BMS Institute of Technology and Management

Autonomous Institute Affiliated to VTU

Avalahalli, Doddaballapur Main Road, Yelahanka, Bengaluru-560119.

Dept. of Artificial Intelligence and Machine Learning (AI & ML)

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Proceedings of the Board of Studies meeting held on 13th August 2025 at 09:30 AM

Members Present

Sl. No.	Member	Role
Head of the Department concerned (Chairperson)		
1	Dr Anupama H S, Professor, Head of Dept. of AIML	Chairperson
All faculty member having minimum five years of Experience from each specialization/Vertical		
1	Dr. Sanjay H A, Principal BMSIT&M.	Member
2	Dr. Pradeep K R, Associate Professor & Associate Head – C2, Dept of AIML	Member
3	Dr. Bharathi M A, Professor, Dept of AIML	Member
4	Dr. Hemamalini B H, Professor, Dept of AIML	Member
5	Dr. Srivani P, Associate Professor, Dept of AIML	Member
6	Dr. Manoj H M, Associate Professor, Dept of AIML	Member
7	Dr. Niranjanamurthy M, Associate Professor, Dept of AIML	Member
8	Dr Karthik Vasu, Associate Professor, Dept of AIML	Member
9	Dr. Kantharaju V, Associate Professor, Dept of AIML	Member
10	Dr. Rajesh I S, Associate Professor, Dept of AIML	Member
11	Prof. Sanjay M Belgaonkar, Assistant Professor, Dept of AIML	Member
12	Prof. Sachin A U, Assistant Professor, Dept of AIML	Member
Subject Experts from outside the University nominated by Academic Council		
1	Jaya Sreevalsan Nair, Associate Professor, International Institute of Information Technology Bangalore	Member
2	Dr. Yogesh Simhan, Associate Professor, Dept. of Computational and Data Sciences, Indian Institute of Science (IISc), Bangalore.	Member
VTU Nominee		
1	Dr. Shambhavi B R, Professor & Head, Dept of CSE (Data Science), BMS Collage of Engineering, Bangaluru.	Member
One Representative from Industry nominated by the Academic Council Member		
1	Mr.Shailesh Sakri, Sr. Director, Automative, Harman International, Bengaluru.	Member
2	Mrs. G Kayalvizhi, Consulting Engineer, Unisys India Pvt. Ltd.	Member
Post graduate meritorious Alumnus nominated by Principal		
1	Ms. Madhumitha V, IIT Hyderabad	Member

The Chairman, BoS in Artificial Intelligence & Machine Learning welcomed the members of Board of Studies (BoS) and requested to deliberate in detail on the agenda for a fruitful outcome. The agenda & resolutions are as follows:

Agenda:

1. Approval of the B.E (AI & ML) scheme & syllabus for 2025 – 2026 (Odd Semesters).
2. Approval of the members of the Board of Examiners (BoE)

Resolutions:

1. After the deliberations, the 2022 Scheme of Teaching, Syllabus and Examinations of B.E Programme in AI & ML for 3rd, 5th and 7th Semesters was approved and following suggestions were given.

Suggestions given by Dr. Yogesh Simmhan, Associate Professor, Dept. of Computational and Data Sciences, Indian Institute of Science (IISc), Bangalore.

- Sir suggested to include Space & Time complexity concepts in Data Structure and Applications course. (3rd Sem)
- Sir suggested to have partial delivery / expert talk from industry experts on the topics of DSA in AI/ML applications. (3rd Sem)
- Sir suggested to introduce CUDA Programming and High-Performance Computing (HPC) techniques like Parallelization, Accelerators, Distributed Training Frameworks, and Optimized Libraries in HPC course. (7th Sem)
- Sir suggested to include some applications of HPC in ML and HPC for ML Workflow.

Suggestions given by Mrs. G Kayalvizhi, Consulting Engineer, Unisys India Pvt. Ltd.

- Madam suggested to include the following comparative analysis in DSA course (Theory/Lab). (3rd Sem)
    - BFS vs. DFS
    - Graph Representation using Matrix vs. Adjacency List Representation
    - Hash Functions (Compare different hash functions)
- Madam suggested to introduce AWS usage in the course on Version Control Systems.

Suggestions given by Dr. Jaya Sreevalsan Nair, Assoc. Professor, International Institute of Information Technology (IIIT), Electronic City, Bangalore.

- Madam suggested to introduce multi-tasking in C++ course.
- Madam suggested to introduce basics of Java Programming in the first-year curriculum before introducing OOPS with Java in second year curriculum.
- Madam suggested to introduce the course Theory of Computation in lower semesters in the next curriculum revision.

