

Minutes of the Meeting of Board of Studies (BoS) of Mechanical Engineering Department, was held on 31st August, 2023 at 07.00 PM on Microsoft Teams platform.

The following members were present:

1. Dr. Hari Vasudevan, Principal, D.J. Sanghvi College of Engineering - Academic Expert
2. Dr. Ashok Bhonsale, Ex. Principal, Vidyavardhini College of Engineering & Technology - Academic Expert
3. Mr. Saket Bhishekar, International Business, Kirloskar Chillers Pvt. Ltd.- Alumni Member
4. Dr. Asha Ingle, Head, Department of Mechanical Engineering, MPSTME, Mumbai
5. Dr. Ravi Terkar, Professor, Department of Mechanical Engineering, MPSTME
6. Dr. Rajesh Patil, Associate Professor, Department of Mechanical Engineering, MPSTME
7. Dr. Ashish Deshmukh, Associate Professor, Department of Mechanical Engineering, MPSTME

The proceedings were as follows:

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

1. The BoS members confirmed the minutes of meetings of BoS in Mechanical Engineering held on 6th May, 2023.
2. The BoS members considered and deliberated upon the revision in the structure of B Tech and MBA Tech. They approved the following -
 - A. Revision of Teaching & Examination Scheme for B Tech for the students admitted in AY 2021-22 onwards and MBA Tech for the students admitted in AY 2022-23 onwards in Mechanical Engineering for Semester V and VI (**Encl.-I**)
 - i. Introducing the following courses in the basket of department electives
 - a. Python for Mechanical Engineers (Approved course of BTI Mechanical) (for B Tech Mechanical Batch 2022-23)
 - b. Smart Manufacturing and Internet of Things (Approved course of BTI Mechanical) (for B Tech Mechanical Batch 2022-23)
 - c. Unmanned Aerial Vehicles (Approved by the BOS of Mechanical Department)
 - B. Introduction of Teaching & Examination Scheme for MBA Tech in Mechanical Engineering, Semester VIII for the students admitted in AY 2020-21 onwards (**Encl.-II**)
 - i. Finite Element Analysis (Approved course of B Tech Mechanical)
 - ii. Mechanical Measurements and Metrology (Approved course of B Tech Mechanical)
 - iii. Department Elective - VI (Approved courses of B Tech Mechanical)
 - a. Total Quality Management
 - b. Supply Chain Analytics
 - c. Automation in Manufacturing
 - d. Micro and Nano Manufacturing
 - e. Computational Fluid Dynamics
 - iv. Capstone Project (Approved by the BOS of EXTC Department)
3. The BoS members considered and deliberated upon the revision in the Teaching scheme and syllabi of B Tech (Integrated) in Mechanical Engineering. They approved the following -

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- A. Revision in syllabus of "Fundamentals of Mechanics-Statics" in B Tech (Integrated) all programs Semester II, for the students admitted in AY 2023-24 onwards. **(Encl.-III)**
- Replace the unit, 'Introduction to trusses' with 'Simple lifting machines' to bring curriculum in line with diploma level requirements. Topic on 'Introduction to trusses' is included later in the course, "Engineering Mechanics", semester VII.
- B. Revision in course structure and Teaching and Examination Scheme and Syllabi of the following courses in B Tech (Integrated) in Mechanical Engineering, Semester IV for the students admitted in AY 2022-23 onwards. **(Encl.-IV)**
- i. Removing the course of "Physics-IV"
 - The students will learn "Classical Physics" in semester VIII.
 - ii. Revision in the syllabus and credits of the course "Basic Thermodynamics".
 - Credit of the course reduced from 4 to 3. Content are reduced to bring the syllabus in line with diploma level. Remove topics on 'Tds relation', 'Carnot theorem', and 'Thermodynamics processes with steam as working substance' from the course. The students will learn these topics in the course, "Engineering Thermodynamics" in Semester VII.
 - iii. Revision in the syllabus of the course "Basic of Machine Drawing".
 - Topic 'Significance of Machine Drawing' is replaced by 'Conventional symbols of machine parts and pipe layout'.
 - iv. Minor revision in syllabus and renaming of the course "Manufacturing Workshop-I" to "Manufacturing Workshop".
 - Added the topic on 'Manufacturing of components using CNC machines'.

