School of Technology, Pandit Deendayal Energy University, Gandhinagar
Department of Mechanical Engineering

Minutes of the meeting of the Board of Studies in Mechanical and Automobile Engineering which was held on 16.04.2024 from 02:00 pm via hybrid mode at F-002 and on MS Teams Platform in the presence of the following members:

A. Members Present:

Sr. No.	Name	Sr. No.	Name
1	Dr. Jatin Patel – Chairman, BoS and Head, Dept. of Mech. Engg., SoT, PDEU	17	Dr. Jaydeep Patel, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
2	Dr. Dilip Srinivas Sundaram, Associate Professor, Mechanical Engineering, Indian Institute of Technology Gandhinagar. (External Expert-Academic)	18	Dr. Krunal Mehta, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
3	Dr. Shailendra Kumar, Professor, Department of Mechanical Engineering, S.V. National Institute of Technology, Surat (External Expert-Academic)	19	Dr. M. B. Kiran, Associate Professor, Dept. of Mech. Engg., SoT, PDEU
4	Dr. Ankush Sharma, Scientific Officer, Ahmedabad Textile Industry's Research Association (ATIRA) (External Expert-Industry)	20	Dr. Nanji Hadia, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
5	Prof. S. S. Kachhwaha, Dean-SoT, PDEU	21	Dr. Pravesh Kumar, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
6	Prof. Vishvesh Badheka, Dean-Academic Affairs, PDEU	22	Dr. Manjeet Keshav, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
7	Prof. Anurag Mudgal, Professor, Dept. of Mech. Engg., SoT, PDEU	23	Dr. Ojas Satbhai, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
8	Dr. Vivek Patel, Associate Professor, Dept. of Mech. Engg., SoT, PDEU	24	Dr. Vinay V., Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
9	Dr. Hiren Dave, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU	25	Dr. Vivek Jaiswal, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU
10	Dr. Rajesh Patel, Associate Professor, Dept. of Mech. Engg., SoT, PDEU	26	Mr. Jainam Modi, Current Student, Dept. of Mech. Engg., SoT, PDEU
11	Dr. Pavan G., Associate Professor, Dept. of Mech. Engg., SoT, PDEU	27	Mr. Aman Sorathiya, Current Student, Dept. of Mech. Engg., SoT, PDEU
12	Dr. Abhishek K., Associate Professor, Dept. of Mech. Engg., SoT, PDEU	28	Mr. Raj Shah, Current Student, Dept. of Mech. Engg., SoT, PDEU
13	Dr. Ankur Chaurasia, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU	29	Mr. Darshan Panchal, Current Student, Dept. of Mech. Engg., SoT, PDEU
14	Dr. Abhinaya Bhasuru, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU	30	Mr. Kush Patel, Alumni, Dept. of Mech. Engg., SoT, PDEU
15	Dr. Nirav Patel, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU	31	Mr. Parth Patil, Alumni, Dept. of Mech. Engg., SoT, PDEU
16	Dr. Ravi Kant, Assistant Professor, Dept. of Mech. Engg., SoT, PDEU		

Dr. Ravi Kumar Varma, Scientist/Engineer-SF, Process & Materials Quality Assurance Division–Mechanical (PMQD-M), Space Applications Centre (SAC), Indian Space Research Organisation (ISRO) (External Expert-Industry) could not attend the meeting.

Alumni invitees Mr. Pratik Patel and Mr. Arrown Dalsaniya could not attend the meeting.

At the beginning of the meeting, the Chairman welcomed all the members. Thereafter, the items on the agenda were taken on hand as under:

Item No.	Particulars
1.	Consideration of confirmation of minutes of the previous meetings held on 12.07.2023. **Resolution:** Resolved that the minutes of the previous meeting held on 12.07.2023 be confirmed as circulated with the agenda.
2.	Consideration of the note on action taken on the decisions of the previous meeting held on 12.07.2023 **Resolution:** Resolved that the note on action taken on the decisions of the previous meeting held on 12.07.2023 circulated with the agenda as Encl-II, be noted and approved.
3.	Consideration of putting current M.Tech (Thermal Engineering), M.Tech (Design), and M.Tech (Manufacturing) in abeyance from AY 2024-25. **Resolution:** Resolved that current M.Tech. Programs under Dept. of Mech. Engg., can be put in abeyance in lieu of the new M.Tech. (Mechanical Engineering) program. However, it was suggested that generally the Master programs are focused on certain specializations. So, offering specializations should be thought of. The Chairman, BoS responded by pointing out that in the newly offered M.Tech. program, the students can select a Track based on their interest in the Semester-II of their study. It was also suggested to explore the possibility of offering M.Tech. with a minor specialization. In view of the above, the Chairman, be authorized to submit the revised documents incorporating the suggestions directly to the Faculty of Technology & Engineering for further consideration.
4.	Consideration of making a recommendation to the Faculty of Technology with regard to offering a new PG Program (M.Tech Mechanical Engineering) with an intake of 36 with eligibility of admission as specified in Encl.-III and course structure and syllabi as specified in Encl. IV to be made effective from the AY 2024-25 onwards. **Resolution:**

Resolved that a new PG program M.Tech. (Mechanical Engineering) can be made effective from AY 2024-25 onwards. The Chairman-BoS presented the newly designed course structure for the PG program. Semester-wise updates for the new course structure were presented. It was suggested to offer the selection of Track from Semester-I itself, unlike the current proposal wherein selection of Track can be made by the student in Semester-II. The Chairman-BoS responded by pointing out that the Semester-I courses were designed to better suit the Industry requirements. It was also suggested to offer some courses pertaining to Thermal Engineering in Semester-I. The members were then invited to share their views on the already shared curriculum of the new PG program. There were no major corrections suggested in this regards.

