



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-Spark



December 2020



CHAIRMAN'S MESSAGE

Hon. Shri. Amrishbhai R. Patel

I am happy to see the first edition of newsletter "**Mind Spark**" December 2020 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 HOD, 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

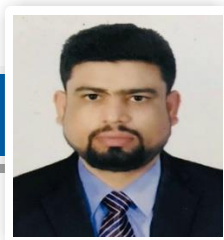
I am very pleased to see the second edition of newsletter of Mechanical Engineering department "**Mind Spark**" **December 2020 edition**.

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

Mr. Mohammed Juneduddin

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 2020-21 has been enhancement of industry institute interaction.

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



Prof. Mohammad Juneduddin
Coordinator and Assistant Professor



Prof. Dhiraj Bhandarkar
Assistant Professor



Prof. Yogesh Sonawane
Assistant Professor



Prof. Satish Patil
Assistant Professor



Prof. Mahesh Dalwani
Assistant Professor



Prof. Dattatray Doifode
Assistant Professor



Prof. Bhushan Behede
Assistant Professor



Prof. Prakash Katdare
Assistant Professor

TECHNICAL ASSISTANTS



Mr. Mahendra Patil
Technical Assistant



Mr. Ganesh Patel
Technical Assistant

WORKSHOP INSTRUCTORS



Mr. Narendra Patil
Welding Shop



Mr. Mahendra Lohar
Machine Shop



Mr. Ravindra Badgujar
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. Nilesh Salunke	Optimization of Axial Flow Compressor Blades Using Genetic Algorithm and Computational Fluid Dynamics	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249-8001
2.	Dr. Nilesh Salunke	Optimization of High Pressure Ratio Compressor Blade Section	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249-8001
3.	Dr. Nilesh Salunke	Aerodynamic Design and Analysis of A Transonic Axial Flow Compressor Stage	International Journal of Mechanical and Production Engineering Research and Development (IJMPERD)	2249-8001
4.	Mr. Yogesh Sonawane	Low Temperature Combustion with Multiple Injection Strategies in Single Cylinder Diesel Engine	International Journal of Innovative Technology and Exploring Engineering (IJITEE)	2278-3075

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. Dattatray Doifode	Employability Enhancement Skills	St. Vincent Pallotti College of Engineering & Technology, Nagpur	Online	11 to 18 August 2020
2.	Mr. Dattatray Doifode	Renewable Energy - A Future Prospectus	MVPS's KBT College of Engineering, Nashik	Online	3 to 5 Sept 2020
3.	Mr. Yogesh Sonawane	Material Science 10 things every engineer should know	Coursera	Online	20th August 2020 Onwards
4.	Mr. Yogesh Sonawane	Design thinking	AICTE & ATAL & Bharati Vidyapeeth College of Engineering	Online	21 to 25 June 2021
5.	Mr. Yogesh Sonawane	Green Energy for Sustainable Development	Bheemanna Khandre Institute of Technology, Bhalki, School of Engineering Central University of Karnataka, Kalaburagi	Online	10 to 14 Aug 2020
6.	Mr. Satish Patil	3D Printing & Design	AICTE & ATAL & Sathyabama Institute of Science and Technology	Online	24 to 28 August 2020
7.	Mr. Mahesh Dalwani	Online training programme on "Satellite Photogrammetry and its Application"	Indian Institute of Remote Sensing, ISRO Dehardun	Online	29/06/20 to 03/07/2020
8.	Mr. Mahesh Dalwani	Online training programme on "Geospatial Inputs for Enabling Master Plan Formulation"	Indian Institute of Remote Sensing, ISRO Dehardun	Online	07/07/20 to 31/07/2020
9.	Mr. Mahesh Dalwani	Online training programme on "Remote Sensing Applications in Agricultural Water Management"	Indian Institute of Remote Sensing, ISRO Dehardun	Online	03/08/20 to 07/08/2020
10.	Mr. Bhushan C. Behede	Energy Engineering	Government College of Engineering, Thanjavur	Online	21 to 25 Dec 2020

Student Competitions

Team **S-Falcons** participated in **Eco-Kart Series 2K19** in this dynamic round team won **Best Mentor award** (Mentor **Mr. Yogesh Sonawane**) with **trophy & Cheque of 10,000/-** and nominated for safest kart and best innovations in different categories at **Gautam Buddha University, Greater Noida**.



