Minutes of the Meeting of the Board of Studies (BoS) of the Computer Engineering Department was held using MS Teams online platform at 10.00 AM on 26th August, 2023.

The following members were present:

- 1. Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay
- 2. Mr. Amit Moondra, Alumni, Technical Lead Equity Data Science IPL, Alumnus
- 3. Dr. Seema Shah, HoD, Computer Engineering Department, MPSTME
- Dr. Aaquil Bunglowala, Associate Dean, STME, Indore.
- Dr. Pravin Shrinath, Associate Professor, Computer Engineering Department, MPSTME, Mumbai

The proceedings were as follows

Leave of absence was granted to Dr. Alka Mahajan, Dean, MPSTME, NMIMS. Her observations and suggestions given were discussed and incorporated apriori.

- The members confirmed the minutes of the earlier meeting held on 20th April 2023.
- The BoS members considered and deliberated upon the revision in the curricula of MBA Tech Computer Engineering. They approved the following:
 - A. Introduction of Teaching & Examination Scheme of the listed courses for MBA Tech Computer Engineering of Semester VIII. This will be applicable to the students admitted in AY 2020-21 onwards
 - i. Department Elective VI
 - Big Data Analytics(Approved course of B Tech Data Science)
 - Cyber Forensics(Approved course of B Tech Computer Science and Engineering (Cybersecurity))
 - Robotic Process Automation(Approved by the BoS of AI Department)
 - ii. Capstone Project(Approved by the BoS of EXTC Department)
- The BoS members considered and deliberated upon the revision in the curricula of B Tech Integrated (Computer Engineering). They approved the following:
 - A. Revision in Course Structure, introduction of the Teaching & Examination Scheme and syllabi of the listed courses for Semester XII. This is applicable for the students admitted in AY 2018-19 and 2019-20.
 - i. Mobile Computing(Approved course of B Tech Computer)
 - ii. Department Electives
 - Robotic Process Automation (Approved by the BoS of AI Department)
 - Reinforcement Learning (Approved course of B Tech Data Science)
 - Computer Vision (Approved course of B Tech AI)

- Mobile Device Security and Forensics (Approved course of B Tech Computer Science and Engineering (Cybersecurity))
- Reverse Engineering and Malware Analysis (Approved course of B Tech Computer Science and Engineering (Cybersecurity))
- Information Systems Audit (Approved course of B Tech Computer Science and Engineering (Cybersecurity))
- iii. Capstone Project(Approved by the BoS of EXTC Department)
- B. Introduction of Teaching and Examination Scheme for B Tech (Integrated) Computer Engineering, Semester VIII for the students admitted in AY 2020-21 and from Semester IX to XI for the students admitted in AY 2020-21 onwards. The Course Structure and syllabi of all the courses is already approved.
- C. Introduction of common scheme and syllabus at institute level for the course 'Project' for B Tech (Integrated) All Programs, Semester XII. This will be applicable to the students admitted in A.Y. 2020-21 onwards.
- D. Introduction of Teaching and Examination Scheme for B Tech (Integrated) Computer Engineering of Semester VII and VIII for the students admitted in AY 2021-22 onwards. The Course Structure and syllabi of all the courses is already approved
- 4. The BoS members considered and deliberated upon the revision in the curricula of B Tech (Integrated) Computer Engineering and B Tech (Integrated) Data Science program. They approved the following:
 - A. Revision of Teaching and Examination Scheme and introduction of syllabi for the listed courses for Semester VI. This will be applicable to the students admitted in AY 2021-22 onwards
 - i. Event Driven & UI Programming
 - **BoS** Committee Suggestions-Dr. Uday Khedker asked about the Programming language to be used for teaching this course. In response, Dr. Seema Shah informed that practical will be conducted using Visual Basics language.
 - ii. Professional Ethics (Approved course of Basic Sciences and Humanities)
 - iii. Minor Project (Approved by the BoS of IT Department)
 - Introduction of Teaching and Examination schemes and syllabus of all the courses for B Tech (Integrated)Data Science Semester VI which are adopted from B Tech (Integrated) Computer Engineering Semester VI. This is applicable to the students admitted in A.Y 2021-22 onwards.
- 5. The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science and Business Systems program. They approved the following:
 - A. Revision in Teaching & Examination Scheme and Syllabi for the listed courses of Semester

 IV. This is applicable for the students admitted in AY 2022-23 onwards
 - i. Operating Systems (Approved course of B Tech Computer)
 - ii. Database Management Systems (Approved course of B Tech AI)

The above courses are revised to bring them in line with the B Tech Curriculum.

