

YANTRA VIDYA

DEPARTMENT OF MECHANICAL ENGINEERING



VIDYA PRATISHTHAN'S KAMALNAYAN BAJAJ INSTITUTE OF ENGINEERING AND TECHNOLOGY, BARAMATI

Department of Mechanical Engineering

Department Vision

To inculcate learning culture in students and faculties to meet the current and future technological challenges of industry and society.

Department Mission

- To impart the students with fundamental knowledge of mechanical engineering.
- To provide practical exposure by promoting students for training and internship in related industries.
- Holistic development of the students by inculcating ethical and moral values towards the society and environment.
- To develop association with premier educational institutions, industries and alumni for enhancement of faculty skill.

Principal's Message



Dr. R. S. Bichkar Principal, VPKBIET, Baramati.

I am pleased to hear that, Department of Mechanical Engineering is publishing the March 2021 issue of Department magazine, 'Yantra Vidya'. The result of high intention, sincere efforts, and intelligent execution, always leads to excellence with choices not chances.

The articles composed with these magazines will sow the seeds of ideas, germinate to the fullest extent possible, and this will lead to the success story. In the era of cut-through competition, the molding of tomorrow's technocrats happens to be all-round engineers, not only Mechanical Engineers.

I am sure, the task force of Mechanical Engineering Department has taken lead, to one of the best examples of not only the land of ideas but the forest of excellent products.

Vice-Principal's Message



Dr. S. B. LandeVice-Principal,
VPKBIET, Baramati.

I am delighted to announce that the Department of Mechanical Engineering is bringing their Technical Magazine 'Yantra Vidya' Issue-March 2021. It is a tool for faculty and students to develop productive technical materials and support skills. The most important thing you can get out of this fantastic effort is that it brings out the various technical and analytical skills of novice engineers. I am happy to welcome all the teachers, students who are more interested in bringing articles with more bright concepts and innovative ideas in the coming issues.

I wish the "Department of Mechanical Engineering" of this organization great success in all their endeavors. I congratulate the Head of the Department of Mechanical Engineering, the Editor and his dedicated committee for their invaluable efforts in bringing this issue to the fore. I wish them all success.

HoD's Message



Dr. P. R. Chitragar

Professor and Head of Department,

Mechanical Engineering

VPKBIET, Baramati.

Greetings of the day,

At present, mankind is passing through the adversity of covid-19 pandemic conditions; there is an overflow of infodemic-news about pros and cons of the disease from various sources. Whole world has been troubled in all aspects, including the education sector too. Still mankind is hopeful that we will find a way for normal life soon.

In this pandemic situation, we at VPKBIET took the help of a virtual lab as one of the nodal centers from IITB and continued our support to students of our institute in order not hamper the routine teaching-learning process.

Amongst this, we are releasing the second edition of our departmental magazine to all our most valued stakeholders.

Wish all to take care of yourselves and your loved ones from this pandemic situation and remember to follow covid guidelines. Be strong mentally and physically.

Editors Message

Dear readers,

We are happy to share our department's technical magazine 'Yantra Vidya' March Issue (2021). As a technical magazine, it is going to cover many issues related to emerging technologies in Engineering, career opportunities, technological innovations, overall development and much more. We aim for motivating our readers by keeping them updated with the lat-est technological changes. Also, we aim for appealing our writers and content providers by giving them a platform for sharing their views. We highly appreciate and thank our skilled writers, who have allowed us to share their views and stories. We are glad to present our magazine's March 2021 Issue, which features clean and thoughtful layout and new approach for reader's experience.

Editorial Team

Faculty:

Dr. P. R. Chitragar (HoD)

Mr. D. D. Rupanwar (Editor)

Mr. K. M. Jadhav (Co-Editor)

Ms. M. S. Yadav (Co-Editor)

Mr. M. S. Gaikwad (Co-Editor)

Student:

Mr. Rohit Gandhi (TE-Mechanical)

Mr. Yash Sawant (SE-Mechanical)

List of Articles

FROM INDUSRTY PERSON

Forging industry Expects Double Digit Growth, Despite Pandemic Challenges	08
Importance of CAE in Today's Competitive World	09
Astounding Progress of Wind Turbines	11
Software Industry as a Career	14
FROM ALUMNI	11
Augmented Reality and Virtual Reality in Automotive Industry	16
Innovation - A Pathway to India's Holistic Development	17
Automotive Mechatronics - An Unexplored Field	21
3D Printing: Booster for Manufacturing	22
Importance of Spindles	24
FROM FACULTIES	
Recent Development in the Medical Image Analysis	25
Biomechanics - Movement Study of Human Beings	27
Solar Analemma	28
Active Listening: A Significant Aspect of Effective Communication	31
Online Education and Childhood	33
The Augmentation of the Collaborative Robot (Cobot)	35
FROM STUDENTS	
The Wrong Car	36
Industry 4.0: The Future of the Work	38
4D Printing Technology	40
Industrialization	42