

Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule (Approved by AICTE, Recognized by DTE and Affiliated to DBATU, Lonere)

Department of Mechanical Engineering

Mind-Spark4.0



December 2023



CHAIRMAN's MESSAGE

Hon. Shri. Amrishbhai R. Patel

I am happy to see the fourth edition of newsletter "**Mind Spark 4.0**" December 2023 edition under Mechanical Engineering Department of SVKM's Institute of Technology, Dhule.

The newsletter/magazine is a communication medium for all students, staff, parents and friends to know the recent activities and developments that are taking place at the departmental level.

I congratulate the Hon. Principal, HOD, Faculty Members, Technical staff, students and the editorial team for coming up with this new issue of newsletter/magazine for the department.

At SVKM's Institute of Technology, we remain committed to give very best to the students under our assistance. I want to extend my heartfelt gratitude to all the parents, students, stakeholders who have put their trust in us and been a part of this wonderful journey of SVKM's Dhule Campus.

Let's come together to work with vision of Trust "Pursuing Excellence in Education"

PRINCIPAL'S MESSAGE



Dr. Nilesh Salunke

I am very pleased to see the Second Edition of newsletter of Mechanical Engineering department "Mind Spark 4.0" December 2023 edition.

The newsletter contains all the information related to student activities, achievements, faculty achievements, workshops and other activities conducted at the departmental level.

Indeed it is a canvass that has taken its forum through the contribution of all the concerned in the department.

I would like to congratulate the Head of Department as well as staff and students.

I wish many more activities, academic pursuits, and achievements coming across our path as we journey together to conquer the milestone with SVKM's Institute of Technology, Dhule.



HOD's MESSAGE

Dr. Hitesh Thakare

I am very blissful to inform that Department of Mechanical Engineering, has taken a leading role constructively in various development activities. The newsletter report highlights many evidences in the areas, such as, industrial visits, internship, training of students and faculties. A major area of focus during this Academic Year 2023-24 has been enhancement of industry institute interaction wherein students participated in various internship activities, industrial projects as well as visit.

The department continually strives to nurture the new relations with follow-up activities to strengthen the bond between academia and industry. Students got opportunities to learn in this new fashion and innovate through industry supported projects, internships, and guest lectures of eminent persons. As in previous years, students passionately participated in national level technology competitions like Hackathons, Avishkar etc. Department conducted some student centric training's like **Hypermesh**. Research papers have been published in the renounced national and international conferences by the department in this year which shows a healthy trend and positive look. This year I proud to express that our faculties are showing interest in pursuing their research works and almost all the faculties have either completed or have joined the PhD program which is a good sign.

INSTITUTE VISION

"To be a socially sensitive engineering institute of excellence adding value to the nation."

INSTITUTE MISSION

- M1. To provide resources of excellence with a focus on nurturing and developing the society.
- M2. To strive to be an institute of global recognition.

DEPARTMENT VISION

"Pursuing excellence in Mechanical Engineering Education."

DEPARTMENT MISSION

- M1. To develop conceptual and analytical skills.
- M2. To collaborate with academia, industries and professional bodies to facilitate continuous improvement in teaching, learning and research.
- M3. To inculcate team work, professional ethics and entrepreneurial spirit.

PROGRAM EDUCATIONAL OBJECTIVES (PEO's)

- PEO1. Graduates should excel in engineering positions in industry and other organizations that emphasize design and implementation of engineering systems and devices.
- PEO2. Graduates should excel in best post-graduate engineering institutes, acquiring advanced degrees in engineering and related disciplines.
- PEO3. Alumni should establish a successful career in an engineering-related field and adapt to changing technologies.
- PEO4. Graduates are expected to continue personal development through professional study and self-learning.
- PEO5. Graduates should be good citizens and cultured human beings, with full appreciation of the importance of professional, ethical and societal responsibilities.