- B. Revision in Course Structure, Teaching & Examination Scheme and Syllabi for the listed courses of Semester VI. This is applicable for the students admitted in AY 2021-22 onwards
 - i. Computer Networks (Approved course of B Tech AI)
 - ii. Artificial Intelligence (Approved course of B Tech Computer)

The above courses are revised to bring them in line with the B Tech Curriculum

- C. Revision in Course Structure, Teaching & Examination Scheme and Syllabi of the listed courses of Semester VIII. This is applicable for the students admitted in AY 2020-21 onwards
 - i. Rename 'Marketing Research and Marketing Management' to 'Marketing Management' and change in the credit structure [L,P,T,C] from [3,0,0,3] to [2,0,0,2]. The syllabus is already approved in the Technology Management Department.
 - Change in the credit structure [L,P,T,C] from [2,2,1,4] to [2,0,0,2] of the listed courses of Elective-V
 - Behavioral Economics
 - Computational Finance and Modeling
 - Industrial Psychology
 - Rename 'Advance Finance' to 'Advanced Finance' and shift from Elective-VI to Elective-V

BoS Committee Suggestions- Dr. Seema Shah informed the members that the above courses fall under the category of management courses which require only theoretical concepts and not practicals. Hence, it is suggested to keep the contents of syllabus as it is and change the credits of these courses.

Action taken -The above changes are incorporated into the revised Course Structure, Teaching & Examination Scheme and Syllabi.

- Introduce a course 'Deep Learning' in the basket of Elective VI (Approved course of B Tech AI)
- Replace 'Image Processing and Pattern Recognition' with 'Image and Video Processing' in Elective VI (Approved course of B Tech EXTC)
- v. Change in credit structure [L,P,T,C] from [2,2,1,4] to [2,2,0,3] of the Elective VI course 'Enterprise Systems' in line with the credit structure of other Elective VI courses.
- The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science (Shirpur Campus). They approved the following:
 - A. Revision in Course Structure, introduction of the Teaching & Examination Scheme and Syllabi for the listed courses of Semester VI. This is applicable for the students admitted in AY 2021-22 onwards and direct second year students admitted in AY 2022-23 onwards.

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- Artificial Intelligence (Approved course of B Tech Computer)
- ii. Cyber Security (Approved course of B Tech AI)
- iii. Distributed Computing (Approved course of B Tech Computer)
- iv. Interpersonal Skills (Approved course of Basic Sciences and Humanities)
- v. Department Elective-II
 - Software Quality Assurance(Approved course of B Tech IT)
 - Microservices and Architecture(Approved course of B Tech Computer)
 - E-Commerce(Approved course of B Tech IT)
- vi. Department Elective-III
 - Human Computer Interaction(Approved course of B Tech Computer)
 - Cloud Computing(Approved course of B Tech IT)
 - IoT and Applications(Approved course of B Tech Computer)
- vii. Open Elective III
- viii. Open Elective IV

BoS Committee Suggestions- Dr. Uday Khedker suggested to make Artificial Intelligence compulsory and shift Machine Learning in Semester VII. They have suggested revision in the course structure.

Action taken: The revision has been made in the course structure and teaching & examination scheme of Semester VI.

- 7. The BoS members considered and deliberated upon the revision in the curricula of Master of Computer Applications (MCA) program. They approved the following:
 - A. Revision in the syllabus of the course 'Advanced Web Technologies' of Semester II. This is applicable for the students admitted in AY 2023-24 onwards
 - i. Replace Unit on 'Angular JS' with 'React JS' as it is used in the industry extensively.
 - Remove the following obsolete topics
 - 'JSON PHP and JSONP' from Unit 2 (Number of hours allocated to Unit 2 is reduced by 1 hour and 1 hour is added to Unit 1)
 - 'Ajax implementation using PHP as server side scripting language' from Unit -3
 (Number of hours allocated to Unit 3 are reduced by 2 hours and 2 hours are added to Unit 1)

After making these changes, total number of credits and duration remains the same.

