

Minutes of the Meeting of the Board of Studies (BoS) of Computer Engineering Department was held using MS Teams online platform at 10.00 AM on 10th September 2022.

The following members were present:

1. Mr. Jayant Dani, Chief Architect: CCIL, NGM INDIA, TCS
2. Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay
3. Mr. Amit Moondra, Alumni, Technical Lead - Equity Data Science IPL
4. Dr. Seema Shah, HoD, Computer Engineering Department, MPSTME
5. Dr. Pravin Shrinath, Associate Professor, Computer Engineering Department, MPSTME, Mumbai

Leave of absence is granted to the following members:

1. Dr. Alka Mahajan, Dean, MPSTME, Mumbai.
2. Dr. Aaquil Bunglowala, Associate Dean, STME, Indore

1. The members confirmed the minutes of the earlier meeting held on April 23, 2022
2. The BoS members considered and deliberated upon the revision in the curricula of B Tech & MBA Tech Program in Computer Engineering. They approved the following:
 - A. Minor revision in Curricula of B Tech and MBA Tech in Computer Engineering by way of-
 - I. Revision in course structure for the students admitted in AY 2021-22 and direct second year students admitted in AY 2022-23 (Encl. - Ia)
 - II. Revision in course structure for the students admitted in AY 2020-21 and direct second year students admitted in AY 2021-22 (Encl. - IIa)
 - B. Revision in Teaching & Examination Schemes and introduction of syllabus of the following course for B Tech and MBA Tech in Computer Engineering, Semester IV for the students admitted in AY 2021-22 and direct second year students admitted in AY 2022-23 onwards (Encl.-I)
 - I. Object Oriented Programming through JAVA (Common with B Tech /MBA Tech Computer and B Tech Computer Science)

The remaining courses are approved in earlier AC meetings.

- 'Object Oriented Programming through JAVA' is introduced as a prerequisite course for 'Mobile Application Development' in Semester V.
 - The BoS members suggested changing the name of Unit 6 from Swing to Spring and also suggested to delete the topics of Swings components.
 - **The suggestion is incorporated in the syllabus**
- C. Introduction of Teaching & Examination Schemes and Syllabi of all courses for B Tech and MBA Tech in Computer Engineering, Semester VI for the students admitted in AY 2020-21 and direct second year students admitted in AY 2021-22. (Encl.-II)
 - I. Department Electives II
 - a) Computer Vision
 - b) Business Information Visualization and Analysis
 - II. Department Electives III
 - a) Biometrics (Common with B Tech /MBA Tech Computer and B Tech Artificial Intelligence)
 - b) Microservices and Architecture

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The remaining courses are approved in earlier AC meetings / placed for approval by other Departments

- Microservices and Architecture - The BoS members suggested to add a topic on "Microservices Introduction" in the syllabus.
 - **The suggestion is incorporated in the syllabus.**
3. The BoS members considered and deliberated upon the revision in the curricula of B Tech (Integrated) in Computer Engineering. They approved the following:
- A. Minor revision in Curricula of B Tech (Integrated) in Computer Engineering by way of-
- I. Revision in the course structure of B Tech (Integrated) in Computer Engineering for the students admitted in AY 2021-22 onwards (**Encl.-IIIa**)
- The subject 'Python Programming' renamed as 'Basics of Python'.
 - Basics of Python are covered in the course
 - Change in credits of subject 'Multimedia and Animation' from 4 to 3.
 - Teaching scheme and syllabus in line with B. Tech Integrated IT Department.
- II. Revision in the course structure of B Tech (Integrated) in Computer Engineering for the students admitted in AY 2020-21 (**Encl.-IVa**)
- B. Revision in Teaching & Examination Scheme and introduction of syllabus of the following course of B Tech (Integrated) in Computer Engineering, Semester IV for the students admitted in AY 2021-22 onwards (**Encl.-III**)
- I. Rename the course 'Python Programming' to 'Basics of Python' (Common with B Tech (Integrated) Computer and B Tech (Integrated) Data Science)

The remaining courses are approved in earlier AC meetings / placed for approval by other departments.