PROGRAM SPECIFIC OUTCOMES (PSO's)

- PSO1. Design and select Mechanical Engineering components, appropriate manufacturing processes, process automation and quality assurance systems using technical and financial analysis tools.
- PSO2. To identify, formulate and solve problems related to conventional & nonconventional energy systems as well as support sustainability in the surrounding region.
- PSO3. Systematically communicate the methodology and conclusion of Mechanical engineering problem solution with colleagues and superiors through effective documentation as well as oral presentation.

PROGRAM OUTCOMES (POs)

- I.Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- 2.Problem Analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.
- 3. Design/Development of Solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- 4. Conduct Investigations of Complex Problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions for complex problems.
- 5.Modern Tool Usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modelling to complex engineering activities with an understanding of the limitations.
- 6.The Engineer and Society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- 7.Environment and Sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- 8.Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- 9.Individual and Team Work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- 10.Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- 11.Project Management and Finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- 12.Life-long Learning: Recognize the need for, and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

FACULTY MEMBERS



Dr. Nilesh Salunke Principal and Professor



Dr. Udaykumar Saindane Prof. Mohammad Juneduddin Prof. Dattatray Doifode Assistant Professor



Prof. Dhiraj Bhandarkar Assistant Professor



Dr. Hitesh Thakare HOD and Associate Professor



Assistant Professor



Prof. Satish Patil Assistant Professor



Dr. Amol Badgujar Assistant Professor



Assistant Professor



Dr. Md Modassir Hussain Assistant Professor



Prof. Yogesh Sonawane Assistant Professor



Prof. Bhushan Behede Assistant Professor

TECHNICAL ASSISTANTS



Mr. Mahendra Patil Technical Assistant



Mr. Amol Mahajan Technical Assistant



Mr. Suresh Patil Technical Assistant

WORKSHOP INSTRUCTORS



Mr. Narendra Patil Welding Shop



Mr. Mahendra Lohar Machine Shop



Mr. Naval Patil CNC Shop



Mr. Gajanan Patil Fitting Shop



Mr. Yogesh Chaudhari Carpentary Shop

Faculty publication in Journals/Conferences/Book chapters :

Sr. No.	Name of Faculty	Title of Paper/Chapter	Journal Title/Conference Name/Book Title	Publisher
1.	Mr. Satish Patil	Predicting and forecasting building energy performance using RSM and ANN	Asian Journal of Civil Engineering	Springer
2.	Mr. Yogesh Sonawane	Effect of NOx and Mechanical Efficiency in Single Cylinder Diesel Engine using Multiple Injection of Biodiesel- An Experimental Investigation	Tuijin Jishu/Journal of Propulsion Technology ISSN: 1001-4055	Tuijin Jishu
3.	Mr. Bhushan Behede	Performance Analysis of Silica- Gel and Calcium Chloride Composite Desiccant Prepared by Varying Proportions: A Gravimetric Study	Tuijin Jishu/Journal of Propulsion Technology ISSN: 1001-4055	Tuijin Jishu
	Mr. Dattatray Doifode	Thermal Analysis of Vertical Heated Cylindrical Surface Employing V - Shape Fin Surfaces	Journal of advanced zoology. ISSN: 0253- 7214.	Assoc Advancement Zoology, Gorakhpur, India
5.	Dr. Amol Badgujar	Monolithic Integration of Cu(In,Ga)Se2 Thin Film Solar Modules by all Nanosecond Laser Scribing	Recent Advances in Materials and Manufacturing Technology	Springer
6.		Computational analysis of pin fin to study the effect of temperature and fin material	Advancement in Materials Processing Technology (AMPT) 2023	NIT Jamshedpur
7.	Dr. Hitesh Thakare	Energy Performance Assessment of Industries and Building: A Review of State of The Art	Advancement in Materials Processing Technology (AMPT) 2023	NIT Jamshedpur
×	Nilesh Salunke	Computational analysis of various fin configurations - a comprehensive assessment	Advancement in Materials Processing Technology (AMPT) 2023	NIT Jamshedpur
9.	Thakare & Dr.	Role of energy and materials in Industry 4.0 – a pragmatic deliberation	Advancement in Materials Processing Technology (AMPT) 2023	NIT Jamshedpur

