT. The Activity Points earned shall be reflected on the student's eighth semester Grade Card. The activities can be spread over the years, anytime during the semester weekends and holidays, as per the liking and convenience of the student from the year of entry to the programme. However, the minimum hours' requirement should be fulfilled. Activity Points (non-credit) do not affect SGPA/CGPA and shall not be considered for vertical progression. In case students fail to earn the prescribed activity Points, Eighth semester Grade Card shall be issued only after earning the required activity Points. Students shall be admitted for the award of the degree only after the release of the Eighth semester Grade Card.

Professional Elective 3

25ISE1721	Advanced Computer Vision	25ISE1724	Python for Cybersecurity
25ISE1722	Smart Contracts and Solidity Programming	25ISE1725	Salesforce Developer (Industry Elective)
25ISE1723	Prompt Engineering	25ISE1726	Business Analytics

Professional Elective 4 (MOOC Course)

25ISE1731	Advanced Distributed Systems	25ISE1734	Ethical Hacking
25ISE1732	Human Computer Interaction	25ISE1735	Reinforcement Learning
25ISE1733	Multicore computer Architecture	25ISE1736	Software Testing


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VIII Semester

Sl No	Course Type	Course Code	Course Title	Teaching Department	Teaching				Contact Hour	Total Credits	Examination		
					L	T	P	J			CIE	SEE	Total
1	CPE	25ISE181x	Professional elective 5	ISE	3				3	3	50	50	100
2	PROJECT	25ISE182	Project Phase - II	ISE			12		12	6	50	50	100
3	INT	25ISE183	Internship/Global Certification Course	ISE			18		18	9	50	50	100
					3	0	30	0	33	18			300

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Internship/ Global Certification Course (25ISE183): All the students admitted shall have to undergo a mandatory summer internship of 24 weeks during VIII semesters. Summer Internship shall include Industry/Research/startup or a global certification offered from the department. A Viva-voce examination shall be conducted during VIII semesters and the prescribed credit shall be included in VIII semesters. Those, who do not take up / complete the internship shall be declared fail and shall have to complete during subsequent examination after satisfying the internship requirements. (The faculty coordinator or mentor has to monitor the students' internship progress and interact to guide them for the successful completion of the internship.)

Professional Elective 5 (MOOC Course)

25ISE1811	Business Intelligence & Analytics	25ISE1814	Full Stack Development
25ISE1812	Blockchain and web Development	25ISE1815	GPU Architecture and programming
25ISE1813	Foundations of Cyber Physical Systems	25ISE1816	Privacy and security in online social Media

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