Team **E-Torc** has secured **All India Rank AIR-4** in **EBRC- E bike racing challenge** by **AMT MotoCorp** at **O.P. Jindal University, Raigarh, CG**.

Team **S-Falcons** has participated and awarded for **Skidpad Winner (Cash Prize ₹ 10,000/-)**, **Autocross Winner (Cash Prize ₹ 10,000/-)**, **Drag Race Runner Up (Cash Prize ₹ 5000/-)**, **Blind Test Runner Up (Cash Prize ₹ 5000/-)** and **Best Standee (Cash Prize ₹ 5000/-)** in **NEKC-2020 Electric go-kart championship** held at **MSME, Bhopal, MP**.



Team **E-Torc** has participated and awarded for **Overall Runner Up (Cash prize ₹ 60,000/-)** and **best skid pad performer (cash prize ₹ 6000/-)** in **TEGKC-2020” Electric go kart championship** held at **TIT, Bhopal, MP**.

Department Activities

Team **M-Mobulus** has secured **Overall All India Rank AIR-10** out of 150 teams at **National level** and it also secured **Rank 4 (AIR-4)** for **Technical Presentation**, **Rank 5 (AIR-5)** for **Flight Round** in **Aero Design Challenge –2020** held at SAE INDIA, Coimbtore



Establishment of **SIEMENS CENTRE OF EXCELLENCE** in the **SVKM's Institute of Technology, Dhule** by **SIEMENS & CAD-CAM-GALAXY, MUMBAI.**

Industrial Visit at **Thermal Power Station, Eklahare, Nashik**

The total number of students has participated : **63**

Coordinator: Mr. Dattatraya Doifode



Online Training Programme in association with IIRS, ISRO

One week (29th June 2020 to 3rd July 2020)

Online Training Programme has been conducted on

“Satellite Photogrammetry and its Application”

The total number of students has participated: **02**

Coordinator: Mr. Mahesh Dalwani



One week (27th July 2020 to 31st July 2020) Online

Training Programme has been conducted on

“Geospatial Inputs for Enabling Master Plan Formulation”

The total number of students has participated : **00**

Coordinator: Mr. Mahesh Dalwani

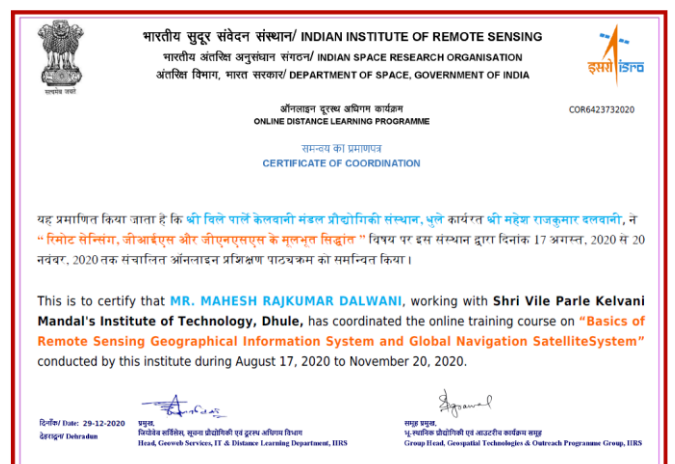
One week (17th August 2020 to 20th November 2020)

Online Training Course conducted on

“Basics of Remote Sensing Geographical Information System & Global Navigation Satellite System”

The total number of students has participated: **01**

Coordinator: Mr. Mahesh Dalwani



One week (21st September 2020 to 25th September

2020) Online Training Course conducted on

“Understanding of Coastal ocean processes using Remote Sensing and Numerical Modelling”

