



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-Spark2.0



**December 2021**



## CHAIRMAN'S MESSAGE

### Hon. Shri. Amrishbhai R. Patel

I am happy to see the second edition of newsletter “**Mind Spark 2.0**” December 2021 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 2.0**” **December 2021 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 2021-22 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 SAE eBAJA, Aeromodelling etc. Department conducted some student centric training's like **Hypermesh and ANSYS etc.** 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 few are having interest to join in 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 & non-conventional 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 Badgajar**  
Assistant Professor



**Prof. Mohammad Juneduddin**  
Assistant Professor



**Prof. Dhiraj Bhandarkar**  
Assistant Professor



**Prof. Satish Patil**  
Assistant Professor



**Prof. Yogesh Sonawane**  
Assistant Professor



**Prof. Mahesh Dalwani**  
Assistant Professor



**Prof. Dattatray Doifode**  
Assistant Professor



**Prof. Bhushan Behede**  
Assistant Professor

## TECHNICAL ASSISTANTS



**Mr. Mahendra Patil**  
Technical Assistant



**Mr. Amol Mahajan**  
Technical Assistant

## WORKSHOP INSTRUCTORS



**Mr. Narendra Patil**  
Welding Shop



**Mr. Mahendra Lohar**  
Machine Shop



**Mr. Ravindra Badgajar**  
Plumbing Shop



**Mr. Mahesh Gaikwad**  
Carpentry Shop



**Mr. Yogesh Chaudhari**  
Fitting Shop

# FACULTY CONTRIBUTIONS

## Faculty publication in Journals/Conferences/Book chapters :

Sr. No.	Name of Faculty	Title of Paper	Journal Title	Journal ISSN
1.	Dr. Amol Badgajar	Solution-processed CIGS thin film solar cell by controlled selenization process	Materials Today: Proceedings	2214-7853
2.	Mr. Satish Patil	A Review: Studies On Different Performance Improvement Methods For Battery Thermal Management Systems For Li-ion Battery	International Journal of Creative Research Thoughts (IJCRT)	2320-2882

## Faculties have successfully completed 08 Modules of NITTTR

No: 01/2022/1/M1-M8/3742





**अखिल भारतीय तकनीकी शिक्षा परिषद्**

**प्रमाणपत्र**

प्रमाणित किया जाता है कि  
योगेश दिलीपराव सोनावणे  
एनआईटीटीटी पंजीयन क्रमांक : 20202113456

ने  
राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण पहल के अंतर्गत

मॉड्यूल 1 : तकनीकी शिक्षा और पाठ्यपत्रों परियोजना का अभिव्यक्ति  
मॉड्यूल 2 : वृत्तिक आधार नीति और संसाधनीयता  
मॉड्यूल 3 : संचार कौशल, मोद और ज्ञान प्रसार  
मॉड्यूल 4 : अनुदेशालक योजना और सुपुंरी  
मॉड्यूल 5 : पौरोषिकी समर्थित अधिगम और आजीवन स्वाधिनम  
मॉड्यूल 6 : ज्ञान निवारण और मुक्तिकन  
मॉड्यूल 7 : पुञ्जनात्मक समस्या समाधान, नवाचार और सामक आर & डी  
मॉड्यूल 8 : संस्थागत प्रबन्धन और प्रशासनिक कार्यविधि

को सफलता पूर्वक पूर्ण किया।

**All India Council for Technical Education (AICTE)**

**Certificate**

This is to certify that  
YOGESH DILIPRAO SONAWANE  
NITTTR Registration No: 20202113456  
has successfully completed

Module 1 : Orientation towards Technical Education and Curriculum Aspects  
Module 2 : Professional Ethics and Sustainability  
Module 3 : Communication Skills, Modes and Knowledge Dissemination  
Module 4 : Instructional Planning and Delivery  
Module 5 : Technology Enabled Learning and Life-Long Self Learning  
Module 6 : Student Assessment and Evaluation  
Module 7 : Creative problem Solving, Innovation and Meaningful R & D  
Module 8 : Institutional Management and Administrative Procedures

of

**National Initiative for Technical Teachers Training**

Director NITTTR, Bhopal | Director NITTTR, Chandigarh | Member Secretary AICTE | Director NITTTR, Chennai | Director NITTTR, Kolkata

SEPTEMBER 2021

No: 12/2021/1/M1-M8/14487





**अखिल भारतीय तकनीकी शिक्षा परिषद्**

**प्रमाणपत्र**

प्रमाणित किया जाता है कि  
माहम्मद जुनेदुद्दीन  
एनआईटीटीटीटी पंजीयन क्रमांक : 20202109372

