

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-Spark3.0

**June 2023** 



## CHAIRMAN'S MESSAGE

#### Hon. Shri. Amrishbhai R. Patel

I am happy to see the newsletter "**Mind Spark 3.0**" June 2023 edition under the Mechanical Engineering Department of SVKM's Institute of Technology, Dhule.

The newsletter 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 giving the very best to the students under our assistance. I want to extend my heartfelt gratitude to all the parents, students, and 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 the vision of the institute "To be a socially sensitive engineering institute of excellence adding value to the nation".

## PRINCIPAL'S MESSAGE

#### Dr. Nilesh Salunke

I am very pleased to see the newsletter of the Mechanical Engineering department "Mind Spark 3.0" June 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 come 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 the 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, internships, and training of students and faculties. A major area of focus during this Academic Year 2022-23 has been the enhancement of industry-institute interaction wherein students participated in various internship activities, industrial visits, and expert talks.

The department continually strives to nurture 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 internships, guest lectures of eminent persons, and industry-oriented projects. As in previous years, students passionately participated in national/state-level technology competitions like **DIPEX** etc. The Department conducted some student-centric trainings like **OpenFoam and FEA using ANSYS etc.** Research papers have been published in the renowned national and international journals/conferences by the department this year which shows a healthy trend and positive look. This year I am 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.

1

## **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)

- ❖ 1.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. Hitesh Thakare HOD and Associate Professor



Dr. Amol Badgujar Assistant Professor



Dr. Md Modassir Hussain Assistant Professor



Prof. Mohammad Juneduddin Prof. Dattatray Doifode Assistant Professor



Assistant Professor



Assistant Professor



Prof. Yogesh Sonawane Prof. Dhiraj Bhandarkar Assistant Professor



**Prof. Satish Patil** Assistant Professor



Prof. Mahesh Dalwani 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 CONTRIBUTIONS

# 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. Yogesh Sonawane	Optimization and Modelling of EGR rate and MIS for POME fuelled CRDI diesel engine	Case Studies in Thermal Engineering	Elsevier
2.	Mr. Bhushan Behede	Review of composite desiccants and their properties for rotary dehumidifiers	European Chemical Bulletin (Scopus). Vo. 12, Issue 2	European Chemical Bulleti n
3.	Dr. Amol Badgujar	on metal oxides for electronic	In Micro and Nano Technologies, Smart Multifunctional Nano-inks	Elsevier
4.	Dr. Hitesh Thakare & Dr. Nilesh Salunke	Role of Energy in Industry 4.0 - A Pragmatic Deliberation	Indo-European Conference on Advanced Manufacturing and Materials Processing 2023	Carmel College of Engineering and Technology, Kerala
5.	Dr. Hitesh Thakare & Dr. Nilesh Salunke	Computational analysis of various fin configurations - a comprehensive assessment	Indo-European Conference on Advanced Manufacturing and Materials Processing 2023	Carmel College of Engineering and Technology, Kerala

# FACULTY CONTRIBUTIONS

# Faculty Development Programme / STTP Attended:

Sr. No.	Name of Faculty	FDP/STTP/ Training program attended	Resource Person(s) / Agency / COmpany	Venue	Date
1	Mr. Bhushan Behede	FDP on "Artificial Intelligence"	Microsoft, SAP & AICTE ATAL	Online	16/01/2023 to 20/01/2023
2	Mr. Bhushan Behede	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
3	Mr. Bhushan Behede	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
4	Mr. Dhiraj Bhandarkar	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
5	Mr. Dhiraj Bhandarkar	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
6	Mr. Mohammed Juneduddin	FDP on "Artificial Intelligence"	AICTE ATAL	Online	16/01/2023 to 20/01/2023
7	Mr. Mohammed Juneduddin	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
8	Mr. Mohammed Juneduddin	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
9	Mr. Satish Patil	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
10	Mr. Satish Patil	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
11	Mr. Yogesh Sonawane	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
12	Mr. Yogesh Sonawane	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
13	Mr. Dattatray Doifode	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
14	Mr. Dattatray Doifode	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023

## **FACULTY CONTRIBUTIONS**

## Faculty Development Programme / STTP Attended:

Sr. No.	Name of Faculty	FDP/STTP/ Training program attended	Resource Person(s) / Agency / COmpany	Venue	Date
15	Dr. Amol Badgujar	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
16	Dr. Amol Badgujar	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
17	Dr. Md Modassir Hus sain	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
18	Dr. Md Modassir Hus sain	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023
19	Dr. Hitesh Thakare	FDP on "Scilab"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	24/01/2023 to 07/02/2023
20	Dr. Hitesh Thakare	FDP on "OpenFOAM version 7"	IIT Bombay – Spoken Tutorial	SVKM's IOT, Dhule	08/05/2023 to 20/05/2023

## National Ambassador for Microsoft & SAP TechSaksham FDP:



Mr. Mohammed Juneduddin has been honored with **TechSaksham Ambassador 2023 Trophy** & **Apple iPad** for his outstanding contributions to the AICTE, Microsoft & SAP TechSaksham FDP.

# **Expert Talks**

Expert talk on "Commercialization of Lab Technologies & Tech-Transfer." [22nd February 2023]

Resource Person: **Dr. Amol Badgujar,** Assistant Professor, SVKM
IOT, Dhule.