The meeting ended with a vote of thanks to the Chair.

Chairperson, Dean, MPSTME

Minutes of the Meeting of the Board of Studies (BoS) of the Computer Engineering Department was held using MS Teams online platform at 10.00 AM on 17th February, 2024.

The following members were present:

- 1. Dr. Alka Mahajan, Dean, MPSTME, NMIMS.
- 2. Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay
- 3. Dr. Dhirendra Mishra, HoD, Computer Engineering Department, MPSTME
- 4. Dr. Mayank Sohani, Chairperson, Computer Science, Shirpur.

Leave of absence was granted to the following member:

1. Mr. Jayant Dani, Chief Architect: CCIL, NGM INDIA, TCS, Industry Expert

Discussion Items

- 1. The BoS members confirmed the minutes of the earlier meeting held on 26th August, 2023.
- The BoS members considered and deliberated upon the revision in the curricula of B Tech & MBA Tech Computer Engineering for the students admitted in AY 2022-23 onwards. They approved the following:
 - A. Revision in the Syllabus of the Department Elective -I course 'Business Information Visualization and Analysis' of Semester VI

BoS Committee Suggestions- Dr. Uday Khedker suggested to add more visualization tools like Power BI, R related reference books can be included in the syllabus.

- B. Revision in the Course Structure, Teaching & Examination Scheme of the following courses of Semester VII and VIII for MBA Tech in Computer Engineering for the students admitted in AY 2021-22.
 - Change in the credits of 'Technical Internship' from 4 to 5 in Semester VII
 - Rename the course 'Project' to 'Capstone Project' in Semester VIII

Justification: To bring them in line with the MBA Tech Curriculum

- C. Revision in the Teaching & Examination Scheme of the course 'Technical Internship' of Semester VII for MBA Tech (All programs) for the students admitted in AY 2021-22.
- The BoS members considered and deliberated upon the revision in the curricula of B Tech in Computer Science and Business Systems by way of-
 - A. Revision in the Course Structure, Teaching & Examination Scheme and Syllabi for the listed courses of Semesters III, IV, VI and VIII. This will be applicable to the students admitted in AY 2023-24 onwards -
 - Replace the course 'Object Oriented Programming' by 'Object Oriented Programming through JAVA' and change in the credit structure [L,P,T,C] from [3,2,0,4] to [0,2,0,1] in Semester III
 - Revision in the syllabus 'Software Design with UML' in Semester VI
 - Introduction of the course 'Project' in Semester VIII

B. Revision in the syllabus of the course 'IT Project Management' in Semester VIII for the students admitted in the AY 2021-22 onwards.

BoS Committee Suggestions: Dr. Uday Khedker suggested that real case studies as per the industry scenario can be included in the courses 'Software Design with UML' and 'TT Project Management'. We should arrange Industry expert lectures to map the real world scenario with theoretical and practical approaches being practiced in the industry currently.

The above courses are revised to bring them in line with the B Tech Computer Curriculum.

C. Revision in the Teaching & Examination Scheme of Semester VII for the courses 'Financial Management' and 'Human Resource Management'. This will be applicable to the students admitted in AY 2021-22 onwards: Change in the Term end examination Question paper marks from 100 to 50 as it is adopted from Management program.

The above course is revised to bring in line with the MBA Tech Curriculum.

- 4. The BoS members considered and deliberated upon the revision in the curricula of B Tech Integrated Computer Engineering and B Tech Integrated Data Science for the students admitted in AY 2022-23 onwards. They approved the following:
 - Revision in the syllabus of the course 'Fundamentals of Website Designing' of Semester V

 Justification: Unit 2 has been revised with detailed topics of HTML and website development. Introduction of PHP has been included in Unit 6 and Angular JS has been removed, as this topic will be taught in further semester.
- The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science. This is applicable for the students admitted in AY 2021-22 onwards by way of-
 - A. Introduction of Teaching and Examination Scheme for Semester VII and VIII. Course Structure and syllabi of the following courses are already approved.