ने  
राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण पहल के अंतर्गत

मॉड्यूल 1 : तकनीकी शिक्षा और पाठ्यपत्रों परियोजना का अभिव्यक्ति  
मॉड्यूल 2 : वृत्तिक आधार नीति और संसाधनीयता  
मॉड्यूल 3 : संचार कौशल, मोद और ज्ञान प्रसार  
मॉड्यूल 4 : अनुदेशालक योजना और सुपुंरी  
मॉड्यूल 5 : पौरोषिकी समर्थित अधिगम और आजीवन स्वाधिनम  
मॉड्यूल 6 : ज्ञान निवारण और मुक्तिकन  
मॉड्यूल 7 : पुञ्जनात्मक समस्या समाधान, नवाचार और सामक आर & डी  
मॉड्यूल 8 : संस्थागत प्रबन्धन और प्रशासनिक कार्यविधि

को सफलता पूर्वक पूर्ण किया।

**All India Council for Technical Education (AICTE)**

**Certificate**

This is to certify that  
MOHAMMED JUNEDUDDIN GHULAMMOHIUDDIN  
NITTTR Registration No: 20202109372  
has successfully completed

Module 1 : Orientation towards Technical Education and Curriculum Aspects  
Module 2 : Professional Ethics and Sustainability  
Module 3 : Communication Skills, Modes and Knowledge Dissemination  
Module 4 : Instructional Planning and Delivery  
Module 5 : Technology Enabled Learning and Life-Long Self Learning  
Module 6 : Student Assessment and Evaluation  
Module 7 : Creative problem Solving, Innovation and Meaningful R & D  
Module 8 : Institutional Management and Administrative Procedures

of

**National Initiative for Technical Teachers Training**

Director NITTTR, Bhopal | Director NITTTR, Chandigarh | Member Secretary AICTE | Director NITTTR, Chennai | Director NITTTR, Kolkata

SEPTEMBER 2021

## Faculties have successfully completed 08 Modules of NITTTTR

No: 07/2024/1/M1-M8/3732





**अखिल भारतीय तकनीकी शिक्षा परिषद्**  
**प्रमाणपत्र**



प्रमाणित किया जाता है कि  
सतीश रमेश पाटिल  
एनआईटीटीटी पंजीयन क्रमांक: 20202113427  
ने  
राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण पहल के अंतर्गत  
मॉड्यूल 1 : तकनीकी शिक्षा और पाठ्यचर्या पहलुओं का अभिव्यक्त  
मॉड्यूल 2 : नैतिक आचार नीति और सारणीयता  
मॉड्यूल 3 : संचार कौशल, मोड और ज्ञान प्रसार  
मॉड्यूल 4 : अनुदेशात्मक योजना और सुपुर्दी  
मॉड्यूल 5 : प्रौद्योगिकी समर्थित अधिगम और आजीवन स्वामित्व  
मॉड्यूल 6 : ज्ञान निर्माण और सुदान  
मॉड्यूल 7 : व्यावसायिक सहायता सामग्य, परामर्श और सार्विक आर & डी  
मॉड्यूल 8 : संस्थागत प्रबंधन और प्रशासनिक कार्यविधि  
को सफलता पूर्वक पूर्ण किया।

**All India Council for Technical Education (AICTE)**

**Certificate**

This is to certify that  
SATISH RAMESH PATIL  
NITTT Registration No: 20202113427  
has successfully completed

Module 1 : Orientation towards Technical Education and Curriculum Aspects  
Module 2 : Professional Ethics and Sustainability  
Module 3 : Communication Skills, Modes and Knowledge Dissemination  
Module 4 : Instructional Planning and Delivery  
Module 5 : Technology Enabled Learning and Life-Long Self Learning  
Module 6 : Student Assessment and Evaluation  
Module 7 : Creative problem Solving, innovation and Meaningful R & D  
Module 8 : Institutional Management and Administrative Procedures

of  
**National Initiative for Technical Teachers Training**

Director NITTT, Bhopal    Director NITTT, Chandigarh    Member Secretary AICTE    Director NITTT, Chennai    Director NITTT, Kolkata