FACULTY CONTRIBUTIONS

Faculty Development Programme / STTP Attended :

Sr. No.	Name of Faculty	FDP/STTP/ Training program attended	Resource Person(s) / Agency / C0mpany	Venue	Date
1	Dr. Md Modassir Hussain	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
2	Mr. Yogesh Sonawane	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
3	Mr. Dhiraj Bhandarkar	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
4	Mr. Bhushan C. Behede	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
5	Mr. Bhushan C. Behede	One Week National Level Faculty Development Program on Cloud Infrastructure (A WS)	SVKM's IOT in Collaberation with the Brainovision Solutions India Pvt Ltd and All India Council for Technical Education (AICTE)	SVKM's IOT, Dhule	21/08/2023 to 25/08/2023
6	Mr. Bhushan C. Behede	5-day Online FDP on the theme "Inculcating Universal Human Values in Technical Education"	All India Council for Technical Education (AICTE)	Online	06/11/2023 to 10/11/2023
7	Dr. Amol Badgujar	5-day Online FDP on "Applications of VR/AR in manufacturing"	National Institute of Technical Teachers' Training and Research, Chandigarh	Online	18/12/2023 To 22/12/2023
8	Dr. Amol Badgujar	5-day Online FDP on "NAA C and Internal Quality Assurance"	National Institute of Technical Teachers' Training and Research, Chandiga rh	Online	11/09/2023 To 15/09/2023
9	Dr. Amol Badgujar	12 week NPTEL Course on "Fundamentals of Additive Manufact uring Technologies"	NPTEL-AICTE	Online	July 2023 To Oct 2023

FACULTY CONTRIBUTIONS

Faculty Development Programme / STTP Attended :

Sr. No.	Name of Faculty	FDP/STTP/ Training program attended	Resource Person(s) / Agency / COmpany	Venue	Date
10	Mr. Satish Patil	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
11	Mr. Satish Patil	Innovation and Entrepreneurship	SSBT's COE, Bhabhori	Jalgaon	30/10/2023 to 3/11/2023
12	Mr. Dattatray Doifode	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
13	Dr. Hitesh Thakare	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023
14	Dr. Hitesh Thakare	FDP on "Linux Applications in Engineering Education"	NITTR Chandigarh	SVKM's IOT, Dhule	06/11/2023 to 10/11/2023
15	Mr. Mohd. Juneduddin	FDP on "NAAC and Internal Quality Assurance"	NITTR Chandigarh	SVKM's IOT, Dhule	11/09/2023 to 15/09/2023

Patents:



Mr. Bhushan Behede has registered a design patent dated 25/10/2023 titled Apparatus for Synthesis of Pharmaceutical Nanosuspension.

FACULTY CONTRIBUTIONS

Sponsored Project :



Shri Vile Parle Kelavani Mandal's INSTITUTE OF TECHNOLOGY, DHULE w Delhi, Grut, of Maharashtra and Affiliated to DRATUL Long



Ministry of Education Government of India





Project title : SOLAR POWERED SMART SCHOOL

Shri Vile Parle Kelavani Mandal's Institute of Technology, Dhule

Name of the Institute : Principal of the Institute: Dr. Nilesh Salunke **Principal Invigilator:**

Mr. Mohammed. Juneduddin (Assistant Professor, SVKM's IoT, Dhule) (UBA Project Coordinator)

Scheme Name: Subject Expert Group (SEG): Title of the project : **Regional Coordinating Institute (RCI):**

UNNAT BHARAT ABHIYAN (UBA) 2.0 RURAL ENERGY SYSTEMS (IIT DELHI) SOLAR POWERED SMART SCHOOL INDIAN INSTITUTE OF TECHNOLOGY, DELHI

Adopted Village for Project Implementation: AJANG, Dhule, Maharashtra Name of the School: **Total project Cost:** Date of Project Completion:

Zila Parishad Primary School, Ajang, Dist. Dhule. Rs. 1,00,000 (One lakh Rupees) 09-09-2023



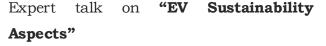
Mr. Mohammed Juneduddin led team successfully completed the project titled Solar Powered Smart School under Unnat Bharat Abhiyan 2.0.