- C. Introduction of Teaching & Examination Scheme of courses of B Tech (Integrated) in Computer Engineering, Semester VI for the students admitted in AY 2020-21 (**Encl.-IV**)
- D. Revision of Teaching & Examination Scheme for B Tech (Integrated) in Computer Engineering, Semester X for the students admitted in AY 2018-19 and AY 2019-20 (**Encl.-V**)
- I. Rename two specializations 'Artificial Intelligence' and 'Cyber Security' to 'Department Elective 4', 'Department Elective 5', and 'Department Elective 6'
- The BoS members suggested since the course structure will not have specializations, instead it is decided to convert them to Department Electives. All the courses coming under specializations are converted to Department Electives.
 - **The suggestions are incorporated in the course structure and the teaching scheme.**
4. The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science and Business Systems. They approved the following:
- A. Revision in the course structure of B Tech Computer Science and Business Systems for the students admitted in AY 2022-23 (**Encl.-VIa**)
- B. Revision in Teaching & Examination Scheme for B Tech in Computer Science and Business Systems of Semester II for the students admitted in AY 2022-23 (**Encl.-VI**)

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5. The BoS members considered and deliberated upon the revision in the curricula of MCA. They approved the following:
- A. Revision in the course structure of MCA for the students admitted in AY 2022-23 (Encl.-VIIa)
 - B. Revision in Teaching & Examination Scheme and introduction of syllabus of the following course of MCA, Semester II for the students admitted in AY 2022-23 (Encl.-VII)
 - I. Rename the course 'Python Programming' to 'Data Analysis with Python'

The remaining courses are approved in earlier AC meetings

- 'Data Analysis with Python' is introduced as a prerequisite course for Machine Learning in Semester I. Units related to Data Analysis is introduced.

6. The BoS members considered and deliberated upon the revision in the curricula of B Tech in Computer Science. They approved the following:
- A. Revision in the course structure of B Tech in Computer Science for the students admitted in AY 2021-22 and direct second year admitted in 2022-23 onwards. (Encl.-VIIIa)
 - B. Revision in Teaching & Examination Scheme and introduction of syllabus of the following course of B Tech in Computer Science, Semester IV for the students admitted in AY 2021-22 (Encl.-VIII)
 - I. Design and Applications of Internet of Things

The remaining courses are approved in earlier AC meetings



Chairperson
Dean, Board of Studies



Minutes of the Meeting of the Board of Studies (BoS) of the Computer Engineering Department was held using MS Teams online platform at 10.30 AM on 12th December 2022.

The following members were present:

1. Dr. Alka Mahajan, Dean, MPSTME, Mumbai
2. Mr. Jayant Dani, Chief Architect: CCIL, NGM INDIA, TCS, Industry Expert
3. Mr. Amit Moondra, Alumni, Technical Lead - Equity Data Science IPL, Alumnus
4. Dr. Seema Shah, HoD, Computer Engineering Department, MPSTME
5. Dr. Pravin Shrinath, Associate Professor, Computer Engineering Department, MPSTME, Mumbai
6. Dr. Aaquil Bunglowala, Associate Dean, STME, Indore

Leave of absence was granted to Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay, Academic Expert.

1. The members confirmed the minutes of the earlier meeting held on 10th September 2022.
2. The BoS members considered and deliberated upon the revision in the curricula of B Tech & MBA Tech in Computer Engineering. They approved the following:
 - A. Revision in Course Structure and introduction of Teaching & Examination Scheme and Syllabi of the following courses of Semester VII for B Tech and MBA Tech in Computer Engineering for the students admitted in AY 2020-21 onwards **(Encl. - I a)**
 - (i) Cloud Computing (Approved by BoS of IT)
 - (ii) Department Elective IV
 - Deep Learning (Approved by BoS of AI)
 - Cryptography and Network Security (Approved by BoS of AI)
 - IoT and Applications
 - (iii) Department Elective V
 - Natural Language Processing (Approved by BoS of AI)
 - Ethical Hacking (Approved by BoS of IT)
 - Blockchain Technology (Approved by BoS of IT)
 - (iv) Department Elective VI (in semester - VIII for MBA Tech)
 - Big Data Analytics (Approved in BoS of DS)
 - Cyber Forensics (Approved by BoS of Cyber Security)
 - Robotics Process Automation (Approved by BoS of AI)
 - (v) Capstone Project (B Tech)
 - B. Approval of Teaching & Examination scheme for B Tech and MBA Tech in Computer Engineering of Semester VI for the students admitted in AY 2021-22 onwards for a course "Interpersonal Skills " **(Encl. - I b)**

