



SRI RAMAKRISHNA INSTITUTE OF TECHNOLOGY

[Educational Service : SNR Sons Charitable Trust]

[Autonomous Institution, Reaccredited by NAAC with 'A' Grade, ISO 21001:2018 Certified]

[Approved by AICTE New Delhi, Permanently Affiliated to Anna University, Chennai]

Coimbatore - 641 010.



DEPARTMENT OF MECHANICAL ENGINEERING

MoM- BOARD OF STUDIES (BOS)

Date: 08.05.2026

Minutes of the 13th Board of Studies (BOS) meeting for the UG (B.E. Mechanical Engineering) Program held on 08.05.2026 at 10:00 AM in the Department of Mechanical Engineering.

The following members attended the meeting:

S.No	Name	Designation	Role in BOS
1	Dr. B. Chokkalingam	HOD/ME	Chairperson
2	Dr. K. Kumaravel	Professor	University Nominee
3	Dr. V. Prabhu Raja	Professor	Subject Expert
4	Dr. K. Leo Dev Wins	Professor	Subject Expert
5	Dr. V. S. Saravanan	Industry Expert	Industrial Representative
6	Mr. M. Jayaprakash	Design Engineer - R&D, NN Engineering Products	Alumni Member
7	Dr. S. Benjamin Franklin	ASP/ME	Internal Member Faculty
8	Mr. B. Varun	AP/ME	Internal Member Faculty
9	Mr. R. Immanual	AP/ME	Committee Coordinator
10	Dr. R. Tamilselvan	AP/ME	Internal Member Faculty
11	Mr. S. Veerakumar	AP/ME	Internal Member Faculty



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12	Mr. R. Sudharshan	AP/ME	Internal Member	Faculty
13	Mr. K. Sambath	AP/ME	Internal Member	Faculty

The Chairperson of the Board of Studies (BOS) warmly welcomed the members and initiated the proceedings by presenting the following agenda items.

ITEM 1: Dissemination of Vision and Mission of the Department/Institution/PEOs/POs/PSOs

The Chairperson presented the Vision and Mission of the Institution and Department, along with the Program Educational Objectives (PEOs), Program Outcomes (POs), and Program Specific Outcomes (PSOs) for the B.E. Mechanical Engineering program.

Vision of the Institution:

To develop into a World Class Technological Institute with centers of excellence in various disciplines by providing quality and value-based education with continuous up gradation of infrastructure, human resources and teaching-learning process.

Mission of the Institution:

To produce Quality Engineers, Scientists and Managers equipped with unbounded technical skills, domain knowledge and excellent moral values, for the advancement of the industry, business and for the emancipation of society.

Vision of the Department:

To be recognised as a leading Mechanical Engineering department in the region committed to pursuit of excellence and professional practices in engineering along with human values and social responsiveness to improve the quality of life in society.

Mission of the Department:

- To prepare quality Mechanical Engineers through rigorous theoretical and practical training.
- To develop innovative research and development through State of the Art Laboratories.
- To inculcate professional ethics and human values through moral education.

Program Educational Objectives (PEOs):



PEO 1: Graduates who effectively demonstrate Mechanical Engineering knowledge and entrepreneurial skills by providing practical solutions.

PEO 2: Graduates who effectively demonstrate professionalism in multidisciplinary engineering environment, leadership quality and teamwork.

PEO 3: Graduates who make contributions to knowledge and establish best engineering practice through research and development.

PEO 4: Graduates who demonstrate an ethical commitment to the community and the profession through involvement with professional organizations and society.

PEO 5: Graduates who engage in life-long learning as demonstrated through career advancement.

Program Specific Outcomes (PSOs):

PSO 1: Ability to analyze and solve mechanical engineering problems relevant to thermal engineering, manufacturing engineering, design engineering and mechatronics engineering.

PSO 2: Ability to engage in multi-disciplinary research and to exhibit ethical code of conduct in engineering practices for the betterment of society.