Expert Talks

Expert talk on **"Employer Need"** [02nd September 2023]

Resource Person: **Mr. Mayureshwar More,** ADV Technophiles.

Mr. Divyesh Pawar, VTECH
Solutions
The total number of students has
participated : 39
Coordinator: Mr. Satish Patil.



[15th September 2023]

participated : 74

Resource Person: **Mr. Sushil Reddy,** Energy Engineer, Founder – The Sun Pedal Ride, Guinness & Limca World Record Holder, IIT Bombay Alumnus The total number of students has

Coordinator: Mr. Yogesh Sonawane.





Expert talk on **"Case study on techno**economic analysis of industrial insulation." [28th October 2023]

Resource Person: **Dr. Hitesh Thakare**, BEE Certified Energy Auditor (EA – 27707), Associate Professor, Dept. of Mech. Engg., SVKM's IOT Dhule.

The total number of students has participated : **36 Coordinator:** Dr. Hitesh Thakare



Expert Talks

Experttalkon"CareerOpportunitiesandBusinessgrowthinHVAC& Rindustry"September 2023]

Resource Person: **Mr. Hardik Shukla,** Students Activities Chair, West Zone ISHRAE HQ.

Mr.RohitkumarDave,Ex.Mananger, G.S.F.C. Ltd., BarodaCoordinator:Mr. Dattatray Doifode.



Expert talk on **"Project Planning and** Estimation"

[22nd September 2023]

Resource Person: **Mr. Govind Nair,** President, ISHRAE Nashik Chapter **Coordinator:** Mr. Dattatray Doifode.



Expert talk on "Recent Trends inMechatronicsEngineering"October 2023]

Resource Person: **Dr. SSPM Sharma B.,** Assistant Professor, School of Mechatronics, Symbiosis University of Applied Sciences, Indore.

The total number of students has participated : **22**

Coordinator: Dr. Md Modassir Hussain



Industrial Visits



Industrial visit to the **"Shivshambhu Milk Processing Plant, Dhule"** [02nd December 2023]

The total number of students participated : 16

Coordinator: Mr. Dattatray Doifode



Industrial visit to **"Burhani Ice factory, Dhule"** [02nd December 2023] The total number of students participated : **16 Coordinator:** Mr. Dattatray Doifode

Workshops

One Day Workshop on "Modern Manufacturing Techniques" [25th July 2023] Resource Persons: Dr. Amol Badgujar, Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule. Prof. Yogesh Sonawane, Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule. Prof. Dhiraj Bhandarkar, Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule. The total number of students has participated : 07 Coordinators: Dr. Amol Badgujar and Mr. Yogesh Sonawane.



Demonstration of **"Truck** components" [30th October 2023] Resource Person: **Mr. Yogesh** Sonawane, Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule. The total number of students has participated : **50**

Coordinator: Mr. Yogesh Sonawane



35 Hours Hands On Workshop on
"Hypermesh" [31st August 2023]
Resource Person: Mr. Bhushan
Behede, Assistant Professor, Dept.
of Mech. Engg. SVKM's IOT Dhule.
The total number of students
participated : 29
Coordinator: Mr. Bhushan Behede