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3. The BoS members considered and deliberated upon the revision in the curricula of B Tech (Integrated) in Computer Engineering. They approved the following:

- A. Revision of Course Structure of Semester I to XII and introduction of Teaching & Examination Scheme of Semester VII for B Tech (Integrated) in Computer Engineering for the students admitted in AY 2020-21(Encl. - II a)

- B. Revision of Course Structure of Semester I to XII, Teaching & Examination Scheme and syllabus of the course "Fundamentals of Website Designing" of Semester V with the change in the credit structure from [0,4,0,2] to [2,4,0,4] as [L,P,T,C] for B Tech (Integrated) in Computer Engineering for the students admitted in AY 2021-22 onwards (Encl. - II b)

BoS Committee Suggestion -

Mr. Jayant Dani suggested to add 2 theory sessions to cover the basic concepts and design principles comprehensively.

Action taken -

The above suggestion is incorporated into the revised curriculum.

- C. Revision of Course Structure of Semester I to XII, Teaching & Examination Scheme and Syllabus of the course "C Programming" of Semester III with the change in credit structure from [2,2,0,3] to [2,2,1,4] as [L, P, T,C] for B Tech (Integrated) in Computer Engineering for the students admitted in AY 2022-23 onwards. (Encl. -II c)

 - D. Revision of Course Structure of Semester I to XII and Teaching & Examination Scheme for B Tech (Integrated) in Computer Engineering of Semester I and II for the students to be admitted in AY 2023-24 onwards. (Encl. - II d)
 - (i) The course "Electrical and Computer Workshop" is shifted from Semester II to I
 - (ii) The course "Mechanical workshop" is replaced by "3D Printing Workshop" and shifted from Semester I to II.
4. The BoS members considered and deliberated upon the revision in the curricula of B Tech in CSBS. They approved the following:
- A. Revision in the Course Structure and Teaching & Examination Scheme of Semester VII for the course "IT Workshop Skylab / Matlab" for the students admitted in AY 2020-2021 onwards (Encl. - III a)
 - (i) Rename the course "IT Workshop Skylab / Matlab" as "IT Workshop".
 - (ii) Change in Term End Examination pattern from University Examination to Non University Exam (NUE)

BoS Committee Suggestion -

Mr. Amit Moondra suggested conducting practical examination instead of theory examination since it is a practical oriented course.

Action taken -

The above suggestion is incorporated into the revised curriculum.

- B. Revision of Course Structure of Semester I to VIII and Teaching & Examination Scheme and Syllabus for BTech in CSBS Semester III with a change in credits for the course "Software Engineering" from [3,2,1,5] to [2,2,0,3] as [L, P, T, C] for the students admitted in AY 2022-23 onwards (Encl. - III b)

5. The BoS members considered and deliberated upon the revision in the curricula of Master of Computer Applications. They approved the following:
- A. Revision in Course Structure of Semester I to IV, introduction of Teaching & Examination Scheme and Syllabi of Semester III and IV of MCA program. This is applicable for the students admitted in AY 2022-23 onwards for the courses listed below - (Encl. IV)

Semester III

- (i) Artificial Intelligence (Approved by BoS of Computer Engineering)
- (ii) Machine Learning

BoS Committee Suggestion -

Mr. Jayant Dani suggested the following changes:

- Remove the names of Python Libraries
- Merge unit on Performance Evaluation with unit on classification

Action taken -

The above suggestion is incorporated into the revised curriculum.