The total number of students has participated : **01**

Coordinator: Mr. Mahesh Dalwani

Online Webinars

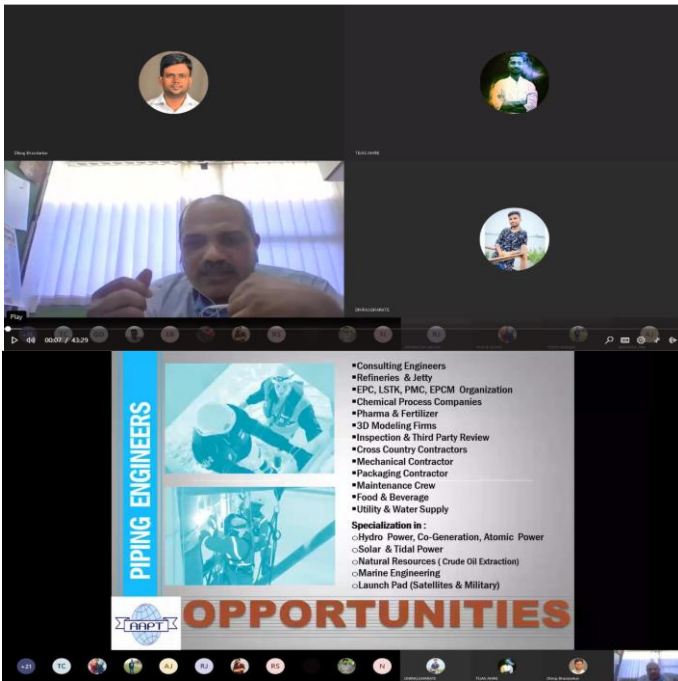
Online Webinar conducted on the topic “**Career opportunities for fresh graduates of Mechanical Engineering with GATE preparation**”

[4th August 2020]

Resource Person: **Dr. H. G. Phakatkar** (Director, Gateway Institute, Pune) a well-known author of numerous textbooks used in the mechanical engineering profession.

The total number of students has participated : **53**

Coordinator: Mr. Dhiraj Bhandarkar

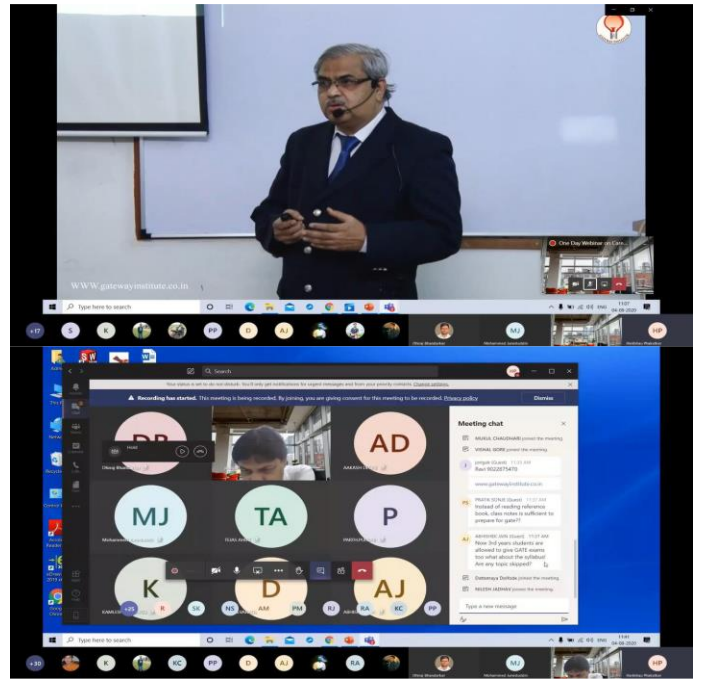


Online Webinar conducted on the topic “**Industry 4.0**” [6th November 2020]

Resource Person: **Mr. Rajesh Jain** (DGM in press tool shop, Mahindra and Mahindra, Nashik).