Suggestions given by Dr. Shambhavi B R, Professor & Head, Dept. of CSE (Data Science), BMS College of Engineering, Bangalore.

- Madam suggested to check AICTE & NBA guidelines for L:T:P:S (Teaching hours per semester).
- Self-study component may be elaborated in each course to justify the number of hours allotted for it.
- Madam suggested to include some Computer Science / AIML related topics in Environmental Studies subject.
- Madam suggested to include Cloud Computing as a core course in the next curriculum revision.
- Madam enquired about the VTU provision of swapping of 7th & 8th Semesters to accommodate internship for students.
- Madam enquired about the evaluation methods of IKS subject.
- Madam suggested to include tutorial hours for mathematical oriented courses.
- Madam suggested to have NPTEL Mentors for the courses offered through this portal. This will help for continuous monitoring of NPTEL credits.

Suggestions given by Mr. Shailesh Sakri, Sr. Director, Automative, Harman International, Bengaluru.

- Sir suggested to introduce bridge courses on some advanced topics of AIML for fast learners to motivate them to take up some research projects.

Suggestions given by Ms. Madhumita V, PG – Student, IIT Hyderabad

- Madam highlighted the importance of Matrix theories in understanding the basics of ML & DL and suggested to include some concepts of Maximum Likelihood Estimation (MLE), Maximum A Posteriori Estimation (MAP), and Convex Optimization in Mathematics courses.

2. The following list of members of the Board of Examiners (BoE) was approved for the academic year 2024 – 2025 even semester.

Sl. No.	Name
	External Member
1	Dr. Anusha Preetham, Associate Professor, Dayananda Sagar College of Engineering, Bengaluru
	Internal Members
1	Dr. Anupama H S, Professor & Head, Dept. of AI & ML
2	Dr. Bharathi M A, Professor, Dept. of AI & ML and Head, R & C, BMSIT & M
3	Dr. Hemamalini B H, Professor, Dept. of AI & ML
4	Dr. Pradeep K R, Associate Professor & Cluster Head C2, Dept. of AI & ML
5	Dr. Srivani P, Associate Professor, Dept. of AI & ML
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8	Dr. Karthik Vasu, Associate Professor, Dept. of AI & ML
9	Dr. Kantharaju V, Associate Professor, Dept. of AI & ML
10	Dr. Vani Krishnaswamy V, Associate Professor, Dept. of AI & ML
11	Prof. Sanjay M Belgaonkar, Assistant Professor, Dept. of AI & ML
12	Prof. Sachin A U, Assistant Professor, Dept. of AI & ML

The board appreciated the overall curriculum and elective subjects, aligned with Machine Learning domain, offered by the department.

The meeting was concluded with vote of thanks by Chairman BoS to all the Members.

Dr. Anupama H S
Chairman, BoS
Professor & Head
Dept. of AI & ML

Professor & Head
Department of Artificial Intelligence & Machine Learning
BMS Institute of Technology & Management
Doddaballapur Main Road, Avalahalli,
Yelahanka, Bengaluru - 560119

Action Plan for Suggestions by Dr. Yogesh Simhan (IISc Bangalore)

Suggestion	Action Plan
Include **Space & Time complexity concepts** in Data Structures and Applications (3rd Sem)	• Add tutorials and lab exercises on analyzing time and space requirements. • Prepare question banks and assignments comparing algorithms.
Arrange **partial delivery / expert talks from industry experts** on DSA in AI/ML applications (3rd Sem)	• Identify and invite industry practitioners. • Schedule guest lectures during the semester. • Collect student feedback for improvement.
Introduce **CUDA Programming & HPC techniques** (7th Sem HPC course)	• Design lab experiments using GPU/cloud resources. • Organize student training workshops on CUDA/HPC.
Include **applications of HPC in ML and ML workflows**	• Add case studies on HPC-enabled ML. • Create hands-on labs with real datasets. • Encourage capstone/research projects integrating ML & HPC.

Action Plan for Suggestions by Mrs. G. Kayalvizhi (Unisys India Pvt. Ltd.)

