Minutes of the Meeting of Board of Studies (BoS) of Mechatronics Engineering Department, was held on 10th September, 2022 at 11.00 AM in MPSTME.

The following members were present:

- 1. Mr. Nitish Kati, Director, Pegasys Systems Pvt. Ltd.
- 2. Mr. Chandrashekhar Limaye, Director, Supertech Instrumentation Services (India) Pvt. Ltd.
- 3. Dr. Faruk Kazi, Professor, Department of Electrical Engineering, Dean, Research, Development and Consultancy, VJTI
- 4. Dr. Venkatesh Deshmukh, Professor and Head, Department of Mechatronics Engineering, MPSTME, NMIMS
- Mr. Vinod Jain, Associate Professor, Department of Mechatronics Engineering, MPSTME, NMIMS
- 6. Mr. Dattatray Sawant, Assistant Professor, Department of Mechatronics Engineering, MPSTME, NMIMS

The proceedings were as follows:

Leave of absence is granted to the following member:

- 1. Dr. Alka Mahajan, Dean, MPSTME, NMIMS
- Mr. Ainal Abdul Azeez, Assistant Professor, Department of Mechatronics Engineering, MPSTME, NMIMS
- 1. The BoS members confirmed the minutes of meetings of BoS in Mechatronics Engineering held on 4^{th} May, 2022.
- 2. The BoS members considered and deliberated upon the revision in the curricula of B Tech in Mechatronics Engineering. They approved the following:
 - A. A minor revision of curricula of B Tech in Mechatronics Engineering by way of -
 - 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.-Ib)
 - B. Introduction of Teaching and Examination Scheme and Syllabi of Semester VI for the students admitted in AY 2020-21 and direct second year students admitted in AY 2021-22 (Encl.-II)
 - Research Methodology
 - Supervisory Control and Data Acquisition
 - PLCs and Instrumentation
 - Artificial Intelligence and Machine Learning
 - Department Elective III
 - Modern Control Systems
 - Digital Signal and Image Processing
 - Embedded Systems
 - Biomedical Instrumentation

- Department Elective IV
 - ➤ Electric and Hybrid Automotive Technology
 - ➤ Additive Manufacturing
 - ➤ CAD/CAM/CIM
 - > Total Quality Management

BoS Committee Suggestions:

- 1. "Artificial Intelligence and Machine Learning" should have the topic of Intelligent Agent in the unit 1 Introduction to Artificial Intelligence.
- 2. SCADA should have a lab incorporating an industrial protocol such as MODBUS with LabVIEW.

Action taken:

The above suggestions are incorporated into the revised curriculum.

Chairperson

Dean, Board of Studies

Minutes of the Meeting of Board of Studies (BoS) of Mechatronics Engineering Department, was held on 26th November, 2022 at 10.00 AM on Microsoft Teams platform.

The following members were present:

- 1. Mr. Nitish Kati, Director, Pegasys Systems Pvt. Ltd. Industry Expert
- 2. Mr. Chandrashekhar Limaye, Director, Supertech Instrumentation Services (India) Pvt. Ltd. Industry Expert
- 3. Dr. Faruk Kazi, Professor, Department of Electrical Engineering, Dean, Research, Development and Consultancy, VJTI Academic Expert
- 4. Dr. Venkatesh Deshmukh, Professor and Head, Department of Mechatronics Engineering, MPSTME, NMIMS
- 5. Mr. Vinod Jain, Associate Professor, Department of Mechatronics Engineering, MPSTME, NMIMS
- 6. Mr. Dattatray Sawant, Assistant Professor, Department of Mechatronics Engineering, MPSTME, NMIMS
- 7. Mr. Ainal Abdul Azeez, Assistant Professor, Department of Mechatronics Engineering, MPSTME, NMIMS

The proceedings were as follows:

