



MANAKULA VINAYAGAR INSTITUTE OF TECHNOLOGY



An Autonomous Institution

Affiliated to Pondicherry University, Approved by AICTE, New Delhi,

Accredited by NAAC with 'A' Grade

Kalitheerthalkuppam, Puducherry- 605 107.

Department of Mechanical Engineering

Minutes of the Meeting of Board of Studies for Department of Mechanical Engineering

held on 12.06.2026

The meeting of Board of Studies for the Department of Mechanical Engineering was held on 12.06.26 at 10.00 am on online mode. (**Venue:** Department of Mechanical Engineering,

Zoom Link:

<https://us06web.zoom.us/j/86754390358?pwd=X4Q70KLFEI7kaKuowWVCzDa90atQ1s.1>)

Members attended:

Sl. No.	Name with designation & Address	Category
1.	Dr. B. RADJARAM Professor and Head, Department of Mechanical Engineering, Manakula Vinayagar Institute of Technology, Puducherry.	Chairman
2.	Dr. S. RAVI Professor & Head , Department of Manufacturing Engg. Annamalai University, Chidambaram, Tamil Nadu.	University Nominee
3.	Dr. T. SENTHILVELAN Professor & Former Head, Department of Mechanical Engineering, Puducherry Technological University Puducherry.	Expert Member
4.	Dr. N. SENDHIL KUMAR- Dean (Student Welfare), Associate Professor, Department of Mechanical Engineering, National Institute of Technology, Karaikal Puducherry.	Expert Member
5.	Dr. R.MURUGANANDHAN, Associate Professor, Department of Mechanical Engineering, College of Engg., Anna University, Guindy, Chennai.	Expert Member
6.	Er A. NARAYANAN- Vice president, MGM-SAFL, Chennai.	Industry Expert
7.	Er. G. VIGNESH KUMAR (2015-19), Consultant, KPMG Global services, Bangalore.	Alumni member



8.	All faculty members of the Department of Mechanical Engineering.	Members
9.	Dr. Govindan Vedhanayagam , Associate Professor and Head, Department of Robotics and Automation.	Co-opt Member
10.	Mr. S. Ravichandran , Associate Professor, Department of Mathematics	Co-opt Member
11.	Mr. K. Anand , Associate Professor, Department of Physics.	Co-opt Member
12.	Mr. S. Balaji , Assistant Professor, Department of Computer Science.	Co-opt Member
13.	Mr. D. Balaji , Assistant Professor, Department of Electrical & Electronics Engg.	Co-opt Member

Agenda for BOS meeting:

- 1) Welcome Address by Chairperson, Board of Studies (BoS).
- 2) To confirm the Minutes of the 2nd Board of Studies Meeting held on 29.01.2026
- 3) To approve the 2nd Year curriculum and syllabi after incorporating the suggested comments by the experts.
- 4) To approve proposed Curriculum and Syllabi for Honors course- Robotics Engineering & Minors courses.
- 5) Any other item with the permission of chair

Agenda 1: Welcome Address and Introduction

At the commencement of the meeting, Dr. B. Radjaram, Chairman – BoS, welcomed all the BoS members and thanked them for their valuable participation. The Chairman introduced the faculty members of the Department of Mechanical Engineering and the co-opted members from various departments of the institution. The meeting then proceeded with the agenda items.

Agenda 2: To confirm the Minutes of the 2nd Board of Studies Meeting held on 29.01.2026.

The Chairman presented and discussed the minutes of the 2nd BoS Meeting with all members. He also summarized the 2nd Year syllabus and curriculum prepared as per the recommendations of the BoS members. The Chairman confirmed with all members that the 2nd BoS meeting Minutes stand approved.

Agenda 3: To approve the 2nd Year curriculum and syllabi after incorporating the suggested comments by the experts.



The Chairman confirmed with all members that the suggestions provided by the members, along with the required changes were incorporated into the 2nd Year syllabus and kept for further discussions and suggestions.

