

For Internal Communication

Department of Artificial Intelligence and Machine Learning
Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120

III Semester B.E. Curriculum

Sl. No	Type of Course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	BSC	23MAC131	Fourier Transform, Fundamentals of logic and Linear Algebra	Mathematics	2	2	-	-	4	3	50	50	100
2	PCC	23AML132	Computer Organization and Architecture	AIML	3	-	-	-	3	3	50	50	100
3	PCI	23AML133	Artificial Intelligence	AIML	3	-	2	-	5	4	50	50	100
4	PCI	23AML134	Data Structures & Applications	AIML	3	-	2	-	5	4	50	50	100
5	PCI	23AML135	Microcontroller and Embedded Systems	AIML	1	2	2	-	5	3	50	50	100
6	PBL	23AML136	Object Oriented Programming using Java	AIML	-	-	2	2	4	2	50	50	100
7	PBL	23AML137	Innovative Project Lab (Social Concern)	AIML	-	-	-	2	2	1	100	-	100
8	AEC	23SFT138	Soft Skill - 1	T & P	-	-	2	-	2	1	100	-	100
Total					12	4	10	4	30	21	500	300	800

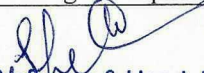
BSC - Basic Science Course
PCL - Professional Core Laboratory
PBL - Project Based Learning
AEC - Ability Enhancement Course Activity

PCC- Professional Core Course
PCE - Professional Core Elective
INT - Internship
UHV - Universal Human Values

PCI-Professional Core Integrated
POE- Professional Open Elective
PRJ - Project Work
HSS - Humanity and Social Science

CIA: Continuous Internal Assessment
SEA: Semester End Assessment

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.


Professor & Head, Dept. of AIML
B.N.M. Institute of Technology
27th Cross, 12th Main, Banashankari II Stage
Bengaluru - 560 070

Additional Director & Principal
BNM Institute of Technology
Bangalore-560 070

For Internal Communication

Department of Artificial Intelligence and Machine Learning
Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120
IV Semester B.E. Curriculum

Sl. No.	Type of Course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	BSC	23MAC141	Statistics, Probability and Graph theory	Mathematics	2	2	-	-	4	3	50	50	100
2	PCC	23AML142	Operating System	AIML	2	1	1	-	4	3	50	50	100
3	PCI	23AML143	Database Management System	AIML	3	-	1	1	5	3	50	50	100
4	PCI	23AML144	Design and Analysis of Algorithms	AIML	3	-	2	-	5	4	50	50	100
5	PCI	23AML145	Machine Learning	AIML	1	2	2	-	5	3	50	50	100
6	PBL	23AML146	Cloud Computing & Applications	AIML	-	-	2	2	4	2	50	50	100
7	AEC	23CIP147	Constitution of India and Professional Ethics	HSS	-	2	-	-	2	1	100	-	100
8	AEC	23SFT148	Soft Skill-II	T & P	-	2	-	-	2	1	100	-	100
9	INT	23AML149	Internship – I/ IPL (Social Concern)	AIML	-	-	2	2	4	2	100	-	100
Total					11	9	10	5	35	22	600	300	900

Internship-I: All the students registered to III year of BE shall have to undergo mandatory internal internship of 3 weeks during II semester or III semester vacation. Semester End Assessment will be conducted in IV semester and the prescribed credit will be included. Internship shall be considered as a head of passing and shall be considered for the award of degree.

Activity

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.

For Internal Communication

Department of Artificial Intelligence and Machine Learning**Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120****V Semester B.E. Curriculum**

Sl. No	Type of Course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	PCC	23AML151	Software Engineering, Project Management and Finance	AIML	3	-	-	-	3	3	50	50	100
2	PCC	23AML152	Automata Theory and Computations	AIML	2	1	1	-	4	3	50	50	100
3	PCI	23AML153	Computer Networks & Security	AIML	3	-	2	-	5	4	50	50	100
4	PCI	23AML154	Advanced Machine Learning	AIML	3	-	2	-	5	4	50	50	100
5	PBL	23AML155	Virtual Reality and Augmented Reality	AIML	-	-	2	2	4	2	50	50	100
6	POE	23AML156x	Open Elective - I	AIML	3	-	-	-	3	3	50	50	100
7	AEC	23AML157	Employability Skills - I	T & P	-	2	-	-	2	1	100	-	100
8	INT	23AML158	Internship-II/ IPL	AIML	-	-	2	2	2	2	100	-	100
Total					14	3	9	4	28	22	500	300	800

OPEN ELECTIVES:

Course Code	23AML1561	23AML1562	23AML1563	23AML1564	23AML1565
Course Title	Introduction to Data Science	Cyber Security	Data Driven Decision Making	Sensors & Robotics	Generative Artificial Intelligence & Advanced Machine Learning

Internship-II: All the students registered to III year of BE shall have to undergo mandatory internship of 3 to 4 weeks during IV semester vacation. Semester End Assessment will be conducted in V semester and the prescribed credit will be included. Internship shall be considered as a head of passing and shall be considered for the award of degree.

