

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



# **December 2022**



## **CHAIRMAN's MESSAGE**

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

I am happy to see the newsletter "**Mind Spark 3.0**" December 2022 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 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" December 2022 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 nationallevel technology competitions like the SAE **Aero Design Challenge**, etc. The Department conducted some student-centric trainings like **Hypermesh 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.

L

#### **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.
- S.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.

3

## **FACULTY MEMBERS**



Dr. Nilesh Salunke Principal and Professor



Prof. Mohammad Juneduddin Prof. Dattatray Doifode Assistant Professor



**Prof. Satish Patil** Assistant Professor



Dr. Hitesh Thakare HOD and Associate Professor



Assistant Professor



Prof. Mahesh Dalwani Assistant Professor



Dr. Amol Badgujar Assistant Professor



Assistant Professor



Prof. Bhushan Behede Assistant Professor



Dr. Md Modassir Hussain Assistant Professor



Prof. Yogesh Sonawane Prof. Dhiraj Bhandarkar 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		Journal Title/Conferenc e Name/Book Title	Publisher
1.	Dr. Md Modassir Hussain	Tribological study of sunflower TMP ester and silica nanoparticles additives for hydrodynamic journal bearing application under boundary lubrication condition	Industrial Lubrication and Tribology	Emerald
2.	Dr. Amol Badgujar	Nanosecond laser scribing for monolithic integration of C u(In,Ga)Se2 thin film solar	2 <sup>nd</sup> International Conference on Advances in Materials and Manufacturing Technology, 2022	MANIT, Bhopal

#### Faculties completing NITTTR certifications:





#### **Mr. Bhushan Behede and Dr. Amol Badgujar** has succesfully completed 08 modules of NITTTR certification.

**Dr. Hitesh Thakare** has succesfully completed NITTTR mentor certification.

# 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 "MATLAB and SIMULINK basics for Hardware Projects"	NITTR Chandigarh	Online	01/08/2022 to 05/08/2022
2	Mr. Bhushan Behede	FDP on "A NEW ERA OF MANUFACTURING- CHALLENGES AND OPPORTUNITIES"	Department of Mechanical Engineering, D. Y. Patil College of Engineering and Technology (An Autonomous Institute)	Online	25/07/2022 to 30/07/2022
3	Mr. Dhiraj Bhandarkar	FDP on "CAD using Solidwork"	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
4	Mr. Dhiraj Bhandarkar	FDP on "Electric Vehicles "	NITTTR,Chandigarh	Online	5/12/2022 to 9/12/2022
5	Mr. Mohammed Juneduddin	FDP on "CAD using Solidwork"	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
6	Mr. Mohammed Juneduddin	Training Program on "Innovation Ambass ador Training"	IIC, MHRD, AICTE	Online	03/08/2022
7	Mr. Satish Patil	FDP on "Electric Vehicles "	NITTTR,Chandigarh	Online	5/12/2022 to 9/12/2022
8	Mr. Satish Patil	FDP on "Research Area in Mechanical Engineering "	Sanjivani College of Engineering, Kopargaon	Online	18/10/2022 to 23/10/2022
9	Mr. Yogesh Sonawane	FDP on "CAD using Solidwork"	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
10	Mr. Yogesh Sonawane	FDP on "Electric Vehicles "	NITTTR,Chandigarh	Online	5/12/2022 to 9/12/2022
11	Dr. Amol Badgujar	FDP on " A New Era of Manufacturing Challenges and Opportunities"	D Y Patil College of Engineering and Technology, Kolhapur	Online	25/07/2022 To 30/07/2022
12	Dr. Amol Badgujar	FDP on "CAD/ CAM"	NITTTR Chandigarh	Online	14/11/2022 To 18/11/2022

# FACULTY CONTRIBUTIONS

## Faculty Development Programme / STTP Attended :

Sr. No.	Name of Faculty	FDP/STTP/ Training program attended	Resource Person(s) / Agency / COmpany	Venue	Date
13	Dr. Amol Badgujar	FDP on "CAD using Solidworks"	NITTTR Chandigarh	Online	12/09/2022 To 16/09/2022
14	Mr. Dattatray Doifode	FDP On CAD using Solidwork	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
15	Mr. Dattatray Doifode	Swayam course on Applied Thermodynamics	NITTTR,Chandigarh	Online	01/06/2022 to 31/10/2022
16	Mr. Dattatray Doifode	Swayam course on Theory of Production processes	NITTTR,Chandigarh	Online	01/06/2022 to 31/10/2022
17	Dr. Md Modassir Hussain	FDP on "Applications of AI and ML in mechanical engineering"	KJ College of Engineering and Management Research, Pune	Online	08/08/2022 to 12/08/2022
18	Dr. Md Modassir Hussain	FDP on "CAD using Solidwork"	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
19	Dr. Hitesh Thakare	FDP on "CAD using Solidwork"	NITTTR,Chandigarh	Online	12/09/2022 to 16/09/2022
20	Dr. Hitesh Thakare	FDP on "Tools for Engineering Research"	NITTTR,Chandigarh	Online	19/09/2022 to 23/09/2022

## **Expert Talks**

Expert talk on **"Angel** Investment/VC Funding Opportunity for Early – Stage Entrepreneurs." [23<sup>rd</sup> August 2022] Resource Person: Mr. Karan Sharma, Training and Placement Officer, SVKM IOT, Dhule.