The total number of students has participated : **61**

Coordinator: Mr. Dattatray Doifode

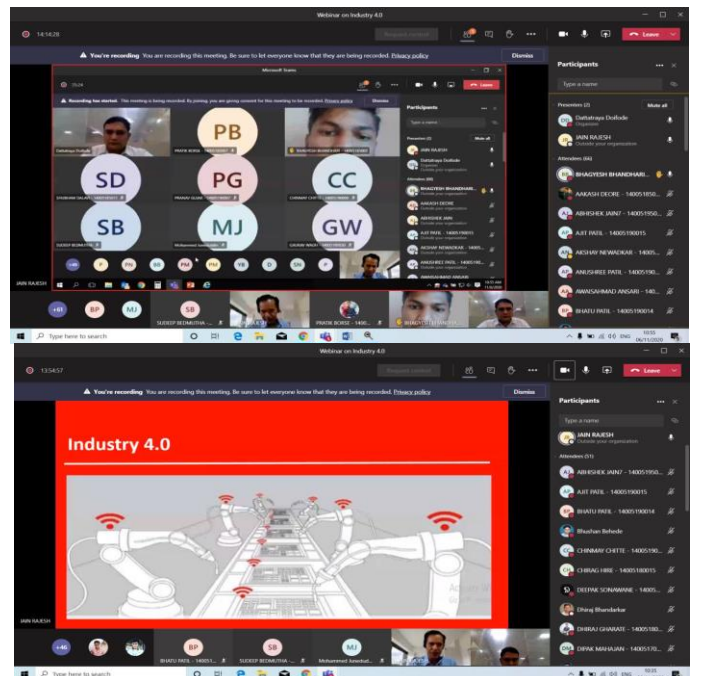


Online Webinar conducted on the topic “**Career opportunities in Piping Design engineering and Construction**” [5th August 2020]

Resource Person: **Mr. Pramod Deshmukh** (Training & Placement head, Asian Academy of Professional Training, Pune).

The total number of students has participated : **49**

Coordinator: Mr. Dhiraj Bhandarkar



Guest Lectures

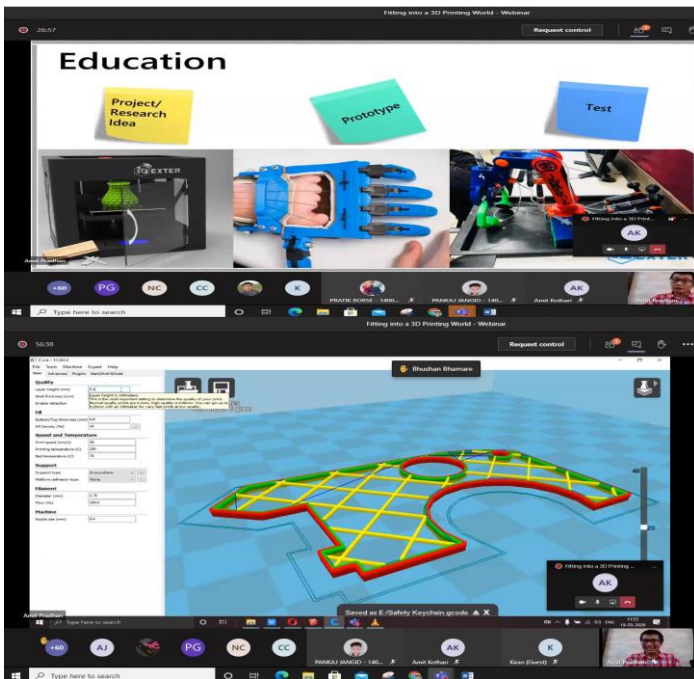
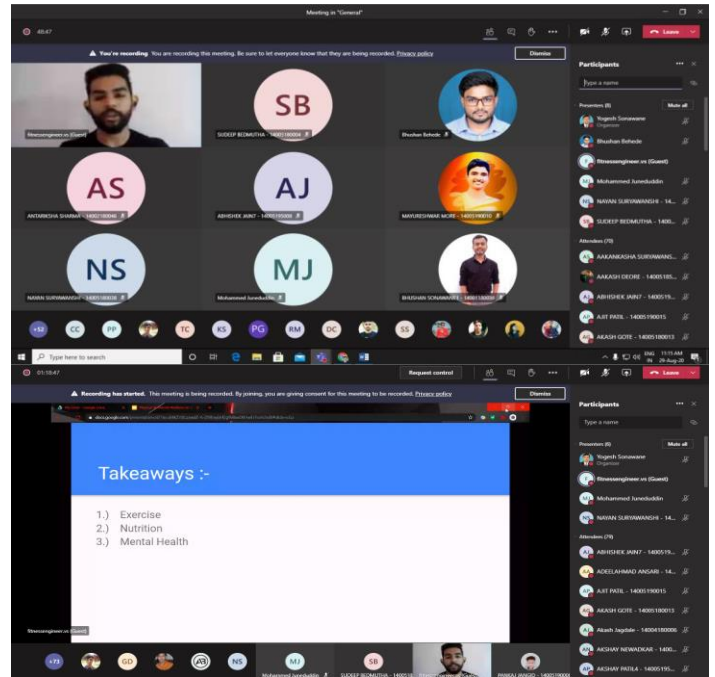
Guest Lecture session delivered on “Physical And Mental Wellness To Survive COVID-19 Wave”

[29th August 2020]

Resource Person: **Mr. Vinay Suryawanshi** (Certified nutritionist, Certified Fitness coach, Certified functional and cross trainer, Sports injury and rehab specialist).

