AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY

(Autonomous)

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Tamaram (V), Makavarapalem, Narsipatnam (RD), Anakapalle Dist., Pin-531113.
www.avanthienggcollege.ac.in, mail: principal@avanthienggcollege.ac.in

DEPARTMENT OF MECHANICAL ENGINEERING

Minutes of the 2nd Board of Studies (BOS) Meeting on Curriculum and Syllabus Approval

Meeting Mode: Hybrid (Offline and Online)
Date & Time: 27th May 2025, 11:00 AM to 12:30 PM
Venue: Conference Hall, AIET, Makavarapalem
Zoom Meeting
Link: https://us06web.zoom.us/j/90309863?pwd=YbCxwrCJ0uwgScGEnI3ynQEd85PU3M.1&omn=84350089049

AGENDA:

1. **Welcome Address** by the Chairperson, BoS.
2. To discuss, review and approve the **proposed curriculum for B.Tech. Mechanical Engineering – II Year (I & II Semesters)**, effective from the academic year **2025–2026**.
3. To discuss, review and approve the **Guidelines for the Honors Programme in Additive Manufacturing (Regulations – R24)** for students admitted from the academic year **2024-2025** onwards.
4. To discuss, review and approve the **Guidelines for the Minor Programme in Robotics & Automation system (Regulations – R24)** for students admitted from the academic year **2024-2025** onwards.
5. To discuss and finalize the syllabus for **II B.Tech. – I Semester** (Mechanical Engineering), for the following courses:
   i. Numerical Methods and Transform Techniques
   ii. Thermodynamics
   iii. CAD/CAM
   iv. Mechanics of Solids
   v. Material Science and Metallurgy
   vi. Mechanics of Solids and Materials Science Lab
   vii. Computer-Aided modeling lab
   viii. Soft Skills & Verbal Ability
   ix. Design Thinking & Innovation
   x. Indian Traditional Knowledge
6. To discuss and finalize the syllabus for **II B.Tech. – II Semester** (Mechanical Engineering) for the following courses:
   i. Complex variables and statistical Methods
   ii. Universal Human Values-Understading harmony and Ethical Human Conduct
   iii. Manufacturing processes
   iv. Fluid Mechanics & Hydraulic Machines
   v. Industrial Management
   vi. Fluid Mechanics & Hydraulic Machines Lab
   vii. Manufacturing processes Lab
   viii. Soft skills and verbal ability
   ix. Design Thinking & Innovation
   x. Indian traditional knowledge
7. To discuss and finalize the syllabus for the **Honors Programme in Additive Manufacturing**:

8. To discuss and finalize the syllabus for the **Minor Programme in Robotics & Automation system**:
9. To suggest improvements in **Teaching-Learning Methodologies**, and finalize **Co-Curricular and Extra-Curricular Activities** for the academic year **2025–2026**.
10. To discuss any other academic matters with the permission of the Chair.
11. Any miscellaneous issues.

Members Present:
The following members attended the Board of Studies (BOS) Meeting of the Mechanical Engineering Department held on 27th May 2025:

S.No.	Name & Designation	Role in BoS
1.	Dr. V. Hari Kiran, HOD, Mechanical Engineering, AIETM	Chairperson
2.	Dr. G. Swami Naidu, Professor, JNTU-GV-CEV(A)	University Nominee (JNTU-GV)
3.	Dr. E. Anil Kumar, Professor, IIT Tirupati	Expert Member (Academic Council Nominee)
4.	Dr. K. N. S. Suman, Professor, AUCE(A), Andhra University	Expert Member (Academic Council Nominee)
5.	Dr. R. Sundara Ramam, Professor, VIIT(A), Visakhapatnam	Expert from outside Autonomous College
6.	Sri. S. V. Mallikarjuna Rao, Senior Team Lead, Tata Motors	Industry Nominee
7.	Sri. Chakravarthula Jaya Srivatsa, Sr. Design Engineer, Bosch	Alumni Nominee
8.	Dr. C P V N J Mohan Rao,	Principal, AIETM(A)
9.	All Faculty Members,	Members, Department of Mechanical Engineering, AIETM

Proceedings of the Meeting
The meeting commenced at 11:00 AM.