SEPTEMBER 2021

No: 04/2024/1/M1-M8/3746





**अखिल भारतीय तकनीकी शिक्षा परिषद्**  
**प्रमाणपत्र**



प्रमाणित किया जाता है कि  
दत्तात्रय सदाशिव दोइफोडे  
एनआईटीटीटी पंजीयन क्रमांक: 20202113467  
ने  
राष्ट्रीय तकनीकी शिक्षक प्रशिक्षण पहल के अंतर्गत  
मॉड्यूल 1 : तकनीकी शिक्षा और पाठ्यचर्या पहलुओं का अभिव्यक्त  
मॉड्यूल 2 : नैतिक आचार नीति और सारणीयता  
मॉड्यूल 3 : संचार कौशल, मोड और ज्ञान प्रसार  
मॉड्यूल 4 : अनुदेशात्मक योजना और सुपुर्दी  
मॉड्यूल 5 : प्रौद्योगिकी समर्थित अधिगम और आजीवन स्वामित्व  
मॉड्यूल 6 : ज्ञान निर्माण और सुदान  
मॉड्यूल 7 : व्यावसायिक सहायता सामग्य, परामर्श और सार्विक आर & डी  
मॉड्यूल 8 : संस्थागत प्रबंधन और प्रशासनिक कार्यविधि  
को सफलता पूर्वक पूर्ण किया।

**All India Council for Technical Education (AICTE)**

**Certificate**

This is to certify that  
DATTATRAY SADASHIV DOIFODE  
NITTT Registration No: 20202113467  
has successfully completed

Module 1 : Orientation towards Technical Education and Curriculum Aspects  
Module 2 : Professional Ethics and Sustainability  
Module 3 : Communication Skills, Modes and Knowledge Dissemination  
Module 4 : Instructional Planning and Delivery  
Module 5 : Technology Enabled Learning and Life-Long Self Learning  
Module 6 : Student Assessment and Evaluation  
Module 7 : Creative problem Solving, innovation and Meaningful R & D  
Module 8 : Institutional Management and Administrative Procedures

of  
**National Initiative for Technical Teachers Training**

Director NITTT, Bhopal    Director NITTT, Chandigarh    Member Secretary AICTE    Director NITTT, Chennai    Director NITTT, Kolkata

SEPTEMBER 2021

## SPOC Appreciation letter from NPTEL




**CERTIFICATE OF APPRECIATION**

is awarded to

**DHIRAJ K. BHANDARKAR**

of

**SHRI VILE PARLE KELAVANI MANDAL'S INSTITUTE OF TECHNOLOGY**  
DHULE, MAHARASHTRA

for his/her instrumental role as SPOC for the **SWAYAM-NPTEL** Local Chapter.  
Thank you for being NPTEL's brand ambassador at your esteemed institution.

**ACTIVE SPOC**  
JAN - DEC 2021

Active SPOC based on Performance & Participation of Candidates for the JAN- DEC 2021 semester

**PROF. ANDREW THANGARAJ**  
NPTEL Coordinator  
IIT Madras

# 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 "NATURAL VENTILATION AND BUILDING DESIGN IN TROPICAL REGIONS"	ATAL Academy	Online	13/09/2021 to 17/09/2021
2.	Mr. Dhiraj Bhandarkar	FDP on "DESIGN AND DEVELOPMENT OF ELECTRIC VEHICLE"	ATAL Academy	Online	2021-7-9 to 2021-7-13
3.	Mr. Mohammed Juneduddin	FDP on "EMERGING TRENDS IN THE FIELD OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING APPLICATIONS"	ATAL Academy	Online	20/09/2021 to 24/09/2021
4.	Mr. Mohammed Juneduddin	FDP on "Internet of Things: Concepts and Implementation"	ATAL Academy	Online	13/12/2021 to 17/12/2021
5.	Mr. Mohammed Juneduddin	NITTTR (Module 01 to Module 08)	NITTTR	Online	September 2021
6.	Mr. Satish Patil	FDP on "Basics of Electric Vehicles"	ATAL Academy	Online	10/09/2021 to 14/09/2021
7.	Mr. Satish Patil	FDP on "Research Areas in Mechanical Engineering"	Sanjivani College of Engineering, Kopergaon	Online	18th October to 23rd October, 2021
8.	Mr. Yogesh Sonawane	FDP on "Introduction to Electric Vehicles; Challenges and Opportunities in Future"	ATAL Academy	Online	20/09/2021 to 24/09/2021