In view of the above, the Chairman, be authorized to submit the revised documents incorporating the suggestions directly to the Faculty of Technology & Engineering for further consideration.

5. Consideration of making a recommendation to the Faculty of Technology with regard to the review of curriculum in B.Tech in Mechanical Engineering, to be made effective for the students admitted from the AY 2024-25 onwards, as under:

    i. Introduction of Course structure of Semester-I to VIII and Syllabi of Semester – I and II of the UG program in Mechanical Engineering, to be made effective for the students admitted in the AY 2024-25 onwards and D to D students admitted from the AY 2025-26 onwards. (Encl.-V)

Resolution:

Resolved that the newly suggested course structure under Curriculum-2024 can be implemented from AY 2025-26. It was pointed by the Chairman-BoS that from Curriculum-2020 to Curriculum-2024, some restructuring of the courses was done along with the introduction of some new courses. The Chairman presented the course structure for Semesters-I to VIII for B.Tech. Mechanical Engineering along with the syllabi for courses offered by Department of Mechanical Engineering in the common first year of B.Tech. namely 'Workshop Practice' and 'Engineering Graphics'. The members appreciated the new structure and introduction of new courses. Following suggestions were made by the BoS:

i. It was suggested that the course on 'Workshop Practice' should be made more modern. The Chairman-BoS presented the new curriculum with introduction of newer manufacturing technique like additive manufacturing.
ii. It was suggested to offer 'Workshop Practice' from the perspective of Product Development. The activities can be organized in a way that results in some tangible product at the end of the laboratory course. The 'Workshop Practice' course should be carried under Project-based mode.
iii. It was suggested that a course on 'Introduction to Engineering' can be added in the first year that would help the students navigate the further study in a better manner.
iv. It was suggested to replace the verb 'Examine' with 'Learn' (or synonymous word) in the CO4 of the 'Workshop Practice' Course.
v. It was suggested to have a course relating to 'Basics of Materials and Manufacturing' so that the students can better understand the processes under 'Workshop Practice'.
vi. It was suggested to remove 'Workshop Practice' for computing branches. Alternatively, two different curriculum can be thought of for core branches and computing branches.

In view of the above, the Chairman, be authorized to submit the revised documents incorporating the suggestions directly to the Faculty of Technology & Engineering for further consideration.

6. Consideration of review of the feedback received from various stakeholders like parents, alumni, Industries Expert and Recruiters etc.

Resolution:

Resolved that the feedback received from various stakeholders were reviewed. Following were the key points of discussion:

i. It was suggested to have more coding related courses. The Chairman informed that the suggestion is already incorporated by the inclusion of Python (Elementary Programming – II Laboratory) in Semester - II and MATLAB as a part of Computational Engineering Laboratory in Semester-VII.

ii. It was suggested to provide more exposure to students in regard to Engineering software. The Chairman responded that the department has an array of proprietary Engineering software. Exposure to many open-source software is also given to the students.

iii. It was suggested to have dedicated subject in regard to Research Paper writing. The Chairman responded saying that many workshop pertaining to technical writing are organized at the school and the students are encouraged to participate in them.

iv. It was suggested that the course curriculum should be reviewed by industry experts. The Chairman responded that we routinely conduct BoS meeting wherein the curriculum is reviewed by industry experts and suggestions are then received from them.

v. It was suggested that Codes and Standards can be included in the curriculum. The suggestion was accepted and it was informed that some courses have already included the Codes and Standards in the teaching pedagogy.

vi. It was suggested to have a dedicated course on 'Vibrations'. Currently, 'Mechanical Vibrations' is offered as an elective and there is a dedicated unit in the new curriculum of 'Dynamics of Machines' about vibrations.

vii. It was suggested to teach the course on 'Project Management' in early Semesters rather than Semester-VII. The course on 'Project Management' is kept in the Semester-VII on the basis that by the end of three years of study, the student is now well prepared to undertake course on 'Project Management'.

7. Consideration of modifications/addition/deletion in courses/course contents for B.Tech. Automobile Engineering program and proposal to make it effective from the AY 2024-25.

Resolution:

Resolved to accept the following changes suggested:

i. To shift the course on 'Advanced Engine Technologies' from Professional Core Elective (PCE) to Professional Core Course (PCC) and to shift the course on 'Vehicle Aerodynamics' from PCC to PCE, in Semester-VII

ii. To shift the course on 'Heat and Mass Transfer' from PCE to PCC and to shift the course on 'Automotive Electricals and Electronics' from PCC to PCE, in Semester-VII

In view of the above, the Chairman, be authorized to submit the revised documents incorporating the suggestions directly to the Faculty of Technology & Engineering for further consideration.

8. The Chairman invited the members to put forth any other suggestions for improving the teaching-learning process. The Chairman also informed the BoS of the various Skill Development Programs (SDPs) conducted by the department during the summer and winter breaks. The various SDPs were in the domain of 'Additive Manufacturing and 3D Printing', 'Advanced Manufacturing', 'Biofuels and Bioenergy', and 'Water Treatment and Management'.

Resolution:

Various members of the board presented their suggestions as follows:

i. The members appreciated the initiative of SDPs.
ii. The members suggested to include training on CNC machining, Laser-based processing, unconventional machining, tool and mold fabrication, Inspection and Quality Check, in the SDPs.
iii. It was also suggested to design and include Course Outcomes for the SDPs.

In view of the above, the Chairman, be authorized to submit the revised documents incorporating the suggestions directly to the Faculty of Technology & Engineering for further consideration.

The meeting ended with a vote of thanks and refreshments.

Dr. Jatin Patel
Chairman,
BoS in Mechanical and Automobile Engineering.