The Board members acknowledged and approved the Vision, Mission, PEOs, POs, and PSOs.

ITEM 2: Curriculum and Syllabus under Regulation 2025

The department presented the comprehensive curriculum structure for B.E. Mechanical Engineering (Regulation 2025). The curriculum was reviewed and approved in the 12th BOS meeting for Semesters 1 and 2. The current meeting focused on the implementation status and final approval of Semesters 3 through 8.

Total Credits: 163 credits across 8 semesters. The curriculum comprehensively covers Basic Science, Engineering Science, Professional Core courses, Professional Electives, and Open Electives with integration of emerging technologies including Smart Materials, Digital Manufacturing, and Industry 4.0 concepts.

The Board approved the curriculum with all implemented enhancements and recommended its continuation for the academic year 2026-27.

ITEM 3: Professional Electives course Syllabus for Regulation 2025

The department presented the Professional Elective courses offered across Semesters 4, 5, 6, and 7. The courses cover Thermal Engineering, Manufacturing Engineering, Design Engineering, Mechatronics and Automation, and Emerging Technology domains.



The Board approved the Professional Elective courses and emphasized periodic review to incorporate latest industry trends.

ITEM 4: Open Electives course Syllabus for Regulation 2025

The department presented the Open Elective courses framework for the academic year 2026-27.

Open Electives Offered by Mechanical Engineering Department to Other Departments:

- 1. Project Management:** Comprehensive coverage of project planning, execution, monitoring, and control methodologies with practical case studies from engineering projects.
- 2. 3D Printing:** Fundamentals of additive manufacturing technologies, materials, design for 3D printing, and hands-on experience with FDM and SLA technologies.

Industry-Supported Open Elective Options for Mechanical Engineering Students:

1. Data Science and AI Foundation (IBM-Supported):

Students can opt for this course instead of traditional Open Elective-I or Open Elective-II. The course is supported by IBM as a vendor partner and provides comprehensive training in:

- Fundamentals of Data Science and Analytics
- Introduction to Artificial Intelligence and Machine Learning
- Python for Data Analysis
- Data Visualization and Interpretation
- Practical Applications in Engineering

Certification: Upon successful completion, students will earn an IBM Certificate in Data Science and AI Foundation, which will be recognized as credit towards their Open Elective requirement.

2. Java Programming (Oracle-Supported):

Third-year students can opt for this course instead of their designated Open Elective. The course is supported by Oracle as a vendor partner and covers:

- Java Programming Fundamentals
- Object-Oriented Programming Concepts
- Data Structures in Java
- Exception Handling and File I/O
- GUI Development and Database Connectivity

Certification: Students who successfully complete the course will receive an Oracle Certified Java Programming Certificate, which will be recognized as credit for their Open Elective requirement.



The Board appreciated the industry partnerships and approved both vendor-supported courses as Open Elective options. Members emphasized that students should be informed about these opportunities during course registration, and the department should track certification completion rates.

ITEM 5: Specialization Course Syllabus for Regulation 2025

The department presented a new specialization course for first-year students (upcoming batch) as part of the expanding Electric Vehicle (EV) specialization track.

Introduction to Electric Vehicle Engineering (Industry-Supported):

Course Details:

- Course Code: To be assigned by Academic Council
- Course Title: Introduction to Electric Vehicle Engineering
- Target Audience: First-year students (upcoming batch 2026-2030)
- Category: Specialization Course / Value-Added Course
- Credits: 2 or 3 credits (to be finalized)

Industry Support Partners:

1. **MATLAB (MathWorks):** Provides simulation and modeling tools for EV system analysis, battery management system design, and electric motor control algorithms.
2. **Device Electronics:** Industry partner providing hands-on training kits, power electronics components, and practical exposure to EV hardware systems.