Suggestions:

- For the course, "Manufacturing Workshop" Dr. Hari Vasudevan recommended that the number of hours in Unit 3 be increased from 04 hours to 06 hours in order to provide students with more hands-on experience with CNC machine.

Action taken -

- The above suggestion is incorporated into the revised curriculum.

- C. Revision in course structure, Teaching and Examination Scheme and syllabus in B Tech (Integrated) in Mechanical Engineering, Semester VI for the students admitted in AY 2021-22 onwards. **(Encl.-V)**
- i. Revision in the syllabus and credits of the course "Automotive Engineering"
 - Reducing the credits from 4 to 3 for the course "Automotive Engineering" and modify the syllabus as per current technology in use. Topics on 'Autonomous driving', 'Cyber security' and 'Artificial intelligence' were added and topics on 'Wheels and tyres' and 'Conventional steering mechanism' were removed.
 - ii. Introducing of the course of "Minor Project" (Approved in BoS of IT Department).
- D. Introduction of Teaching & Examination Scheme of B Tech (Integrated) in Mechanical Engineering, Semester VIII. This is applicable for the students admitted in AY 2020-21. **(Encl.-VI)**
- i. Probability and Statistics (Approved course of Basic Science and Humanities)
 - ii. Strength of Materials (Approved course of B Tech Mechanical)

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- iii. Kinematics and Dynamics of Machines (Approved course of B Tech Mechanical)
 - iv. Applied Thermodynamics (Approved course of B Tech Mechanical)
 - v. Machine Shop-I (Approved course of B Tech Mechanical)
 - vi. Management Accounting for Engineers (Approved course of Technology Management)
 - vii. Classical Physics (Approved course of Basic Science and Humanities)
 - viii. Environmental Science (Approved course of B Tech Civil)
- E. Revision of Teaching & Examination Scheme of B Tech (Integrated) in Mechanical Engineering, Semester VIII. This is applicable for the students admitted in AY 2021-22 onwards (**Encl.-VII**)
- i. Remove the course of "Environmental Science" as the course is in now the semester V revised curriculum.
- F. Revision in course structure and Introduction of Teaching & Examination Scheme and Syllabi of all the courses for B Tech (Integrated) in Mechanical Engineering Semester XII for the students admitted in AY 2018-19 and AY 2019-20 (**Encl.-VIII**)
- i. Project Management (Approved course of B Tech Mechanical)
 - ii. Industrial Applications of HVAC (Approved course of B Tech Mechanical)
 - iii. Department Elective - V
 - a. Unmanned Aerial Vehicles (Approved by the BOS of Mechanical Department)
 - b. Micro and Nano Manufacturing (Approved course of B Tech Mechanical)
 - c. Alternative Fuels (Approved course of B Tech Mechanical)
 - iv. Department Elective - VI (Approved courses of B Tech Mechanical)
 - a. Biomechanics
 - b. Aerodynamics in Flight Design
 - c. Supply Chain Analytics
 - v. Department Elective - VII (Approved courses of B Tech Mechanical)
 - a. Autonomous Navigation of Electric Vehicles
 - b. Ergonomics in Design
 - c. Design of Heat Exchangers
 - vi. Capstone Project (Approved by the BOS of EXTC Department)
4. **Information Items** - Shifting of the course "Production Technology" from semester V to Semester IV for the students admitted in AY 2022-23 onwards.



Chairperson
Dean, Board of Studies



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Minutes of the Meeting of Board of Studies (BoS) of Mechanical Engineering Department, was held on 17th February, 2024 at 07.00 PM on Microsoft Teams platform.

The following members were present:

1. Dr. Hari Vasudevan, Principal, D.J. Sanghvi College of Engineering - Academic Expert
 2. Dr. Ashok Bhonsale, Ex. Principal, Vidyavardhini College of Engineering & Technology - Academic Expert
 3. Dr. Alka Mahajan, Dean, MPSTME, NMIMS
 4. Mr. Saket Bhishekar, International Business, Kirloskar Chillers Pvt. Ltd.- Alumni Member
 5. Dr. Ashish Deshmukh, Head, Department of Mechanical Engineering, MPSTME, Mumbai
 6. Dr. Ravi Terkar, Professor, Department of Mechanical Engineering, MPSTME
 7. Dr. Rajesh Patil, Associate Professor, Department of Mechanical Engineering, MPSTME
1. The BoS members confirmed the minutes of meetings of BoS in Mechanical Engineering held on 31st August, 2023.