- (iii) Cloud Computing (Approved by BoS of IT)
- (iv) Cyber Security (Approved by BoS of AI)
- (v) Interpersonal Skills (Approved by BoS of BSH)
- (vi) ASP.NET with C#
- (vii) Open Elective
 - Basic Decision making with Spreadsheet (Approved by BoS of DS)
 - Algorithmic Trading (Approved by BoS of DS)
 - Introduction to Virtual Reality and Augmented Reality (Approved by BoS of Computer Engineering)
 - Game Design (Approved by BoS of AI)
- (viii) Department Elective - II
 - Microservices and Architecture (Approved in BoS of Computer Engineering)
 - DevOps (Approved in BoS of DS)
 - Blockchain Technology (Approved in BoS of IT)
 - Big Data Analytics (Approved in BoS of DS)

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(ix) Minor Project


Semester IV

(i) Project

6. The BoS members considered and deliberated upon the revision in the curricula of BTech in Computer Science. They approved the following:

A. Introduction of Teaching & Examination Scheme and Syllabi of courses for BTech in Computer Science of Semester V for the students admitted in AY 2021-22 onwards (**Encl. V**).

- (i) Software Engineering (Approved by BoS of IT)
- (ii) Compiler Design
- (iii) Image and Video Processing (Approved by BoS of EXTC)
- (iv) Operating Systems (Approved by BoS of Computer Engineering)
- (v) Department Elective-I
 - Advanced Web Programming (Approved by BoS of Computer Engineering)
 - Operation Research (Approved by BoS of BSH)
 - Advanced Database Management Systems (Approved by BoS of IT)
 - Mobile Computing
- (vi) Open Elective I
- (vii) Open Elective II


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 20th April, 2023.

The following members were present:

1. Dr. Alka Mahajan, Dean, MPSTME, Mumbai
2. Dr. Uday Khedker, Professor, Department of CSE, IIT Bombay,
3. Mr. Jayant Dani, Chief Architect: CCIL, NGM INDIA, TCS, Industry Expert
4. Mr. Amit Moondra, Alumni, Technical Lead - Equity Data Science IPL, Alumnus
5. Dr. Seema Shah, HoD, Computer Engineering Department, MPSTME
6. Dr. Pravin Shrinath, Associate Professor, Computer Engineering Department, MPSTME, Mumbai

Leave of absence was granted to Dr. Aaquil Bunglowala, Associate Dean, STME, Indore.

1. The members confirmed the minutes of the earlier meeting held on 12th December 2022.
2. The BoS members considered and deliberated upon the revision in the curricula of B Tech & MBA Tech in Computer Engineering, B Tech Computer Science. They approved the following:
 - A. **Minor revision in the syllabi of the following courses of Semester V and VI for B Tech & MBA Tech in Computer Engineering, B Tech Computer Science for the students admitted in AY 2021-22 onwards:**
 - **Operating Systems (Sem V)** -Removed topics, 'Advanced Operating System: Real Time Operating system' and 'Distributed Operating System' as the advanced topics are beyond the scope of this core course where the focus is on basic operating system functionalities.
 - **Machine Learning (Sem VI)**- adopted from MCA program (Sem III) as it is a common course
 - **Computer Vision (Sem VI)**-adopted from AI program as it is a common course (Approved course)
 - B. **Revision in the syllabus of the open elective course, 'Introduction to Virtual Reality and Augmented Reality', for B. Tech and MBA Tech, Semester V/VI (All programs except Mechatronics) for the students admitted in the AY 2021-22 onwards.**
3. The BoS members considered and deliberated upon the revision in the curricula of B Tech Integrated (Computer Engineering) and B Tech Integrated (Data Science). They approved the following:
 - A. **Revision in Teaching & Examination Scheme and Syllabi of the following courses of Semester V for the students admitted in AY 2021-22 onwards -**
 - Replace "Object Oriented Programming using C ++" by "Programming for Problem Solving" (Approved course).

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- Introduction of "Management Accounting for Engineers" and "Environmental Science", both the courses are already approved.

The above courses are added to bring them in line with B Tech First year curriculum.