Item 1: Welcome Address
The meeting was called to order by **Dr. C. P. V. N. J. Mohan Rao, Principal of AIET(A)**. He warmly greeted all the BoS members and expressed his sincere thanks for their crucial guidance, which led to the successful completion and implementation of the syllabus for the I-I and I-II semesters. Following the Principal's remarks, **Dr. V. Hari Kiran, Chairperson of the Board of Studies** and Head of the Department, formally welcomed the committee. He thanked them for their valuable time and anticipated their expert suggestions for strengthening the academic framework of the department for the second-year curriculum.

Item 2, 5 & 6: Discussion and Approval of B.Tech. Mechanical Engineering – II Year (I & II Semesters) Curriculum and Syllabus (Regulations – R24).

The Chairperson presented the proposed course structure and detailed syllabus for the II B.Tech I & II Semesters, effective from the academic year 2025–2026. The floor was then opened for discussion.

- **Dr. G. Swami Naidu**, the esteemed University Nominee from JNTU-GV, initiated the discussion by inquiring about the alignment of the proposed R24 syllabus with the university's R23 regulations. He sought clarification on the nature and justification of any deviations.
- **The Chairperson, Dr. V. Harikiran,** addressed the query by assuring the board that the R24 curriculum was developed with the JNTU-GV R23 syllabus as its foundational framework. He explained that the modifications are primarily minor revisions intended to leverage the flexibility granted by autonomy. These changes are strategically aimed at enhancing the curriculum with recent industry-relevant topics and pedagogical approaches specific to the goals of AIET, while ensuring the core objectives and learning outcomes remain in complete alignment with the university's standards. The committee expressed its satisfaction with the detailed explanation.

- **Discussion on CAD/CAM Placement:**
  - **Dr. Sundara Raman** suggested that the CAD/CAM course could be moved to a later semester to allow students to build a stronger foundation in core subjects first.
  - **The Chairperson, Dr. V. Harikiran,** explained that introducing CAD/CAM in the II-I semester is a strategic decision to provide students with early exposure to design and manufacturing software. This approach enables them to apply these skills in subsequent mini-projects and internships, making them more industry-ready.
  - **Sri. Srivatsa (Alumni)**, building on this, recommended incorporating industry-standard software like **CATIA, Unigraphics (NX), and Creo** into the Computer-Aided Modeling Lab. He noted that his company, Bosch, has recently migrated from CATIA to Unigraphics, highlighting the importance of exposing students to multiple platforms.
  - **The Chairperson** thanked Sri. Srivatsa for the valuable industry insight and assured the board that the lab curriculum would be updated to include hands-on sessions with these software packages to enhance student employability.
- **Discussion on Thermodynamics Syllabus:**
  - **Dr. K. N. S. Suman** pointed out the placement of the Refrigeration and Air-Conditioning (RAC) topic within the core Thermodynamics course. He suggested reviewing if it should be a part of the basic course or a more advanced one.
  - **The Chairperson** clarified that a foundational chapter on RAC is included in the II-II semester Thermodynamics course to provide a comprehensive overview of thermal engineering principles. The detailed, advanced concepts will be covered in a dedicated elective in higher semesters. The board agreed with this structured approach.
- **Approval:** After a thorough review and incorporating the suggestions, the proposed curriculum and syllabi for the II year were unanimously approved by the board.

Item 3 & 7: Discussion and Approval of Guidelines and Syllabus for Honors Programme in Additive Manufacturing (R24).

The guidelines and proposed syllabus for the Honors Programme were presented.

- **Dr. K. N. S. Suman** raised a concern about offering only a single stream (Additive Manufacturing) for the Honors program, suggesting that more options could be provided.

- **The Chairperson** explained that Additive Manufacturing was chosen as the initial offering due to its high industry demand and the department's faculty expertise and lab infrastructure. He assured the committee that the department plans to introduce more streams in the future based on student interest and resource availability.
- **Prof. Anil Kumar** inquired about the criteria for selecting NPTEL/MOOC courses for the Honors program and the flexibility in credit distribution.
- **The Chairperson** elaborated that a departmental committee will approve a list of relevant, high-quality NPTEL/MOOCs each semester. Students can choose from this list, and the credit framework adheres strictly to the R24 regulations set by the college's academic council, ensuring standardization and quality.
- **Approval:** The guidelines and syllabus for the Honors Programme in Additive Manufacturing were approved.