Course Content Overview:

Module 1: Fundamentals of Electric Vehicles

- Evolution of electric vehicles and global EV market trends
- Types of electric vehicles: BEV, HEV, PHEV, FCEV
- Basic architecture and components of EVs
- Environmental impact and sustainability aspects

Module 2: Battery Technology and Energy Storage

- Battery chemistry and cell types (Li-ion, NiMH, solid-state)
- Battery pack design and configuration
- Battery Management Systems (BMS) fundamentals
- Charging technologies and infrastructure

Module 3: Electric Motors and Power Electronics

- Types of electric motors used in EVs (DC, AC, BLDC, PMSM)
- Motor control strategies and drive systems



- Power electronics components (inverters, converters, controllers)
- Regenerative braking systems

Module 4: MATLAB Simulation and Modeling (MATLAB-Supported)

- Introduction to MATLAB/Simulink for EV applications
- Modeling of battery systems and performance prediction
- Electric motor simulation and control algorithm development
- Vehicle dynamics and energy consumption analysis

Module 5: Hands-on with EV Hardware (Device Electronics-Supported)

- Introduction to EV hardware components and testing
- Practical sessions with battery cells and modules
- Motor controller interfacing and programming
- Basic EV diagnostics and troubleshooting

Learning Outcomes:

- Understand the fundamental principles and architecture of electric vehicles
- Gain knowledge of battery technologies and energy management systems
- Develop basic skills in MATLAB-based EV system simulation
- Acquire hands-on experience with EV hardware components
- Prepare foundation for advanced EV specialization courses in higher semesters

Implementation Plan:

- Target Batch: First-year students admitted in 2026-27 academic year
- Offering Semester: Semester 2 (January-May 2027)
- Faculty Training: To be completed by November 2026
- MATLAB License: Department to coordinate with MathWorks for academic licensing
- Hardware Kits: Device Electronics to provide training kits and support materials
- Laboratory Setup: Dedicated EV lab space to be allocated by August 2026

The Board unanimously approved the introduction of 'Introduction to Electric Vehicle Engineering' as a specialization course for first-year students. Members appreciated the industry partnerships with MATLAB and Device Electronics, emphasizing that this early exposure will help students make informed choices about EV specialization in higher semesters. The Board recommended completing all infrastructure and training requirements before the course launch in January 2027.



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CONCLUSION

The Chairperson thanked all the Board of Studies members for their valuable suggestions and constructive recommendations. The members expressed satisfaction with the curriculum implementation, new industry-supported course offerings, and infrastructure development.

VOTE OF THANKS

The meeting concluded with a vote of thanks to all members for their valuable time, expert guidance, and constructive suggestions.

The meeting ended at 1:30 PM.

Resolved and Approved by

S.No	Name	Designation	Signature
1	Dr. B. Chokkalingam	Chair Person	B. Chokkalingam
2	Mr. R. Immanuel	Committee Coordinator	R. Immanuel
3	Dr. K. Kumaravel	University Nominee	K. Kumaravel
4	Dr. V. Prabhu Raja	Subject Expert Academician	V. Prabhu Raja
5	Dr. K. Leo Dev Wins	Subject Expert Academician	K. Leo Dev Wins
6	Dr. V. S. Saravanan	Industry Representative	V. S. Saravanan
7	Mr. M. Jayaprakash	Alumni Representative	M. Jayaprakash
8	Dr. S. Benjamin Franklin	Member Internal	ABSENT
9	Mr. B. Varun	Member Internal	B. Varun
10	Dr. R. Tamilselvan	Member Internal	R. Tamilselvan
11	Mr. S. Veerakumar	Member Internal	S. Veerakumar



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12	Mr. R. Sudharshan	Member Internal	ON DUTY
13	Mr. K. Sambath	Member Internal	

The meeting concluded with a vote of thanks and the Chairperson extended sincere gratitude to all the members for their insightful suggestions and active participation.

Chair Person