The total number of students has participated : **76**

Coordinator: Mr. Yogesh Sonawane

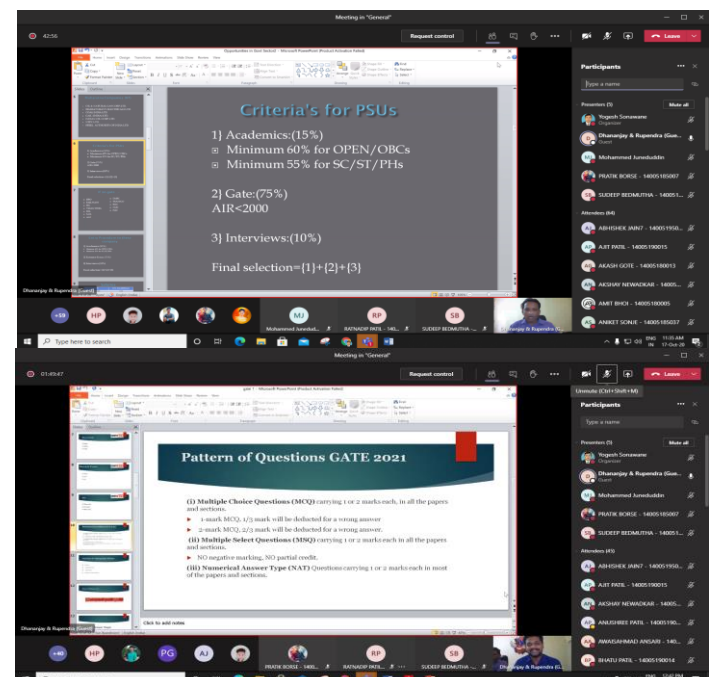


Guest Lecture session delivered on “How to fit in the 3D Printing World” [19th September 2020]

Resource Person: **Mr. Aditya Pradhan** (*Assistant Professor SVKM IOT, Dhule*).

The total number of students has participated : **63**

Coordinator: Mr. Mohammed Juneduddin



Guest Lecture session delivered on “GATE, MES and PSU's Exam awareness and preparation”

[17th October 2020]

Resource Person: **Mr. Dhananjay Kachale** (Ex. Executive Engineer at ONGC Mumbai) and **Mr. Rupendra Pathak** (Director, IGNITE Academy, Pune).