The total number of students has participated: **68** 

Coordinator: Mr. Dattatray Doifode



Expert talk on "How to prepare for MS in foreign countries" [23rd March 2023]

Resource Person: **Mr. Sudeep Bedmutha,** Alumni, Dept. Of Mechanical Engineering, SVKM's IOT, Dhule

The total number of students has participated: **88** 

Coordinator: Mr. Bhushan Behede



Expert talk on "Recent Advancement in Finite Element Analysis." [01st April 2023]

Resource Person: **Mr. Ganesh Wani**, Senior Manager, NVH, TATA Motors Pune

The total number of students has

participated: 33

Coordinator: Mr. Dhiraj Bhandarkar



# **Expert Talks**

Expert talk on "Low global warming refrigerants and Cryogenic engineering." [08th April 2023]

Resource Person: **Dr. Yogendra Kuwar,** Assistant Professor, SVNIT,
Surat.

The total number of students has participated: **45** 

Coordinator: Mr. Dattatray Doifode



Expert talk on **"Hydraulic and Pneumatics"** [12<sup>th</sup> April 2023]

Resource Person: Mr. Dilip Patil, Ex

Mahindra & Mahindra Trainer

Coordinator: Mr.Dattatray Doifode



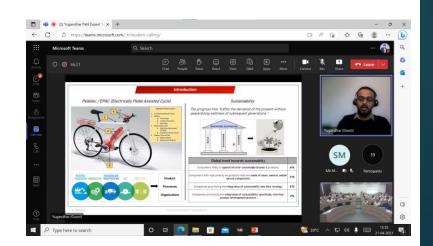
Expert talk on **"Sustainable Product Development"** [21st April 2023]

Resource Person: **Mr. Yugandhar Patil,** Product Manager, PEM Fuel
Cell Test Solutions, HORIBA FuelCon
GmbH, Madgeburg Germany.

The total number of students

has participated: 40

Coordinator: Dr. Hitesh Thakare



# **Expert Talks**



Expert talk on "Energy conversion opportunities in HVAC industry: Fundamental and case study"  $[06^{th} \text{ May } 2023]$ 

Resource Person: Dr. Hitesh Thakare, Head, Mechanical

Engineering Department, SVKM's IOT, Dhule

Participants: TY Mech students

Coordinator: Mr. Dattatray Doifode



Expert talk on "How to prepare for government examinations"  $[19^{\rm th}~{\rm May}~2023]$ 

Resource Person: Dr. Prasanna Gadhari, HOD, Mechanical Engineering Department,

Government Polytechnic, Dhule. Participants: TY Mech students

Coordinator: Mr. Yogesh Sonawane

# Workshops



Two weeks Workshop on **"OpenFoam"** [08<sup>th</sup> May 2023] Resource Person: Spoken Tutorial, IIT Bombay.

The total number of students has participated :  $\bf 94$ 

Coordinator: Mr. Bhushan Behede





**38 Hours** Hands On Workshop on **"FEA using ANSYS"** [ $17^{\rm th}$  Feb 2023]

Resource Person: Mr. Dhiraj Bhandarkar, Assistant Professor,

Dept. of Mech. Engg. SVKM's IOT Dhule.

The total number of students has participated: 42

Coordinator: Mr. Dhiraj Bhandarkar

## **Industrial Visits**





Industrial visit to "Vaitarna Hydroelectric Power Plant, Nashik" [25th May 2023]

The total number of students has participated: 45

Coordinator: Mr. Yogesh Sonawane



Industrial visit to "School of Artilliary, Nashik" [25th May 2023]

The total number of students has participated: 45

Coordinator: Mr. Yogesh Sonawane

Industrial visit to "Orchid Cooling & Cleaning Private Limited, Nashik"
[24th February 2023]

The total number of students has

participated: 11

Coordinator: Mr. Dattatray Doifode





Chinmay Chitte, student of final year mechanical - NPTEL Certification received Elite + Silver. He came in top 5% amongst 1088 students at All India level



04 Final Year Students presented their research paper in International Conference





04 students of final year, Department of Mechanical Engineering participated in DIPEX 2023 – state level project exhibition and competition organized at Sipna College of Engineering and Technology, Amravati



Gunvant Patil, student of Third Year Mechanical won Second prize in the elocution competition held on the occasion of Marathi language fortnight, celebrated in the SVKM College of Engineering. Competition is Organized by Department of Marathi Language of Maharashtra State as well as Dr. Babasaheb Ambedkar Technological University from January 14 to January 28 January 2023.



First Year Mechanical Toppers for AY 2021-22





TY Mechanical Toppers for AY 2021-22



Follow us on: () (a) (a) Aukmiotshuk

DTE CODE: 5449

Follow us on: () (a) (b) (b) /svkmic

# **MESA Members**



**Prof. Yogesh Sonawane** Faculty Coordinator



Sr. No.	Name of Students	Designation	Year
1.	Mr. Pradyumna Patil	President	Final Year
2.	Mr. Rushikesh Pawar	Vice-President	Third Year
3.	Mr. Gunwant Deore	Secretary	Second Year
4.	Mr. Vinay Bhadane	Treasurer	Second Year

# **ISHRAE Student Chapter**



**Prof. Dattatray Doifode**Faculty Coordinator

Sr. No.	Name of Member	Designation	Year
1.	Mayureshwar More	President	Final Year
2.	Gunvant Dinkar Patil	President Elct	Third Year
3.	Tejas Shrikant Wani	Secretary	Final Year
4.	Bhavesh Kishor Deore	Treasurer	Final Year
5.	Rushikesh Pawar	Member – CWC	Third Year
6.	Aanchal Pardeshi	Member – CWC	Third Year
7.	Hatim Lokhandwala	Member – CWC	Third Year

# **Editorial Members**



**Dr. Md Modassir Hussain** Faculty Coordinator

Sr. No.	Name of Students	Year
1.	Mr. Yogesh Mali	Final Year
2.	Mr. Saurabh Kadam	Third Year
3.	Mr. Rohit Sonawane	Second Year