Semester VII:

- i. Machine Learning
- ii. Department Elective IV
- Cryptography and Network Security
- Mobile Computing
- Biometrics
- iii. Department Elective V
- UI and UX Design
- IoT for Smart Cities
- Blockchain Technology
- iv. Department Elective VI
- Big Data Analytics
- Natural Language Processing
- Evolutionary Computing

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Mukesh Patel School of Technology Management & Engineering v. Open Elective V vi. Capstone Project

Semester VIII:

- Project
- 6. The BoS members considered and deliberated upon the revision in the curricula of MCA program for the students admitted in AY 2023-24 onwards by way of-
 - Revision of Teaching and Examination scheme of by introducing the course 'Professional Ethics' in Semester III which is already approved.

Reporting Items

- 1. The BoS members considered and deliberated upon the revision in the curricula of B Tech in Computer Science and Business Systems by way of-
 - A. Revision in the Course Structure, Teaching & Examination Scheme and Syllabi for the listed courses of Semesters III, IV, V, VI, VII and VIII. This will be applicable to the students admitted in AY 2023-24 onwards -
 - Remove the course 'Essence of Indian Traditional Knowledge' in Semester IV
 - Shifting the course 'Software Engineering' from Semester III to Semester V
 - Shifting the course 'Software Design with UML' from Semester IV to Semester VI
 - Shifting the course 'Computer Networks' from Semester VI to Semester IV
 - Shifting the course 'Fundamentals of Management' from Semester V to Semester III
 - Shifting the course 'IT Project Management' from Semester VIII to Semester VII
 - Shifting the course 'Services Science & Service Operational Management' from Semester VIII to Semester V

The above courses are shifted to bring them in line with the B Tech Computer Curriculum

- 2. The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science by way of-
 - A. Revision in Course Structure for the listed course for Semester V. This will be applicable to the students admitted in AY 2022-23 onwards and direct second year students admitted in 2023-24 onwards-

Department Elective -I

- Shifting the course 'Mobile Computing' from semester V to semester VII.
- 3. Minor change in the text and reference books of the following courses of Semester I to X for all programs in Computer Engineering from AY 2024-25 onwards.

B Tech/MBA Tech/BTI Computer/B Tech CSBS/MCA

Semester I:

i. Programming for Problem Solving

Semester III:

- i. Data Extraction and Processing
- ii. Data Structures and Algorithms
- iii. C Programming

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Semester IV:

- i. Computer Organization and Architecture
- ii. Design and Analysis of Algorithms
- iii. Theoretical Computer Science
- iv. Object Oriented Programming through JAVA

Semester V:

- i. Artificial Intelligence
- ii. Basic Data Structures
- iii. Operating Systems
- iv. Compiler Design
- v. Fundamentals of Management

Semester VI:

- i. Biometrics
- ii. Distributed Computing
- iii. Computer Graphics

Semester VII:

- i. Mobile Computing
- ii. Services Science & Service Operational Management

Semester VIII:

i. Corporate Finance

Semester IX:

- i. Object Oriented Software Engineering
- ii. Image Processing
- iii. Data Mining
- iv. Soft Computing
- v. Ethical Hacking
- vi. Introduction to Cryptography

Semester X:

- i. Software Project Management
- ii. Operating Systems and Database Security
- iii. Digital Forensics

Justification: - The text books and reference books have been revised/changed to include the latest editions.

The meeting ended with a vote of thanks to the BoS Committee members.

All suggestions given by BoS members have been accepted and incorporated.

Chairperson, Dean, MPSTME



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Minutes of the Meeting of Board of Studies (BoS) of Computer Department, was through email circulation on 23rd April 2024.

The mail for suggestion/confirmation was sent to the following BoS members:

- 1. Dr. Alka Mahajan, Dean, MPSTME, NMIMS.
- 2. Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay
- 3. Mr. Jayant Dani, Chief Architect: CCIL, NGM INDIA, Tata Consultancy Services Ltd
- 4. Mr. Amit Moondra, Alumni, MCA Passout Batch 2017 (Technical Lead (Jan 2020 Present) Equity Data Science IPL)
- A. The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science and Business Systems. They approved the following:

Reporting Items -

- Revision in following courses of B Tech Computer Science and Business Systems, Semester VII & VIII along
 with Course structure & Teaching and Examination Scheme for students admitted in AY 2021-22 onwards.
 The courses are already approved in earlier Academic Council with credit change.
 - Financial Management Semester VII
 - · Marketing Management Semester VIII

Justification: The above courses are revised to bring them in line with already approved course curriculum of MBA Tech program

Dean, MPSTME

Chairperson, Board of Studies