Minutes of Meeting of the Board of Studies in Mechatronics held on 12th November, 2019

The meeting of the Board of Studies in Mechatronics of MPSTME was held on 12th November, 2019 at 11:00am in Mukesh Patel School of Technology Management and Engineering, Mumbai

Following Members were present:

1. Dr. N. T. Rao (in the chair)
2. Dr. Prasanna S. Gandhi (Member- attended viva skype)
3. Mr. Nitish Kati (Member)
4. Mr. H. M. Vedant (Member)
5. Mr. Bhuvan Damahe (Member)
6. Prof. Vinod Jain (Member)
7. Dr. U Ragavendran (Shirpur Member)
8. Prof. Sawankumar Naik (Member)
9. Prof. Ainal Abdul Azeez (Member)
10. Prof. Chetna Sharma (Member)
11. Prof. Venkatesh Deshmukh (Member)

Following members were granted leave of absence:

1. Mr. Aslam Adam (Member)
2. Mr. J. Gokhale (Member)
3. Dr. Ram Gaud (Shirpur Member)
4. Mr. Nikhilesh Sharma (Shirpur Member)
5. Dr. Basant Kumar Mohanty (Shirpur Member)
6. Dr. Vaishali Kulkarni (Member)
7. Dr. Archana Bhise (Member)
8. Dr. Asha Ingle (Member)
9. Dr. Manoj Sankhe (Member)
10. Dr. Ravi Terkar (Member)

Following agenda items were transacted:

1) Welcome and introductory remarks.

   The members were welcomed to the meeting and the external experts were thanked for giving their valuable time for the BoS.

2) The BoS members approved the Minutes of Meeting held on 15th November, 2018.

3) Proposed teaching scheme for 3rd & 4th year of B. Tech Mechatronics Engineering and syllabus for 3rd year of B. Tech Mechatronics Engineering.

Currently 1st and 2nd year students of B. Tech Mechatronics Engineering are following new B. Tech curriculum as per the revised AICTE guidelines.

The proposed teaching scheme and syllabus of B. Tech (Mechatronics Engg.) 3rd year (SEM V, VI) and proposed teaching scheme 4th year (Sem VII, Sem VIII) to be implemented in academic year 2020-21 was presented by Prof. Vinod Jain.

The members suggested the following amendments:

a) The Professional Elective course (PEC-2) "UNIX Programming" in Sem V to be replaced with subject of "Signals and Systems".
   In the subject of Signals and Systems Unit name 5 and 6 do not match with the given content. Hence units are renamed as per the content specified:
   Unit 5 is named as Analysis of continuous time system using Laplace transforms
   Unit 6 is named as Analysis of discrete time system using Z transforms

b) The Professional Elective course (PEC-2) "Wireless Communication" in Sem V to be replaced with subject of "Industrial Data Communication" which is more relevant to Industrial Automation field.
   In the subject of "Industrial Data Communication" unit 3 of Ethernet, TCP/IP needs to be revamped.
   Unit 6 of Wireless Technologies to include 6LoWPAN, 5G technology, Bluetooth low energy(BLE), HM10 module and remove Zigbee brand name, IIOT and RFID.

c) The subject of "Electro-Mechanical Workshop" to be introduced in Sem V. Members suggested that in Term Work Details, one Mini-Project with a group of maximum 3 students need to be specified as well as Presentation and Report Writing.

d) Unit 7 of the Professional Elective Course (PEC-1) "Materials Engineering" in Sem V to be included with the content on composite materials, smart materials and advanced materials with duration of 6 hours. Unit 3 Phase Diagrams to have duration of 4 hours.

e) The Professional Elective course (PEC-1) "Fluid Mechanics" in Sem V to be renamed as "Fluid Mechanics & Machinery".

f) In semester V, course title of "Financial Accounting" is changed to "Cost and Management Accounting for Engineers".

g) The Professional core course "PLC and Data Acquisition" is Sem VI to include content on connection of PLC with distant nodes.

h) The Professional core course "Mechanical Measurements and Instrumentation" in Sem VI is to be removed with content on Screw Thread Metrology and Gear Metrology from Unit 3 having duration of 5 hours. Unit 4 to have content on "Modern Optical Measurement and Metrology" with duration of 5 hours. Unit 5 to include Resonant Sensor, Optical Fiber based sensor, Grating Leakage with the duration of 10 hours.

i) The new professional core course of "Research Methodology" is to be introduced in Sem VI having 1 theory hour and two practical hours with the total 2 credits.

j) The Professional Elective course (PEC-3), "CAD/CAM/CIM" in Sem VI to include concept of smart manufacturing in Unit 6 having duration of 6 hours. The details of term work to include usage of SolidWorks/Catia/ProE.

k) The Professional Elective course (PEC-4), "Design of Machine Elements" in Sem VI to remove A4 size sheets from term work.

l) The Professional Elective course (PEC-4), "Additive Manufacturing" in Sem VI, Unit 8 to include AM file formats PLY, VRML, LEO and Unit 1 to include content on Metal Manufacturing, LASER cutting and Water jet cutting.

m) The Professional Elective course (PEC-3), having courses "Modeling and Simulation" in Sem VI and "Dynamic System Modeling and Analysis" in Sem VI to include Simulation based project in term work.

n) The Professional Elective course (PEC-5) "Signal Processing" in Sem VII to be replaced with subject of "Digital Signal & Image Processing".

o) "Human Machine Interface & Data Acquisition" to be introduced in addition to existing Open Elective-I in Sem VII.

p) The Professional Elective course (PEC-6) "Industrial Engineering" in Sem VII to be replaced with subject of "Industrial Engineering and Quality Management".

q) The Professional Elective course (PEC-5), "Automotive Electronics" in Sem VII to include content on Hybrid Electric Vehicle and Li-ion battery.

r) The Professional Elective course, "Bio-Mimicry", is to be added as PEC-7 in Sem VIII.

Since there were no other agenda items, the meeting ended with vote of thanks.

Prof. Vinod Jain

HOD, Mechatronics Engineering