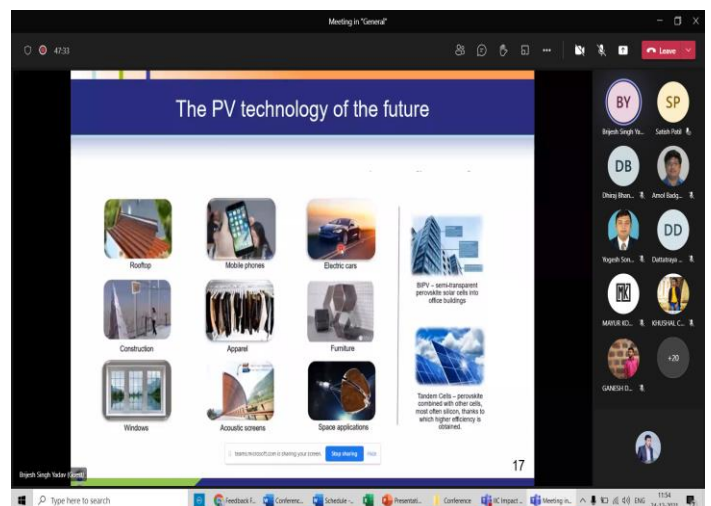
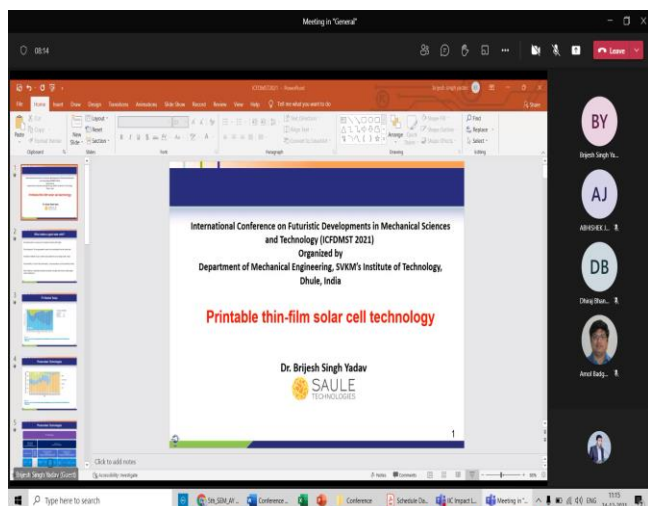
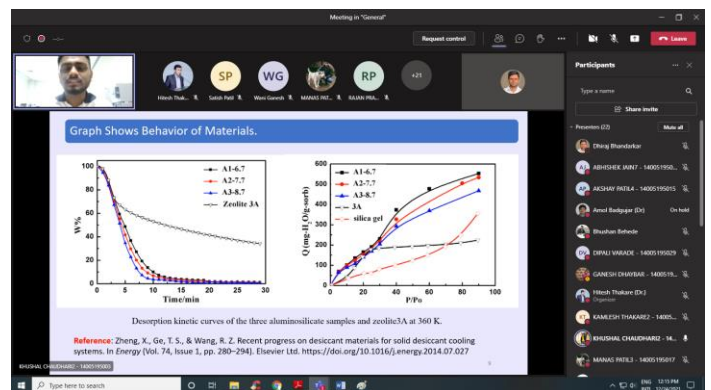
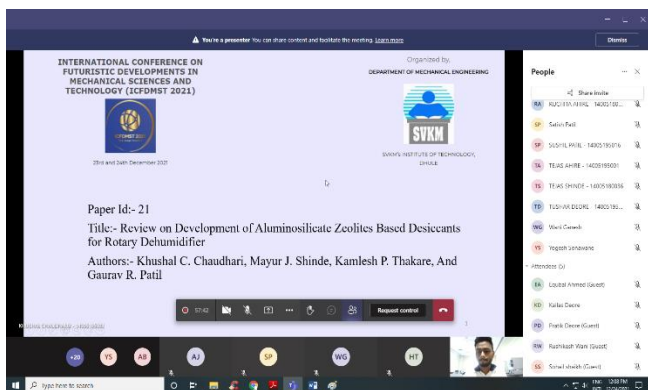
Departmental Conference “International Conference on Futuristic Development in Mechanical Sciences and Technology ICFDMST 2021” [23<sup>rd</sup> & 24<sup>th</sup> December 2021]

## Keynote Speakers

- ❖ Dr. Rahul Jagtap Ph.D. (SVNIT Surat)
- ❖ Dr. Brijesh Singh Yadav Ph.D. (IIT Hyderabad)

## Session Chairs

- ❖ Dr. Rahul Jagtap Ph.D. (SVNIT Surat)
- ❖ Dr. Dhiraj Deshmukh Ph.D. (SVNIT Surat)
- ❖ Mr. Ganesh Wani, Hitachi Astemo, Pune



