



SANDIP FOUNDATION'S
SANDIP INSTITUTE OF TECHNOLOGY AND RESEARCH CENTRE ,
NASHIK
DEPARTMENT OF MECHANICAL ENGINEERING
E-BULLETIN

Departmental E -Bulletin Edition / volume - 6 / issue - 7

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Vision of siTRC

To be acclaimed
Institution for
learning and research

Mission of siTRC

To impart in-depth technical
knowledge.

To create conducive
environment for research,
innovation and
entrepreneurship.

To instill the social and
cultural values.



From the HoD's Desk

I am happy to learn that Mechanical Engineering Department, Sandip Institute of Technology and research Centre is coming out with the quarterly departmental E-Bulletin. This E-Bulletin will help to share the news, events achievements of the department among alumni. This E-Bulletin will provide an opportunity for the staff and students to showcase their talents in technical writing. I would like to appreciate and congratulate editorial team of the department for their unrelenting efforts in compiling this E-Bulletin.

From the editor's Desk

It gives us an immense pleasure to introduce this E-bulletin of Mechanical Engineering Department. Proper communication plays a vital role in institution's development. This E-bulletin will serve to reinforce and allow increased awareness, improved interaction and integration among all of us. This E-bulletin will be a medium to provide proper acknowledgement and respect all of these efforts and its results.

VISION OF THE DEPARTMENT

To achieve excellence in the domain of Mechanical Engineering by inculcating a culture of learning and research.

MISSION OF THE DEPARTMENT

- To nurture the students of Mechanical Engineering to be competent, motivated and ethical professionals.
- To foster research, innovation and entrepreneurship skills leading to employable and self-reliant technocrats.
- To groom the socio-techno potential for up-liftment of society.

PROGRAMME EDUCATIONAL OBJECTIVES (PEO'S)

- PEO 1: To pursue and establish the career in Mechanical Engineering.
- PEO 2: To demonstrate personal growth by pursuing higher studies, professional development course and/or engineering certifications.
- PEO 3: To inculcate entrepreneurship skills and nurture the ethics in the domain.

PROGRAMME OUTCOMES

1. **Engineering Knowledge** – Apply knowledge of mathematics, science and engineering to solve the real life problems in Mechanical systems. An ability to analyze and interpret data.
2. **Problem Analysis** – Identify, formulate and solve Mechanical Engineering problems in thermal, manufacturing and machine design and conduct new experiments.
3. **Design/development of Solutions** – Design systems like thermal, robotics, mechatronics and machines within realistic constraints.
4. **Conduct investigations of complex problems** – Design and conduct experiments to interpret data and analyse the results.
5. **Modern Tool Usage** – To develop awareness and work on emerging technologies like CAD/CAM software's, Robotics.
6. **The engineer and society** – Understand the impact of an engineer in general and Mechanical Engineering knowledge for welfare of society in particular.
7. **Environment and Sustainability** – Develop or modify eco-friendly and highly reliable as well as sustainable systems.
8. **Ethics** – Take professional decision with a sense of ethical responsibility.
9. **Individual and team work** – Function effectively as an individual and as a member or leader in multidisciplinary and/or cross cultural teams.
10. **Communication** – Communicate effectively for achievements of goals.
11. **Project Management and Finance** – Execute disciplinary and interdisciplinary projects in day-to-day life.
12. **Life-Long Learning** – Imbibe habit of lifelong learning.

ABOUT THE DEPARTMENT

The department is having highly qualified, experienced & motivated faculty members. The department has laboratories with latest testing facilities like multifuel VCR engine, computerized UTM (capacity 100 tonnes), computerized diesel engine test rig & exhaust gas analyzer for Engines. The CAD Centre of the department armed with latest hardware & software like Pro-E wildfire-5, ANSYS, Hypermesh, Mastercam. The strength of department enables to offer the consultancy in all fields related to Mechanical Engineering.

Professor and Head

Departmental activities

Expert Lecture on, “Kyoto Protocol & Carbon Trading”

Air pollution control has been always seen critical area for all kinds of industries across the world. Stringent norms are enforced by the Authorities and International Agencies for power plants. This thrust has been well apprehended in the course of “Power Plant Engineering” designed for final year students studying mechanical engineering. In this endeavor, a convivial lecture of Mr. M. M. Kulkarni was organized. Mr. Kulkarni has proactively engaged himself in the consultancy under his established flagship of AIM Enviro since 1991. He is also environment enthusiast. To this end, he has set up and flourished Environment Knowledge Center in Nashik. In his spellbound talk, he refreshed the fundamentals of greenhouse effect and thereby the mechanism of global warming. He shared his practical experiences of his latest tour to Antarctica. Considering the global warming potential of different effluents from commercial and industrial exercises, the emphasis was made on the equivalence of carbon emissions. The features of international agreement, named Kyoto Protocol, as per UN framework convention on climate change were elaborated. Implications of the recent amendments on developing countries like India were put forth. Carbon trading along with air pollution control emerged out as a bifocal opportunity for Indian industries. Students posed their questions regarding international issues and methodology of carbon trading. The speaker answered to the audience to their satisfaction.

Prof. V. A. Kolhe organized the event through constant interaction with the guest speaker. Prof. Kasar took up anchoring of the session and Prof. P.S. Garudkar made all administrative arrangements of resources for smooth conduction in the Mechanical Engineering Department.



Guest Lecture “Programmable logic Controller”

Department of Mechanical Engineering organized Expert Lecture on “*Programmable logic Controller*” delivered by Mr. Nilesh Pawar, Pooja Industries, Nasik for TE Mechanical. Mr. Nilesh Pawar, having vast experience in the field of *Programmable logic Controller* Mr. Nilesh Pawar explains PLCs were first developed in the automobile manufacturing industry to provide flexible, ruggedized and easily programmable controllers to replace hard-wired relays, timers and sequencers. Since then, they have been widely adopted as high-reliability automation controllers suitable for harsh environments. Mr. Pawar shared his experience and also encouraged the students to take up careers in Automation giving a practical view of the PLC in Mechatronics industry