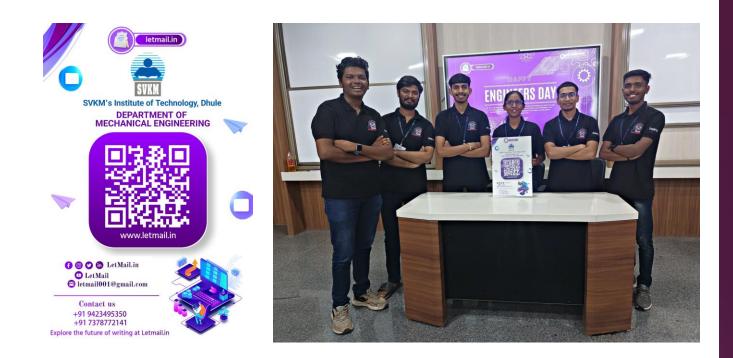




Rupesh Pradeep Shinde (TY), Dnyaneshwar Kedar Shardul (TY), and Vivek Pravin Vispute (TY) Won the "Postman API Track" award in Inithacks 2023. (28/10/2023 to 29/10/2023)



Winner at Institute Level Avishkar 2024 (03/11/2023) and Participation at Zonal Level Avishkar 2024 (26/11/2023)



TY Students : Rupesh Pradip Shinde, Nilesh Magan Patil, Vivek Pravin Vispute, Deven Bhatu Wagh, Dnyaneshwar Kedar Shardul, and Akansha Vidyadhar Patil launched Website – Letmail.in which helps students in writing letters and to complete day to day tasks related to office work.



Patel Jayesh Chhotu (SY) is selected as a member of the Dr. Babasaheb Ambedkar Technological University team which participated in the West Zone/All India inter-university Yoga Men tournament held at KIIT University, Bhubaneshwar.

17 Students of Final Year Mechanical have Completed Altair One Certification Course.(October 2023)

Sample Certificate:



Final year students - Aanchal Pardeshi and Prathamesh Deore (22/12/2023) Presented research paper in International Conference on Energy Materials and Rechargeable Batteries organized by Department of Sciences (Physics) & University Instrumentation Center (UIG), Manav Rachna University(MRU), Faridabad, Haryana, India.







Neha D. Patil, Prathamesh D. Deore, Siddesh N. Dalal, Jay Chaudhari, Mayureshwar More, Nishant Mahale, Tejas Wani, Bhavesh Deore, Kunal Karankal, Pranav Gujar, and Rohit Patil from SVKM's IOT Dhule, Maharashtra has given presentation In International Conference Advancement in Materials Processing Technology (AMPT) 2023 during 13th – 14th july 2023 organized by Department of Metallurgical and Materials Engineering NATIONAL INSTITUTE OF TECHNOLOGY JAMSHEDPUR.



Students Activities



Installation of ISHRAE Student Chapter of SVKM's IOT Dhule.



Fresher's Party 2K23.





Mech. Engg. Students participated in Institute Level Avishkar Competition.

MESA Members



Prof. Yogesh Sonawane Faculty Coordinator



Sr. No.	Name of Students	Designation	Year
1.	Mr. Gunvant Patil	President	Final Year
2.	Ms. Bhumika Patil	Vice-President	Second Year
3.	Ms. Purva Kapade	Secretary	Second Year
4.	Mr. Vinay Bhadane	Treasurer	Third Year

ISHRAE Student Chapter



Prof. Dattatray Doifode Faculty Coordinator

Sr. No.	Designation	Name of Member	Year
1.	PRESIDENT	Gunvant Patil	Final Year
2.	PRESIDENT ELCT	Harshit Mahajan	Third Year
3.	SECRETARY	Akansha Patil	Third Year
4.	TREASURER	Vaibhav Patil	Third Year
5.	MEMBER – CWC	Chirag Desale	Third Year
6.	MEMBER – CWC	Aniket Bhokare	Third Year
7.	MEMBER – CWC	Trupti Wagh	Third Year

Editorial Members



Dr. Md Modassir Hussain Faculty Coordinator

Sr. No.	Name of Students	Year
1.	Mr. Saurabh Kadam	Final Year
2.	Mr. Rohit Sonawane	Third Year
3.	Mr. Vaibhav Pradip Gurav	Second Year