# Expert Talk and Webinars

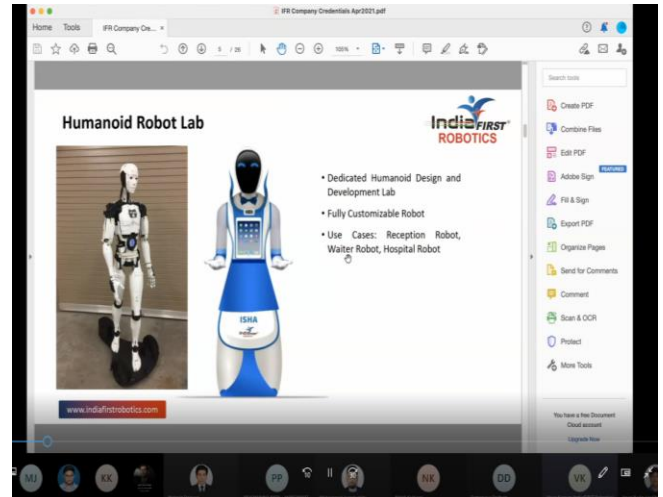
Online Webinar conducted on the topic “**Robotics and Robotics and Additive Manufacturing**”

[18<sup>th</sup> August 2021]

Resource Person: **Mr. Vinay Kunwar** and **Mr. Nikhil Kulkarni**, India-FIRST® Robotics Innovation and Research LLP, Pune

The total number of students has participated :

**Coordinator:** Dr. Amol Badgujar



Expert talk on “**Entrepreneurship**” [07<sup>th</sup> October 2021]

Resource Person: **Mr. Sachin Deshpande**, Director, ARS Energy Auditors, Mumbai

The total number of students has participated :

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



Expert talk on “**How to Write Research Paper**”

[29<sup>th</sup> November 2021]

Resource Person: **Dr. Hitesh Thakare**, Associate Professor, Dept. of Mech. Engg. SVKM's IOT

Dhule The total number of students has participated : **72**

**Coordinator:** Dr. Amol Badgujar



Expert talk on “**National Pollution Control Day**”

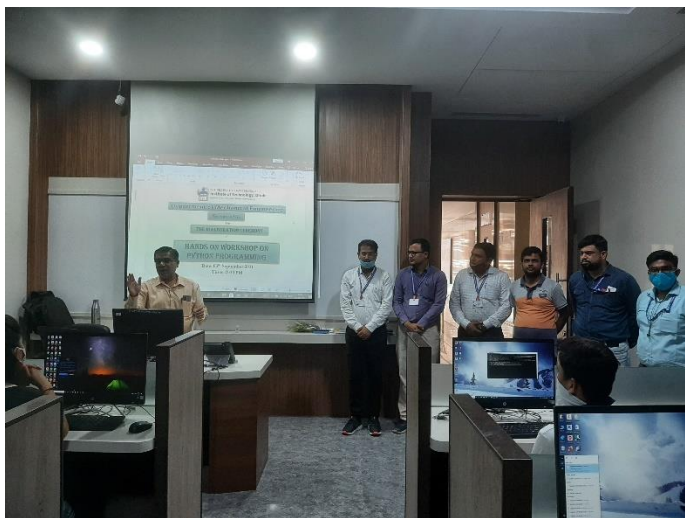
[2<sup>nd</sup> December 2021]

Resource Person: **Dr. Shrikant Randhavane**, Assistant Professor, Dept. of Civil Engg. SVKM's IOT Dhule.

The total number of students has participated : 72

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





## **One Week Hands On Workshop on “Python Programming”**

Resource Person: **Mr. Mahesh Dalwani**, Assistant Professor, Dept. of Mech. Engg. SVKM's IOT Dhule. The total number of students has participated : **42**

**Coordinator:** Mr. Mahesh Dalwani

## **One Week Hands On Workshop on “Demonstration of 3D Printing Machine” [30<sup>th</sup> December 2021]**

Resource Person: **Mr. Swapnil Potdar**, CEO, Creative 3D Printing Service, Dhule

The total number of students has participated : **46**

**Coordinator:** Mr. Yogesh Sonawane





Industrial visit to the “**3D-Printing Lab and CNC-Lab of NMIMS Campus Shirpur**” [18<sup>th</sup> December 2021]

Resource Person: **Dr. Rakesh Chaudhary**, Associate Professor and **Mr. Rushikesh Dandgavhal**, 3D-Printer-Lab In charge, Mechanical Engineering Department, MPSTME-NMIMS Campus, Shirpur

The total number of students has participated : **30**

**Coordinator:** Mr. Mohd. Juneduddin

## MESA Members



**Prof. Yogesh Sonawane**  
Faculty Coordinator

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

## Editorial Members



**Prof. Dhiraj Bhandarkar**  
Faculty Coordinator

Sr. No.	Name of Students	Year
1.	Mr. Abhishek Jain	Final Year
2.	Mr. Yogesh Mali	Third Year
3.	Mss. Aanchal Pardeshi	Second Year