

### DEPARTMENT OF MECHATRONICS ENGINEERING Minutes of Meeting-BoS -07<sup>th</sup> May, 2021

# MINUTES OF THE 2<sup>nd</sup> ONLINE MEETING

## BOARD OF STUDIES OF MECHATRONICS ENGINEERING

**DATE:** 07<sup>th</sup> May, 2021, Friday **Time:** 11.00 AM –2.30 PM

PLATFORM: Microsoft Team

Meeting Link: https://rb.gy/enn9rz

#### **IN ATTENDANCE:**

S. No	Name of the Expert	Designation	Capacity
1	Dr. V. Santhanam	Dr. V. Santhanam, Professor & Head, Department of Mechatronics Engineering, Rajalakshmi Engineering College, Chennai - 602 105. santhanam.v@rajalakshmi.edu.in Ph: 9840166401	AU Nominee
2	Dr. T. Asokan	Dr. T. Asokan, Professor & Head, Department of Engineering Design, Indian Institute of Technology Madras, Chennai – 600036 asok@iitm.ac.in Ph: 22574707	Academic Council nominated BoS Members
3	Dr. N. Selvaraj	Dr. N. Selvaraj, Professor, Department of Mechanical Engineering, National Institute of Technology Warangal, Telangana-506004 <a href="mailto:selva@nitw.ac.in">selva@nitw.ac.in</a> Ph:9989231847	



4	Dr. N. Manivannan	Mr. N. Manivannan Managing Director, Techland Automation, 196 Dindigul main road, Tiruchirappalli – 620001. info@techland.in Ph:9994304608	Industrialist
5.	Dr. D. Kannadassan	Dr. D. Kannadasan, Associate Professor, Center for Nanotechnology Research, Vellore Institute of Technology, Vellore-600 014 dkannadasan@vit.ac.in Ph:91-9944055243	Alumni

FACULTY OF MECHATRONICS ENGINEERING	MEMBERS
WECHATRONIES ENGINEERING	WENDERS

S. No	Name of the Faculty	Designation
1	Dr. K. Kannan	Associate Professor
2	Mr. G. Sakthivel	Assistant Professor
3	Mr. A. Arul Kumar	Assistant Professor
4	Mr. S. Kannappan	Assistant Professor
5	Mr. P. Balasundar	Assistant Professor
6	Mr. B. Aravind Kumar	Assistant Professor
7	Mr. A. Ganesan	Assistant Professor
8	Mr. S. Wesley Moses Samdoss	Assistant Professor



- 1. Dr. K. Kannan welcomed the gathering and introduced the external members to the faculty
- 2. Dr. K. Kannan presented the Vision and Mission statement of the Department.
- 3. Dr. K. Kannan presented the updated PEO & PSO of R2020 to get the approval of experts.
- 4. Dr. T. Asokan suggested to change the **Mechatronics system in to Mechatronics** systems in the PEO 1
- 5. Dr. N. Selvaraj & Dr. V. Santhanam said that the PEO & PSO are in correlation with the vision and mission statement of the department. All the experts are satisfied with the PEO & PSO statement and gave their approval.
- 6. Dr. K. Kannan presented the first BOS meeting minutes for getting the approval from experts which has been already sent through the mail to the experts on 24<sup>th</sup> August 2020. All the experts gave their approval.
- 7. Experts gave their approval through mail for the updated curriculum sent to them through mail on 16<sup>th</sup> September 2020.
- 8. Dr. N. Selvaraj enquired about Theory cum Laboratory course and he also asked whether all course code is verified
- 9. Dr. N. Selvaraj said that it is good decision taken to have Industrial project in 8<sup>th</sup> semester
- 10. Dr. T. Asokan enquired whether there is corresponding laboratory course for Power Electronics Drives subject in 5<sup>th</sup> semester. All the experts gave their approval for the proposed curriculum from I Semester to VIII Semester including Professional Electives, Open Electives and Audit Courses.
- 11. Dr. K. Kannan presented the guidelines for framing UG curriculum and also the process adopted for framing curriculum and syllabi.
- 12. Dr. K. Kannan presented the R2020 syllabus for core subjects in III to VIII semester to get the suggestion and approval from the experts.



- 13. Dr. D. Kannadassan enquired whether there are any pre-requisites needed for Digital Electronics
- 14. Dr. D. Kannadassan suggested that circuit components are less in analog devices and circuits.
- 15. Dr. N. Selvaraj suggested including the text book "Strength of Materials by Timoshenko" for Solid Mechanics.
- Dr. N. Selvaraj suggested changing the Basics of CNC into Introduction to CNC in Unit
   III & including a topic comparison of conventional and unconventional machining in
   Unit IV of Manufacturing Technology.
- 17. Dr. V. Santhanam suggested to add a topic on RasperryPI in Unit -III of Microprocessor and Microcontroller
- 18. Dr. N. Selvaraj suggested to add a topic on contact and non-contact sensor in Unit I of Sensor and Instrumentation
- 19. Dr. N. Manivannan suggested to include wiring techniques and details about specifications and manufacturer of sensors in Sensor and Instrumentation
- 20. Dr. N. Manivannan suggested to add experiments related to temperature or pressure transmitter in Manufacturing Technology & Sensor Laboratory
- 21. Dr. D. Kannadassan suggested to include designing and testing software tools like "MULTISIM" in Manufacturing Technology & Sensor Laboratory
- 22. Dr. V. Santhanam suggested to add topic related to gear design in Design of Machine Elements. He also suggested revising the syllabus of Design of Machine Elements specific to our department with the inclusion of some relevant topics from Design of Transmission Systems.
- 23. Dr. N. Selvaraj suggested adding a topic related to Design of Miscellaneous components like Screw jack, Engine in Design of Machine Elements.
- 24. Dr. V. Santhanam suggested to remove Multi cylinder in line and V- Engine topic from Dynamics of Machines and asked to revise the syllabus specific to Mechatronics students.