The total number of students has participated : **64**

Coordinator: Mr. Mohammed Juneduddin

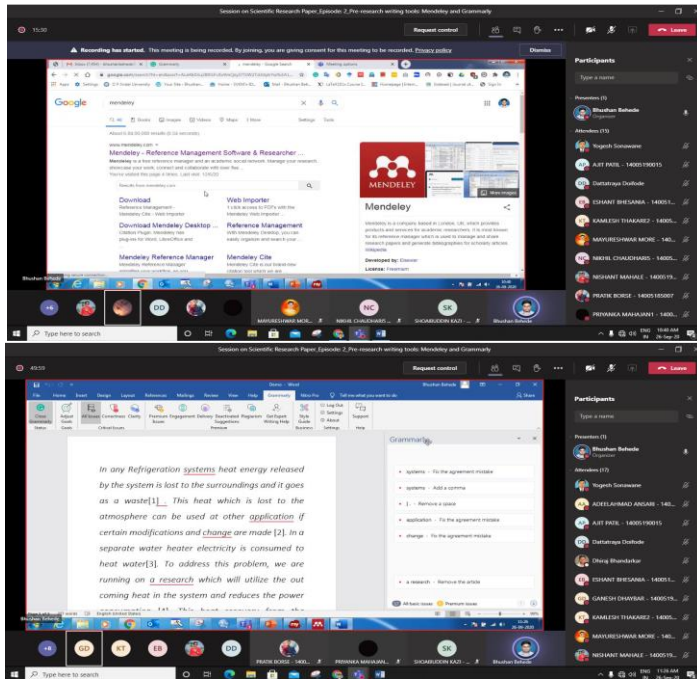
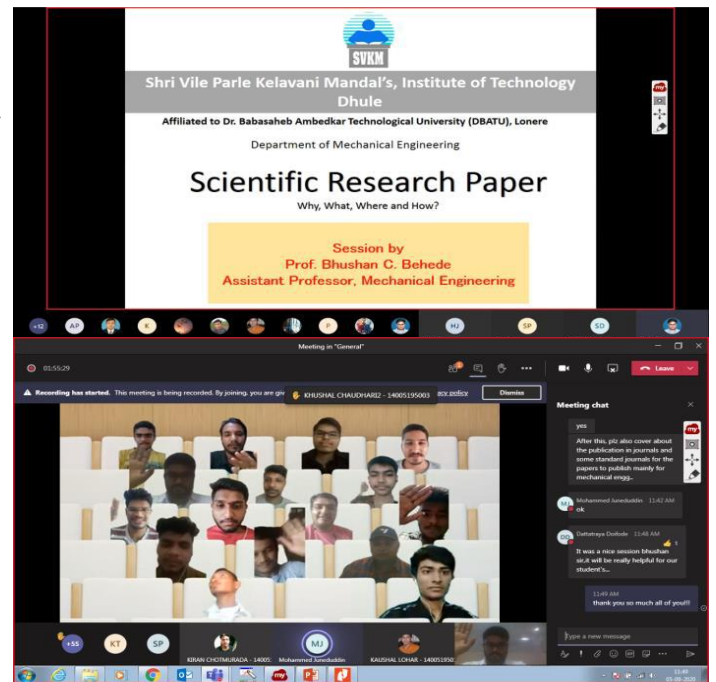
Guest Lectures

Guest Lecture session delivered on the occasion of **Teachers Day** on **“Scientific Research Paper writing and publication.”** [5th September 2020]

Resource Person: **Mr. Bhushan Behede** (Assistant Professor SVKM IOT, Dhule).

The total number of students has participated : **79**

Coordinator: Mr. Mohammad Juneduddin



Guest Lecture session delivered on **“Use of Pre-research writing tools: Mendeley and Grammarly”** [26th September 2020]

Resource Person: **Mr. Bhushan Behede** (Assistant Professor SVKM IOT, Dhule).

The total number of students has participated : **17**

Coordinator: Mr. Mohammad Juneduddin

Guest Lecture session delivered on **“Computational Fluid Dynamics (CFD)”** [15th October 2018]

Resource Person: **Mr. Sudesh Powar** (Assistant Professor MIT Academy of Engineering, Pune).

The total number of students has participated : **63**

Coordinator: Mr. Satish Patil



Guest Lectures



Guest Lecture session delivered on “**Introduction to Computational Fluid Dynamics (CFD)**”

[11th October 2019]

Resource Person: **Mr. Prashant Nawale** (Project Staff at IIT Bombay)

The total number of students has participated : **63**

Coordinator: Mr. Satish Patil

Three days Workshop on “**Soft Skills Training**”

[06th to 08th February 2020]

Resource Person: **Mr. Neville Meheta**

Ms. Karishma Ahuja

(NMIMS Mumbai Campus)

The total number of students has participated : **134**

Coordinator: Mr. Dhiraj Bhandarkar



Hands-on Workshop on “**SIEMENS NX Software**”

[Started from 25th July 2019 till 100 Hrs completion]