Leave of absence is granted to Dr. Alka Mahajan, Dean, MPSTME, NMIMS

- Comments and suggestions received prior and incorporated.
- 1. The BoS members confirmed the minutes of meetings of BoS in Mechatronics Engineering held on 10th September, 2022.
- 2. The BoS members considered and deliberated upon the revision in the curricula of B Tech in Mechatronics Engineering. They approved the following:
 - A. Revision in Course Structure and Teaching & Examination Scheme of Semester III for the students admitted in AY 2022-23 onwards (Encl.-I a, I)
 - i. Renaming the course "Introduction to Digital Systems" to "Digital Logic Design" in Semester III. (The syllabus is approved by EXTC BoS).
 - B. Revision in Course Structure and Teaching & Examination Scheme and Syllabi of Semester V for the students admitted in AY 2021-22 onwards (Encl.-I b, II)
 - i. Renaming the course "Fundamentals of Control Systems" to "Classical Control Systems" and Moving from Semester IV to V (Approved).
 - ii. Introducing the course "Heat Flow Analysis" as Department Elective I.
 - iii. Revision in syllabus with change in teaching scheme from 2,0,1,3 to 3,0,0,3 (L,P,T,C) for the course "Industrial Engineering" (The syllabus is approved by Mechanical Engineering BoS)
 - iv. Introducing the course "Analysis of Fluid Machines" as Department Elective II.
 - C. Revision in Course Structure and Teaching & Examination Scheme and Syllabi of Semester VI for the students admitted in AY 2021-22 onwards (Encl.-I b, III)
 - i. Renaming the course "Research Methodology" to "Project Methodology" and revision in the syllabus with change in teaching scheme from 1,0,0,1 to 0,2,0,1 (L,P,T,C).
 - ii. Introducing the course "Interpersonal Skills" (The syllabus is approved by BSH BoS).
 - iii. Revision in syllabus of the course "Additive Manufacturing" as Department Elective IV (The syllabus is approved by Mechanical Engineering BoS).

- iv. Renaming the course "CAD/CAM/CIM" to "Virtual Design and Manufacturing" as Department Elective IV and revision in the syllabus.
- D. Introduction of Teaching and Examination Scheme and Syllabi of the following courses B Tech in Mechatronics Engineering, Semester VII for the students admitted in AY 2020-21 onwards (Encl.-IV)
 - i. Mechatronic Systems Design
 - ii. Robotic Systems Design
 - iii. Capstone Project
 - iv. Department Elective V
 - a. Industrial Robotics and Motion Control
 - b. Microelectromechanical Systems
 - c. Fluid Power Automation
 - d. Computational Methods in Engineering
 - v. Department Elective VI
 - a. Data Analysis and Mining
 - b. Smart System Communication
 - c. Robotic Process Automation (The syllabus is common with B Tech/ MBA Tech Computer and B Tech AI)
 - d. Simulated Mixed Reality
- E. Revision in Teaching & Examination Scheme and Syllabi of the following open elective courses offered by the Department of Mechatronics Engineering, Semester V & VI for the students of B Tech and MBA Tech programs except B Tech CSBS and B Tech CSE (DS) admitted in AY 2021-22 onwards (Encl.-V)
 - i. Revision in the syllabus with change in teaching scheme from 3,0,0,3 to 2,2,0,3 (L,P,T,C) for the course on "Supervisory Control and Data Acquisition" (except B Tech Mechatronics)
 - ii. Introducing the course "Elements of Automation" (except B Tech Mechatronics)

BoS Committee Suggestions -

The following suggestions given by Dr. Faruk Kazi for the course "Mechatronic Systems Design"

- 1. Address issues of sensor noise in Unit 3: Smart Sensors
- 2. Move use of fuzzy logic and neural network from Unit 3: Smart sensors to Unit 5: Controllers
- 3. Include applications of BLDC motor in Unit 4: Actuation Systems

Action taken -

The above suggestions are incorporated into the revised curriculum.

Chairperson

Dean, Board of Studies