Item 4 & 8: Discussion and Approval of Guidelines and Syllabus for Minor Programme in Robotics & Automation System (R24).

The guidelines and syllabus for the Minor Programme were presented.

- **Prof. Anil Kumar** questioned the structure, eligibility criteria, and course overlap for students opting for the Minor. **Dr. Sundara Raman** also sought clarification on the range of Minor programs offered.
- **Pricipal AIET(A)** explained that the Minor in Robotics & Automation is designed to be interdisciplinary and has clear eligibility criteria defined in the R24 regulations to prevent significant academic overload. He clarified that this is one of several Minor programs being offered at the institutional level and is tailored for non-mechanical engineering students to foster cross-disciplinary skills.
- **Approval:** The guidelines and syllabus for the Minor Programme in Robotics & Automation System were approved.

Item 9: Suggestions on Teaching-Learning Methodologies and Co-Curricular/Extra-Curricular Activities.

The committee discussed enhancing the teaching-learning process. It was resolved to increase the number of guest lectures by industry experts, organize more workshops on emerging technologies, and encourage students to participate in national-level technical competitions and hackathons.

Item 10: Discussion on any other academic matters.

- **Dr. K. N. S. Suman** suggested that the **Theory of Machines** course could be shifted to an earlier semester to better align with its prerequisite subjects like Engineering Mechanics.
- **The Chairperson, Dr. V. Harikiran,** acknowledged the merit of the suggestion. He stated that since the overall curriculum structure for R24 has been framed, this valuable input will be formally recorded and strongly considered during the next curriculum revision cycle.

Item11:MiscellaneousIssues.

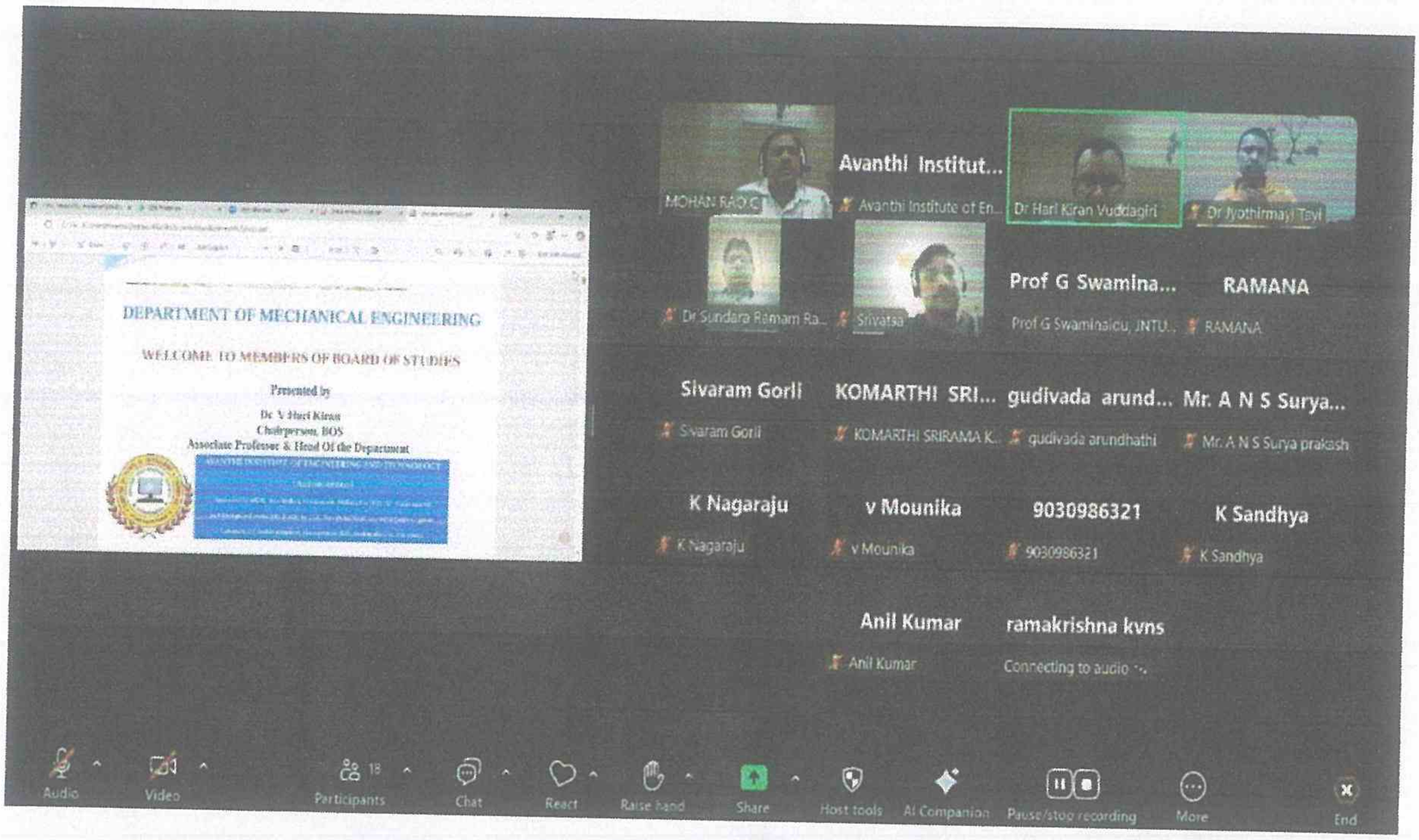
No other miscellaneous issues were raised by the members.