1. **Prof. Dr. N. Sendhil Kumar** enquired whether the topic "**Theories of Failure**" included in the **Mechanics of Solids course or the Machine Design course**. It was clarified that the topic is **already covered in the Machine Design course** and, therefore, need not be included in the Mechanics of Solids syllabus.
2. **Prof. Dr. T. Senthilvelan and Prof. Dr. S. Ravi** suggested incorporating **Part Programming into the CNC Laboratory experiments**. Accordingly, it was included in both the **study of CNC machines and part programming exercises as theoretical components** prior to conducting the CNC machine experiments in the Advanced Manufacturing Process Laboratory.
3. **Prof. Dr. R. Muruganandhan**, had suggested corrections to the unit titles in the Computer-Aided Manufacturing and Design (CAMD) syllabus during the 2nd BoS meeting. **The revised unit titles were presented in the 3rd BoS meeting, and the changes were approved by Prof. Dr. R. Muruganandhan.**
4. **Dr. Senthil Kumar** suggested that the topic "**Turbulent Flow**" is currently not included in the Fluid Mechanics syllabus it is essential topic because it will be asked in Interview. If this topic is already covered in the Heat and Mass Transfer subject, there is no need to include it again. However, if it is not covered in any other subject, he recommended adding **Turbulent Flow** to the **Fluid Mechanics and Machinery** course and therefore it was added in **Unit-II**.
5. Dr. Senthil Kumar also suggested including **Fox and McDonald's Introduction to Fluid Mechanics** textbook in the reference list for the **Fluid Mechanics and Machinery Laboratory** course. He further recommended removing the detailed Unit I, Unit II, and Unit III syllabus contents, as only the **list of experiments** is sufficient for a laboratory course.
6. **Dr. Muruganandam**, suggested adding **Major Loss and Minor Loss** experiments to the **Fluid Mechanics and Machinery Laboratory** course.
7. **Dr. Narayanan**, observed that several Fluid Mechanics laboratory experiments have become outdated, as pointed out by **Chairman**. He suggested introducing experiments and concepts related to **Positive Displacement Pumps and Metering**



Pumps, as these pumps are widely used in modern process industries. This will help students gain industry-relevant knowledge and improve their employability.

8. **Dr. Senthil Kumar** pointed out that topics related to **Reciprocating Compressors** are not included in the **Thermal Engineering** syllabus, although experiments on reciprocating compressors are listed in the **Thermal Engineering Laboratory**. He suggested that the topic should be included in Thermal Engineering or any other suitable theory course before the laboratory course.
9. For the **Thermal Engineering Laboratory**, Dr. Senthil Kumar recommended adding the following textbooks to the reference list with latest version of the books:
 - **P. L. Ballaney- Thermal Engineering**
 - **V. Ganesan – Internal Combustion Engines**
 - **C. P. Arora – Refrigeration and Air Conditioning**
10. Dr. Senthil Kumar also suggested adding **Refrigeration Cycle Theory** to the **Applied Thermodynamics** course under the **Psychrometrics** unit.
11. Dr. T. Senthilvelan suggested including **Compression Test, Fatigue Test, and Creep Test** in the practical component under **Unit V** of the integrated course **Metallurgy and Materials Science & Lab**.
12. Dr. R. Muruganandhan suggested that **experiment numbers need not be mentioned** in the syllabus of the integrated course **Metallurgy and Materials Science & Lab**.
13. Dr. T. Senthilvelan recommended that under **Unit III**, the **Objectives of Heat Treatment of Steel** and the **TTT Diagram** shall be included before the **Annealing process** for the integrated course **Metallurgy and Materials Science & Lab**.
14. **Dr. T. Senthilvelan** suggested retaining **Vijaya Raghavan** in the Textbooks section. And recommended including **George E. Dieter, Mechanical Metallurgy & William D. Callister Jr.** in the Reference Books section. Adding to that he suggested including the **year of publication** for all prescribed textbooks and reference books.
15. **Dr. T. Senthilvelan** suggested for the theory course **Kinematics & Dynamics of Machinery** that the **year of publication** should be mentioned for all textbooks and reference books, and preference should be given to the **latest editions published from 2020 onwards**, wherever available.