Discussion Items:

2. The BoS members considered and deliberated upon the revision in the Teaching scheme of B Tech (Integrated) in Mechanical Engineering. They approved the following -
- A. Revision in syllabus of "Introduction to 3D Printing Technology" for B Tech (Integrated) in Mechanical Engineering, Semester V for the students admitted in AY 2022-23 onwards along with Course Structure and Teaching and Examination Scheme. **(Encl.-I)**
- i. Change in the credit structure [L, P, T, C] from [3,2,0,4] to [2,2,0,3]
 - Topic on powder bed fusion, material setting, binder setting and direct energy deposition has been removed since these contents will be taught in semester VII in the 'Additive Manufacturing' course.

Suggestions:

- Dr. Hari Vasudevan showed his concern for the content of the course removed from Introduction to 3D printing.

Action Taken:

- Dr. Ravi Terkar said that the common part of the course in Introduction to 3D printing is removed which will be cover further in Additive Manufacturing, Sem. VII of B Tech Mechanical.

Reporting Items:

- A. The following existing courses approved in earlier academic councils by respective department, which will be offered to B Tech (Integrated) Mechanical Engineering, Semester IX along with Course Structure and Teaching and Examination Scheme for the students admitted in AY 2020-21. **(Encl.-II)**
- i. Design of Machine Elements

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- ii. Manufacturing Processes-II
 - iii. Fluid Mechanics
 - iv. Department Elective - I
 - a. Electric and Hybrid Automotive Technology
 - b. Lean Manufacturing
 - c. Alternative Fuels
 - d. Industrial Automation and Robotics
 - v. Department Elective - II
 - 1. Marine Structures
 - 2. Composite Materials
 - 3. Biomechanics
 - 4. Additive Manufacturing
 - 5. Smart Manufacturing and Internet of Things
 - vi. Open Elective - I
 - vii. Open Elective - II
- B. The existing approved course "Python for Mechanical Engineers" approved in earlier academic council by respective department, which will be offered to B Tech (Integrated) Mechanical Engineering, Semester IX. This is applicable for the students admitted in AY 2021-22 onwards (Encl.-IV)
- Introducing the course in the basket of department elective.
- C. The following existing courses approved in earlier academic councils by respective department, which will be offered to B Tech (Integrated) Mechanical Engineering, from Semester X to XII along with Course Structure and Teaching and Examination Scheme for the students admitted in AY 2020-21 onwards. (Encl.-V)

Semester X

- i. Heat Transfer
- ii. CAD/CAM/CIM
- iii. Industrial Applications of HVAC
- iv. Machine Shop-II
- v. Department Elective - III
 - a. Industrial Engineering
 - b. Hydraulic and Pneumatic Systems
 - c. Product Design and Development
 - d. Fluid Machinery
 - e. Unmanned Aerial Vehicles
- vi. Department Elective - IV
 - a. Autonomous Navigation of Electric Vehicles
 - b. Aerodynamics in Flight Design
 - c. Advances in IC Engines
 - d. Vibration Engineering
- vii. Open Elective - III
- viii. Open Elective - IV
- ix. Interpersonal Skills

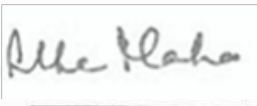
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Semester XI

- i. Finite Element Analysis
- ii. Mechanical Measurements and Metrology
- iii. Capstone Project
- iv. Department Elective - V
 - a. Design of Transmission Systems
 - b. Ergonomics in Design
 - c. Wind Turbine Technology
 - d. Design of Heat Exchangers
- v. Department Elective - VI
 - a. Total Quality Management
 - b. Supply Chain Analytics
 - c. Automation in Manufacturing
 - d. Micro and Nano Manufacturing
 - e. Computational Fluid Dynamics
- vi. Open Elective - V

Semester XII

- i. Project
- D. Shifting the course "Production Technology" from Semester V to Semester IV for the students admitted in AY 2022-23 onwards.
- E. Shifting and renaming the course "Manufacturing Workshop-II" to "Manufacturing Workshop" from Semester V to Semester IV for the students admitted in AY 2022-23 onwards.



Chairperson
Dean, Board of Studies