Key Resolutions

1. **Resolved** to approve the curriculum and syllabi for B.Tech. Mechanical Engineering – II Year (I & II Semesters) under R24 regulations, effective from the academic year 2025–2026.
2. **Resolved** to approve the guidelines and syllabus for the Honors Programme in Additive Manufacturing.
3. **Resolved** to approve the guidelines and syllabus for the Minor Programme in Robotics & Automation System.

4. **Resolved** to enhance co-curricular and extra-curricular activities for the academic year 2025-2026 by organizing more workshops and expert lectures.

The meeting concluded at 12:30 PM with a vote of thanks by the Chairperson to all the members for their constructive feedback and valuable contributions.



Members Present:

S. No	Board members	Signature
1.	Dr. G. Swami Naidu, Profeesor	Online (Zoom)
2.	Dr.E.AnilKumar, Professor	Online (Zoom)
3.	Dr. K. N. S. Suman, Professor	Online (Zoom)
4.	Sri. S. V. Mallikarjuna Rao, Senior Team Lead	Online (Zoom)
5.	Dr. R. Sundara Ramam, Professor	Online (Zoom)
6.	Sri. Chakravarthula Jaya Srivatsa, Sr. Design Engineer	Online (Zoom)
7.	Dr. C P V N J Mohan Rao, Professor	
8.	Dr. V. Hari Kiran (Chairperson).	
9.	Mr. A N S Surya Prakash, Assistant Professor	
10.	Mrs. P Sadhana, Assistant Professor	
10.	Mr. K Naga Raju, Assistant Professor	
11.	Mr. G SivaRam, Assistant Professor	
12.	Mrs. Y Jaya Santhoshi, Assistant Professor	
13.	Mr. G S M Reddy, Assistant Professor	
14.	Mr. K V N S Rama Krishna, Assistant Professor	
15.	Mr. B Rama Krishna, Assistant Professr	
16.	Mr. P Ramana Babu, Assistant Professor	
17.	Mrs. V Mounica, Assistant Professor	
18.	Mr. V V Naidu, Assistant Professor	
19.	Mrs. K Sandhya, Assistant Professor	
20.	Mr. K Sriram Kumar, Assistant Professor	
21.	Mrs. G A L Rekha, Assistant Professor	

25/6/22

Yours truly,
Dr. V Hari Kiran,
BoS, Chairperson (ME), AIETM.

Chairperson
Board of Studies (ME)
Avanthi Inst. of Engg. & Tech (Autonomous)
Makavarapalem (V), Anakapalle (Dist)-531113