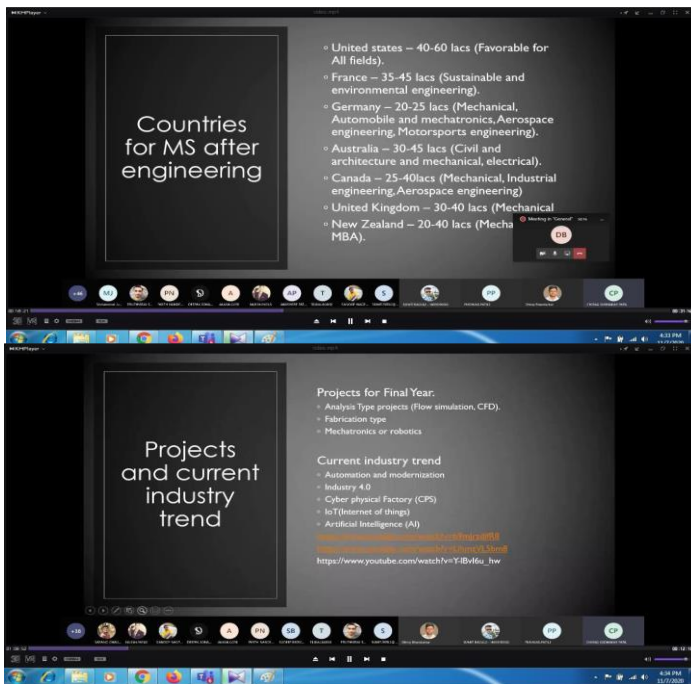
Resource Person: **Mr. Rahul Ramaswamy & Team**

(Siemens Certified Trainer,

CAD-CAM-GALAXY, Mumbai)

The total number of students has participated : **62**

Coordinator: Mr. Mohammad Juneduddin



Session 01: Higher studies in Abroad after Engineering [5th November 2020]

Resource Person: **Mr. Chirag Patil** (M.S. in Swinburne University of Technology Australia).

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

Coordinator: Mr. Dhiraj Bhandarkar

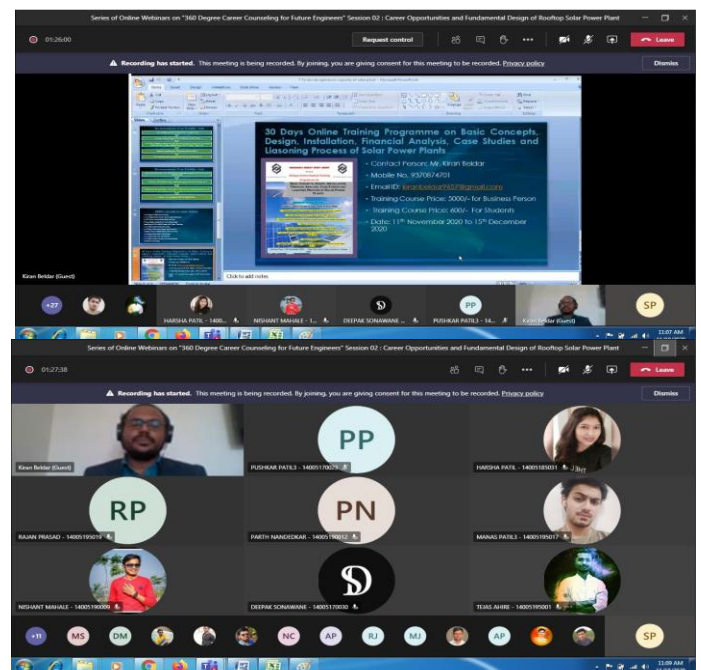
Session 02: Career Opportunities and Fundamental Design of Rooftop Solar Power Plant

[10th November 2020]

Resource Person: **Mr. Kiran Beldar** (Instructor of Renewable energy in UDEMY & Solar Instructor for 12 Courses based on Solar Power Plant Design, Author of book "A to Z Design of Rooftop Solar Power Plant").

The total number of students has participated : **32**

Coordinator: Mr. Dhiraj Bhandarkar



NPTEL Certification

Elite

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)




This certificate is awarded to
BHUSHAN CHANDRAKANT BEHEDE
for successfully completing the course
Energy Conservation and Waste Heat Recovery

with a consolidated score of **76** %

Online Assignments	24.56/25	Proctored Exam	51.75/75
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Total number of candidates certified in this course: 280

Jul-Oct 2019
(12 week course)




Roll No: NPTEL19ME60S41270048 To validate and check scores: <https://nptel.ac.in/noc>

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
YOGESH DILIPRAO SONAWANE
for successfully completing the course
IC Engines and Gas Turbines

with a consolidated score of **57** %

Online Assignments	20.78/25	Proctored Exam	36/75
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Total number of candidates certified in this course: 218