16. Regarding Dynamics of Machinery Lab, Dr. T. Senthilvelan pointed out that the **year of publication** shall be mentioned for all reference books prescribed for the course.
17. **Prof. Dr. R. Muruganandhan** recommended that the reference book by R. S. Khurmi and J. K. Gupta may be removed from the reference list. Also he mentioned that S. S. Rattan's Theory of Machines may be included in the reference section in place of the Khurmi and Gupta book for the practical course Dynamics of Machinery Lab.
18. **The chairman** explained about the non credit courses and the **Employability Enhancement Course** and the **Mandatory Course** for both **3rd & 4th semester**.
19. Also **chairman** requested for the suggestion from the BoS members on the list of Value added courses availed and their suggestions on selection of courses and Dr. T. Senthilvelan sir suggested to add softwares of smart manufacturing technology i.e. **CAM software** along with **METFORM software** which will enable students to learn about the smart manufacturing technologies available.
20. Narayanan suggested adding **Production planning, Batch control and line function** and **chairman** affirmed that the suggested will be added in **Production Operation Management** course in 5th semester along with **international pricing and methodologies to handle GeM portal**.
21. **Dr. Senthil Kumar** enquired about **SDG practice** in the curriculum, **chairman** clarified the incorporation of the SDG in the subjects and also mentioned about the inclusion of Sustainability concepts in the 2nd semester namely in **Environmental science & Sustainability**.
22. **Dr. Senthilkumar** enquired about the Non- Conventional machining and the chairman clarified that it is been included in the manufacturing process in the 1st semester.
23. **Dr. P. Natarajan** explained the detailed revisions made in the Mechatronics Robotics & Control subject syllabus based on the suggestions and recommendations provided by the members during the 2nd Board of Studies (BoS) meeting.
24. **Prof. Dr. T. Senthilvelan** suggested updating the reference and textbook list by including the latest editions of relevant books.
25. **Prof. Dr. T. Senthilvelan** expressed satisfaction with the revised syllabus and stated that the modifications made were appropriate and comprehensive.



26. **Prof. Dr. N. Sendhil Kumar** suggested incorporating the topic "Human Collaborative Robots (Cobots)" in Unit V to align the syllabus with recent developments in robotics and automation.
27. Regarding the Robotics Laboratory course, **Prof. Dr. T. Senthilvelan** suggested introducing a separate experiment in Cycle III focusing on robot programming. The experiment may require students to develop and execute programs for any three robotic applications

Agenda 5: To approve proposed Curriculum and Syllabi for Honors course- Robotics Engineering & Minor course program.

1. **The chairman** presented the **Honors and Minors courses** and **Dr.S.Ravi** sir enquired about the dept faculty handling the subjects.
2. As a honor course Robotics Engineering is been presented, in which **Dr. Senthil Kumar** enquired about the software are available for the robotics handling. **Dr.Govindan.V**, appraised about the software available in the Robotics Lab.
3. **Dr.T.Senthilvelan** appreciated about the contents of the syllabus of Robotics Engineering is adequate for the students.
4. In the minor course **Dr.T.Senthilvelan** suggested to change the title of **3D printing** into **Additive manufacturing &3D printing** and suggested to latest 5 yrs of books in the textbook section and in the reference section.
5. **Dr.Senthil Kumar** suggested to add composite materials in the Additive manufacturing & 3D printing and also told to rename the as "**Sustainable Energy Technologies**" and discussed about the curriculum of the courses. Two more minor courses were also proposed – **Industrial Automation & Defense Technology**.
6. **Dr.T.Senthilvelan** pointed that the application based contents are lacking in the Industrial Automation course and suggested to incorporate the application based contents in the last unit in the course.

Resolution:

- The Chairman confirmed with all members that the **second BoS Minutes** stand approved.



- The BoS members approved the **revised 2nd Year syllabus and curriculum (R2025)**. (i.e 3rd & 4th Semester)
- The BoS members approved the **Honour degree in Robotics Engineering** and the **Minor degree** course;
 - **Additive Manufacturing and 3D Printing.**
 - **Industrial Automation.**
 - **Sustainable Energy Technologies.**
 - **Defense Technology.**

The curriculum & syllabus of above are approved by the BoS members.

- The members provided suggestions for improvement in **IInd year(IIIrd & IVth semester)** syllabus.
- The Chairman agreed to incorporate the recommendations in the revised curriculum draft.

The meeting is ended with vote of thanks by Chairman.



A handwritten signature in green ink, appearing to read "B. Radjaram", followed by a horizontal line.

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