- 25. Dr. T. Asokan suggested revising the syllabus of Design of Mechatronics system since it has more modelling related topics rather than design.
- 26. Dr. N. Selvaraj suggested to add a topics Introduction to Hydro-pneumatic system and Introduction to Fluidics in Unit IV of Fluid Power System
- 27. Dr. T. Asokan suggested to give more importance to circuit design and trouble shooting of circuits in Fluid Power System
- 28. Dr. N. Manivannan suggested to include details related to PLC manufacturer, case studies and addressing component of I/O in Industrial Automation
- 29. Dr. N. Selvaraj suggested to include a topic Introduction to Computer Aided Part Programming (APT) in Computer Aided Design and Manufacturing
- 30. Dr. N. Selvaraj suggested to include "Computer Control of Manufacturing Systems by Yoram Koren" as a reference book for Computer Aided Design and Manufacturing
- 31. Dr. T. Asokan suggested to remove the topics that are already learnt (Power Transmission) from Unit -I of Robotics and Machine vision.
- 32. Dr. N. Manivannan suggested to include Machine Vision controller details and to use computer open CV software in Robotics and Machine Vision System.
- 33. Dr. K. Kannan presented the Professional elective syllabus to get the suggestion and approval from the experts
- 34. Dr. V. Santhanam suggested including transformer and servomotor topic in Special Electrical Machine.
- 35. Dr. T. Asokan suggested to check the sentence framing in Unit III of Autotronics and also to include the word sensor wherever necessary.
- 36. Dr. N. Manivannan suggested including topics related to AUTOSHARE and CAN tools in Autotronics.
- 37. Dr. N. Selvaraj suggested to include material handling system instead of AGV in Unit IV of Computer Integrated Manufacturing.



- 38. Dr. T. Asokan conveyed that Computer Integrated Manufacturing syllabus is vast and he suggested removing the sub topics wherever possible.
- 39. Dr. N. Selvaraj suggested including topics difference between additive & subtractive manufacturing and drawbacks of subtractive manufacturing in Additive Manufacturing paper. He also suggested including a reference book related to CAD.
- 40. Dr. N. Selvaraj suggested including case studies from journal paper in Design of Experiments.
- 41. Dr. N. Selvaraj suggested including Introduction to Reliability in Maintenance Engineering.
- 42. Dr. N. Selvaraj suggested to include Introduction to FMC / FMS in Flexible Manufacturing System and he also suggested to include a text book "Fundamentals of FMS & FMC by William Jaken"
- 43. Dr. N. Manivannan suggested including all protocols in Embedded Systems Design.
- 44. Dr. N. Selvaraj suggested that it would be better to change Unit IV title in to Testing of Composite Materials in Composite Materials.
- 45. Dr. N. Selvaraj suggested to include "Assembly Automation and Product Design by Geoffrey Boothroyd" has a text book in Automation System Design.
- 46. Dr. V. Santhanam suggested to make revision in syllabus of Data Science for Business Decision
- 47. Dr. K. Kannan presented the Audit course syllabus to get the suggestion and approval from the experts.
- 48. Dr. N. Selvaraj suggested making change in title of Stress Management by Yoga as Stress Reliving Management by Yoga.
- 49. Dr. N. Selvaraj & Dr. N. Manivannan suggested that the syllabus of Sanga Tamil Literature Appreciation is vast and it cannot be given in five units.
- 50. Dr. N. Selvaraj suggested removing the hyperlink given the text and reference book given in some places.



- 51. Dr. K. Kannan presented the online course related details to get the suggestion and approval from the experts. All experts gave their approval.
- 52. Dr. V. Santhanam suggested to recommend the online courses which are not already studied by the students earlier.
- 53. Dr. K. Kannan presented the open elective course syllabus to get the suggestion and approval from the experts. Experts asked to revise the syllabus of Modeling and Simulation.
- 54. Dr. N. Selvaraj gave a general suggestion to follow same number of course objective & outcome for all courses throughout the syllabus and he also suggested to include minimum of two latest edition text book and four reference books
- 55. Dr. K. Kannan presented the details of three-member committee for Industry internship, Value added course and Online course to get the suggestion and got approval from the experts.
- 56. All the experts gave their approval for the details related to three-member committee presented by Dr. K. Kannan.
- 57. Dr. K. Kannan presented the list of external examiners for practical examination, subject expert and question paper setting & scrutiny expert to get the suggestion and approval from the experts.
- 58. All the experts gave their approval for the list of experts presented by Dr. K. Kannan.
- 59. Dr. K. Kannan presented the report on performance analysis of End semester examination conducted during the period of Dec 2020/ Jan 2021to the experts
- 60. Dr. K. Kannan conveyed that our department has applied for NBA Accreditations and waiting for NBA committee visit.
- 61. Mr. A. Arul Kumar proposed the vote of thanks to all the external and internal experts and the meeting adjourned.