B. Minor revision in Teaching & Examination scheme and Introduction of Syllabi of the following courses of Semester IX for B Tech Integrated (Computer Engineering) for the students admitted in 2019-20

- Machine Learning- adopted from MCA program (Sem III) as it is a common course
- Introduction of the following courses in the basket of Open Elective-I for B Tech (Integrated) Computer Engineering, Semester IX for the students admitted in AY 2019-20
 - > 'Nutrition for Health' (Approved course)
 - > 'Graphology for Personal Development' (Approved course)

4. The BoS members considered and deliberated upon the revision in the curricula of B Tech Computer Science and Business Systems. They approved the following:

A. Revision in Course Structure of Semester I to VIII and Teaching & Examination Scheme of Semester I and II for B Tech (Computer Science and Business Systems) for the students admitted in AY 2023-24 onwards-

Semester I

- Replace "Fundamentals of Computer Science" by "Programming for Problem Solving" (Approved course)
- Shift course "Discrete Mathematics" from Semester I to III
- Shift course "Constitution of India" from Semester III to I

Semester II

- Introduction of a course "Python Programming" (Approved course)
This course is added to strengthen programming foundation in the first year of the program
- Shift course "Data Structures and Algorithms" from Semester II to III (Approved course)

The above courses are revised to map with B Tech curriculum

B. Revision in Course Structure of Semester I to VIII, Teaching & Examination Scheme and Syllabi of the following courses of Semester III for B Tech (Computer Science and Business Systems) for the students admitted in AY 2022-23 onwards-

- Replace "Formal Language and Automata Theory" by "Theoretical Computer Science" (Approved course)
- Change in the credit structure of the course "Computer Organization and Architecture" from [3,2,0,4] to [3,0,0,3]
- Rename "Indian Constitution" as "Constitution of India" (Approved course)

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

C. Revision in Teaching & Examination Scheme and Syllabi of the following courses of Semester V for the students admitted in AY 2021-22 onwards-

- Revision in the syllabus of “Design and Analysis of Algorithms” (Approved course)
- Elective-I:
 - Revision in the syllabus of “Machine Learning” (Approved course)
 - Replace “Cloud Microservices and Application” by “Microservices and Architecture” (Approved course) as it is generic requirement in the industry.

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

D. Revision in Course Structure, Teaching & Examination Scheme and Syllabi of the following courses of Semester VII for B Tech (Computer Science and Business Systems) for the students admitted in AY 2020-21 onwards -

- Revision in the syllabus of “Financial Management” (Approved course)
- Revision in the syllabus of “Human Resource Management” (Approved course)
- Change in the credit structure of the course “Cognitive Science & Analytics” from [3,2,0,4] to [2,2,0,3]
BoS Committee Suggestions-Dr. Uday Khedker suggested to remove the topic Measurement & Scaling Concepts under the unit on “Data Theory & Taxonomy of Data” and Regression, Logistic Regression, Principal Component Analysis (PCA), and Cluster Analysis under the unit “Multivariate Data Analytics & Cognitive Analytics” as it is already covered in other courses
- Replace “Cryptology” by “Cryptography and Network Security” (Approved course)
- Replace “Introduction to IoT” by “IoT and Applications” (Approved course)

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

Action taken: The above changes are incorporated into the revised teaching & examination scheme and syllabi.

5. 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 Course Structure, Teaching & Examination Scheme and Syllabi of Semester I and II of MCA program for the students admitted in AY 2023-24 onwards -

Sem I

- **Operating Systems** -Remove topics, ‘Advanced Operating System: Real Time Operating system’ and ‘Distributed Operating System’ as the advanced topics are beyond the scope of this core course where the focus is on basic operating system functionalities.

Sem II

- Change elective course "Advanced Java" to compulsory course to cater to the rising demand for programming skills in the industry
- Remove "Industrial Economics and Management"
- Shift "Artificial Intelligence" from Semester III to II to cater to the rising demand for AI skills and application development in the industry
- Rename "Professional Ethics for IT" as "Professional Ethics" and shifted from Semester II to III as it is a common course (Approved course)

Mr. Jayant Dani and Mr. Amit Moondra appreciated the proposed changes catering to industry requirements

B. Revision in Course Structure of Semester I to IV, Teaching & Examination Scheme and Syllabus of Semester III of MCA program for the students admitted in AY 2022-23-

- Replace ^{the} ~~a~~ course "ASP.NET with C#" by "Microservices and Architecture" since ASP. NET technology is obsolete (Approved course)



Chairperson,
Dean, MPSTME