Activity

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.

For Internal Communication

Department of Artificial Intelligence and Machine Learning
Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120
VI Semester B.E. Curriculum

Sl. No.	Type of course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	PCI-C	23AML161	Deep Learning	AIML	2	-	2	-	4	3	50	50	100
2	PCI-P	23AML162	Natural Language Processing	AIML	2	-	2	-	4	3	50	50	100
3	PCI-C	23AML163	Generative Artificial Intelligence	AIML	3	-	2		5	4	50	50	100
4	PBL	23AML164	Image Processing & Computer Vision	AIML	-	-	2	2	4	2	50	50	100
5	PCE	23AML165x	Professional Elective – I	AIML	3	-	-	-	3	3	50	50	100
6	PCE	23AML166x	Professional Elective – II (MOOC)	AIML	3	-	-	-	3	3	50	50	100
7	POE	23AML167x	Open Elective - II	AIML	3	-	-	-	3	3	50	50	100
8	AEC	23AML168	Employability Skills - II	T & P	-	-	2	-	2	1	100		100
Total					16	-	10	2	28	22	450	350	800

OPEN ELECTIVES:

Course Code	23AML1671	23AML1672	23AML1673	23AML1674
Course Title	Big Data Analytics & Data Visualization	Natural Language Processing	Computer Vision	Virtual Reality & Augmented Reality

Activity

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 MOOC: Tentative changes based on courses offered during the semester.

For Internal Communication

Department of Artificial Intelligence and Machine Learning
Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120
VII Semester B.E. Curriculum

Sl. No	Type of course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	PCI	23AML171	Agentic Artificial Intelligence	AIML	2	-	2	-	4	3	50	50	100
2	PCE	23AML172x	Professional Elective – III	AIML	3	-	-	-	3	3	50	50	100
3	PCE	23AML173x	Professional Elective – IV (MOOC)	AIML	3	-	-	-	3	3	50	50	100
4	AEC	23AML174	Research Methodology & Intellectual Property Rights	AIML	2	-	-	-	2	2	50	50	100
5	PRJ	23AML175	Project Work Phase – I	AIML	-	-	-	10	10	5	100		100
Total					10	-	2	10	22	16	300	200	500

Project Work Phase - 1: 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.

Activity

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 institution 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 MOOC: Tentative, changes based on courses offered during the semester.

For Internal Communication

Department of Artificial Intelligence and Machine Learning
Scheme of Teaching for 2023-27 batch- Choice Based Credit System (CBCS) Total Credits – 120
VIII Semester B.E. Curriculum

Sl. No.	Type of course	Course Code	Course Title	Teaching Department	Hours per week				Subject Contact Hours	Credits	Examination		
					Lecture (L)	Tutorial (T)	Practical (P)	Project (J)			CIA	SEA	Total
1	PCE	23AML181x	Professional Elective – V (MOOC)	AIML	3	-	-	-	3	3	50	50	100
2	INT	23AML182	Internship-III	AIML	-	-	16	-	16	8	50	50	100
3	PRJ	23AML183	Project Work Phase-II	AIML	-	-	-	12	12	6	50	50	100
Total					3	-	8	20	31	17	150	150	300

Project Work Phase - II: 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.

Internship - III: All the students admitted to III year of BE shall have to undergo mandatory internship of 6 months during the vacation of VI semester and during VII semester. End Assessment will be conducted in VIII semester, and the prescribed credit shall be included. Internship shall be considered as a head of passing and shall be considered for the award of degree.

Activity

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 MOOC: Tentative changes based on courses offered during the semester.

[Signature]
Professor & Head, Dept. of AIML
B.N.M. Institute of Technology
27th Cross, 12th Main, Banashankari II Stage
Bengaluru - 560 070

[Signature]
Additional Director & Principal
BNM Institute of Technology
Bangalore - 560 070