The total number of students has participated : **47** 

**Coordinator:** Mr. Dattatray Doifode Dr. Amol Badgujar



Expert talk on **"Energy Audit" at SNJB's Polytechnic Chandwad.** [19<sup>th</sup> September 2022]

Resource Person: **Dr. Hitesh Thakare,** Head, Mechanical Engineering Department, SVKM's IOT, Dhule

**Organizer:** SNJB's Polytechnic Chandwad.

SNJB's Shri. H.H.J.B Polytechnic, Chandwad Department of Mechanical Engineering organized a guest lecture Under ISTE Student Chapter and Technical Club Date-19/09/2022

#### Expert Session on Energy Audit Welcome... Dr. Hitesh R. Thakare Head of Department (Mechanical Engineering)

Associate Professor Shri Vile Parle Kelavani Mandal's Institute C Technology, Obule Ph.D. (S.Y.M.I.T. Surat), M. Tech, (Thermal More 12 Years of Experience in Teaching Area of Interest: Refrigeration, Energy Aud







Expert talk on **"Design, Modelling** and Analysis Software Trending in Mechanical Industry." [04<sup>th</sup> October 2022]

Resource Persons: CADD Centre Dhule

The total number of students has participated : **85 Coordinator:** Mr. Satish Patil



# **Industrial Visits**



Industrial visit to the **" Mechatronics Lab of NMIMS Campus Shirpur"** [30<sup>th</sup> November 2022]

Resource Person: **Dr. Vishal Fegade,** Associate Professor, Mechanical Engineering Department, MPSTME-NMIMS Campus, Shirpur The total number of students participated : **08 Coordinator:** Md Modassir Hussain



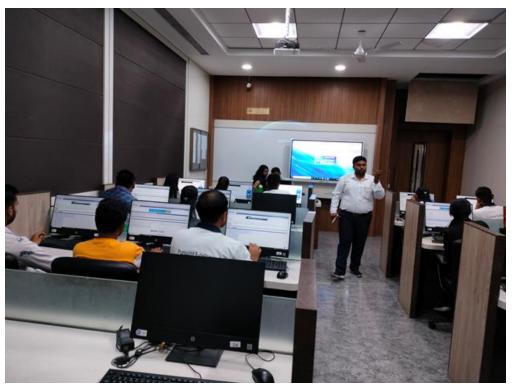
Industrial visit to **"Jain Irrigation and Jain Valley, Jalgaon"** [13<sup>th</sup> December 2022] Resource Person: **Mr. Yogesh Joshi**, PRO, Jain Irrigation The total number of students participated : **45 Coordinator:** Mr. Yogesh Sonawane

# Workshops



2 Days Hands On Workshop on "Design and Assembly of E-Kart" [28-29th October 2022]
Resource Persons: Team S- Falcons.
The total number of students has participated : 46

Coordinator: Mr. Yogesh Sonawane



**40 Hours** Hands On Workshop on **"Hypermesh"** [19<sup>th</sup> November 2022] Resource Person: **Mr. Bhushan Behede,** Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule.

The total number of students has participated : 20

Coordinator: Mr. Bhushan Behede

# Workshops



**Mock interviews** for Final year students [24<sup>th</sup> November 2022] Resource Person: **Dr. Sambhaji Rao,** Assistant Professor, Dept. of Humanities & Science, SVKM's IOT Dhule.

Mr. Karan Sharma, Training & Placement Officer, SVKM's IOT DhuleThe total number of students participated : 53Coordinator: Mr. Satish Patil

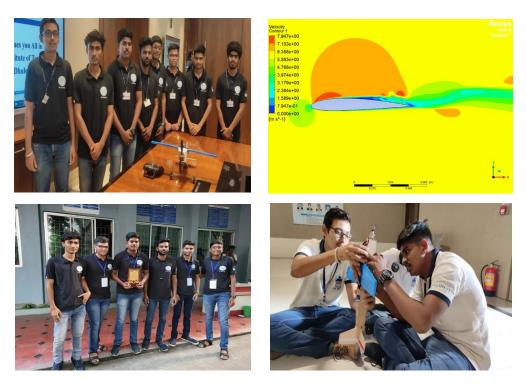


10 Hours Hands On Workshop on "Python
Programming" [25<sup>th</sup> November 2022]
Resource Person: Dr. Amol Badgujar, Assistant
Professor, Dept. of Mech. Engg. SVKM's IOT Dhule.
The total number of students has participated : 26

Coordinator: Dr. Amol Badgujar



# **Students Achievements**



SVKM IOT Mechanical Students Won

All India Rank 2 in 7th Aero Design Challenge in BEST AERODYNAMIC ANALYSIS (CFD) in Micro Class, SAEINDIA Southern Section Organized at SRM Institute of Science and Technology, Chennai.



SVKM IOT Mechanical Students Won 2<sup>nd</sup> & 3<sup>rd</sup> Prize in District Level Table Tennis Competition

12

# **Students Achievements**



Mr Tejas Rajput, Second Year Mechanical Student, won Gold Medal in 100 m race in DBATU Inter Zonal Athletic Competition held at Samarth Pharmacy College, Belhe, Junnar.



Four students of TY Mech Completed ASME Certificate of Air Crash Testing Analysis

13

# **Students Achievements**





# **Students Activities**



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



TY students attended workshop on Aero Modeling at Chennai.



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. 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