Jan-Apr 2020
(12 week course)

Roll No: NPTEL20ME42S21670008 To validate and check scores: <https://nptel.ac.in/noc>

Elite

NPTEL Online Certification
(Funded by the Ministry of HRD, Govt. of India)



This certificate is awarded to
BHANUDAS RAJENDRA KAPADNE
for successfully completing the course
IC Engines and Gas Turbines

with a consolidated score of **62** %

Online Assignments	19.88/25	Proctored Exam	42/75
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Total number of candidates certified in this course: 218

Jan-Apr 2020
(12 week course)

Roll No: NPTEL20ME42S22280001 To validate and check scores: <https://nptel.ac.in/noc>



NPTEL-AICTE Faculty Development Programme
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
MAHESH RAJKUMAR DALWANI
for successfully completing the course
IC Engines and Gas Turbines

with a consolidated score of **72** %



Jan-Apr 2019

Roll No: NPTEL19ME10S41780274 To validate and check scores: <http://nptel.ac.in/noc>

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams. This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2016, similar to other refresher / orientation courses. F.No. AICTE / RIFD / FDP through MOOCs / 2017-18



NPTEL-AICTE Faculty Development Programme
(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to
MAHESH RAJKUMAR DALWANI
for successfully completing the course
Energy Conservation and Waste Heat Recovery

with a consolidated score of **66** %

(Jul-Oct 2019)

Roll No: NPTEL19ME60S41270050 To validate and check scores: <http://nptel.ac.in/noc>

The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams. This certificate is therefore acceptable for promotions under CAS as per AICTE notifications dated 24th July 2016, similar to other refresher / orientation courses. F.No. AICTE / RIFD / FDP through MOOCs / 2017-18

NATIONAL PROGRAMME ON TECHNOLOGY ENHANCED LEARNING
A JOINT VENTURE BY INDIAN INSTITUTES OF TECHNOLOGY & INDIAN INSTITUTE OF SCIENCE




Letter of Appreciation

This letter of appreciation is awarded to **DHIRAJ K. BHANDARKAR** for his/her efforts in disseminating and supporting the learners of the Swayam NPTEL Local Chapter **SHRI VILE PARLE KELAVANI MANDAL'S INSTITUTE OF TECHNOLOGY, DHULE**, as a Single Point of Contact (SPOC) during the Jan-Apr 2020 semester. The support provided by the SPOC was critical in ensuring a smooth completion of the various academic activities in the COVID-19 impacted semester.

As per the data at our end, the details related to **SHRI VILE PARLE KELAVANI MANDAL'S INSTITUTE OF TECHNOLOGY, DHULE** are as given below. This is indicative of the activeness of the SPOC in supporting and disseminating the information within the local chapter. We want to extend our sincere appreciation to the SPOC for all the effort and support extended throughout the semester.

Number of candidates registered	Number of candidates passed (based on assignment scores)
82	73

This calculation is per the modified pass criteria.

- If average assignment score $\geq 40/100$ (which is also one condition for certificate eligibility), we will issue a modified Pass certificate.
- If this score $< 40/100$, this certificate will not be issued.

We will calculate the Average Assignment score as follows:

Average of the best 3/6/8 assignments for courses of duration 4/8/12 weeks (or as announced a priori in the course in case of changes)


 Prof. Andrew Thangaraj
 NPTEL Co-Ordinator

MESA Members



Prof. Yogesh Sonawane
Faculty Coordinator

Sr. No.	Name of Students	Designation	Year
1.	Mr. Prasad Jambhale	President	Final Year
2.	Mr. Sarang Chaudhari	Joint President	Final Year
3.	Mr. Nayan Suryawanshi	Vice-President	Third Year
4.	Mr. Saurabh Pukale	Joint Vice-President	Third Year
5.	Mr. Tejraj Borse	Secretary	Final Year
6.	Mr. Nikhil Chaudhari	Treasurer	Third Year

Editorial Members



Prof. Dhiraj Bhandarkar
Faculty Coordinator

Sr. No.	Name of Students	Year
1.	Mr. Abhishek Jain	Third Year
2.	Mr. Yogesh Mali	Second Year