Suggestion	Action Plan
Include **comparative analysis in DSA (Theory/Lab)**: - BFS vs. DFS - Graph Representation (Matrix vs. Adjacency List) - Hash Functions (comparison of different hash functions)	• Design lab experiments where students implement BFS & DFS and analyze performance on different graph sizes. • Introduce exercises to compare space & time trade-offs in matrix vs. adjacency list representations. • Include practical assignments to evaluate and compare different hash functions (division, multiplication, universal hashing). • Add relevant tutorial problems, assignments, and exam questions.
Introduce **AWS usage** in Version Control Systems course	• Provide hands-on lab sessions where students use AWS for repository hosting, branching, and CI/CD. • Arrange a workshop / expert session on AWS developer tools. • Leverage AWS Academy resources/credits for students and faculty training. • Develop mini-projects using AWS-based version control and deployment.

Action Plan for Suggestions by Dr. Jaya Sreevalsan Nair (IIIT Bangalore)

Suggestion	Action Plan
Introduce **multi-tasking in C++ course**	• Add lab experiments on thread creation, synchronization, and inter-process communication. • Provide mini-projects demonstrating real-world applications of multi-tasking
Introduce **basics of Java Programming in the first-year**	• Add an introductory Java module (syntax, data types, operators, control structures, basic I/O) in the 1st year Programming course.

curriculum before OOPS with Java in the second year	• Ensure smooth transition to OOPS with Java in the 2nd year by reducing the need for re-teaching basics. • Develop lab exercises to practice simple Java programs (loops, arrays, functions).
Introduce **Theory of Computation (TOC) in lower semesters** during the next curriculum revision	• Restructure the curriculum for 2025 batch students to offer TOC in 3rd or 4th semester instead of later years. • Adjust course sequencing so that TOC concepts support advanced subjects like Compiler Design and Machine Learning foundations. • Prepare course outcomes, teaching plan, and supporting study materials for early-semester delivery.

Action Plan for Suggestions by Dr. Shambhavi B. R. (BMSCE Bangalore)

Suggestion	Action Plan
Check **AICTE & NBA guidelines for L:T:P:S (Lecture:Tutorial:Practical:Self-study hours)**	• Align each course with recommended credit structure. • Document compliance in course files.
Elaborate **self-study component** in each course	• Clearly define self-study activities (online modules, case studies, coding practice, library work). • Include them in course plan and assessment methods. • Provide faculty guidance for tracking self-study hours.
Include **Computer Science / AIML related topics** in Environmental Studies subject	• Identify CS/AI/ML applications in environment (IoT for pollution monitoring, AI for climate modelling, smart grids). • Add a module/unit showcasing tech-driven sustainability solutions. • Design small projects/assignments linking AIML with environment.
Include **Cloud Computing as a core course** in the next curriculum revision	• Propose "Cloud Computing" as a core subject in the higher semesters. • Draft syllabus covering virtualization, containers, cloud services, and ML on cloud. • Add lab component with AWS/Azure/Google Cloud.
Include **tutorial hours for mathematically oriented courses**	• Allocate tutorial hours for subjects like Mathematics, Probability, TOC, ML Theory. • Use tutorial sessions for problem-solving and doubt clarification. • Reflect tutorials in L:T:P:S structure.
Appoint **NPTEL Mentors for courses**	• Nominate faculty as NPTEL mentors for relevant subjects. • Create a monitoring mechanism for student progress in NPTEL courses. • Integrate NPTEL credits with internal assessment.

Action Plan for Suggestions by Mr. Shailesh Sakri (Harman International, Bengaluru)

Suggestion	Action Plan
Introduce **bridge courses on advanced topics of AIML for fast learners** to motivate them towards research projects	• Identify advanced AIML topics suitable for bridge courses (e.g., Generative AI, Explainable AI, Federated Learning, Edge AI, Multimodal AI). • Design short-term certificate/bridge courses (15–30 hours) with hands-on components. • Offer courses during semester breaks/ weekends as value-added programs. • Involve industry experts and researchers as guest faculty. • Provide students with mini-research projects or problem statements as course outcomes. • Link bridge courses with department research labs / student clubs to encourage publications, hackathons, and internships.

Action Plan for Suggestions by Ms. Madhumita V (PG Student, IIT Hyderabad)

Suggestion	Action Plan
Highlighted importance of **Matrix theories** in ML & DL; suggested inclusion of **MLE, MAP, and Convex Optimization** in Mathematics courses	• Strengthen Linear Algebra/Matrix Theory modules in Mathematics courses (Eigenvalues, Eigenvectors, Matrix Factorization, SVD, PCA foundations). • Introduce topics of Maximum Likelihood Estimation (MLE) and Maximum Aposteriori Estimation (MAP) in Probability & Statistics course. • Add a module on Convex Sets, Convex Functions, and Convex Optimization techniques in Mathematics / Optimization course.

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