



Shri Venkateshwara Shikshan Sanstha's

Nanasaheb Mahadik College of Engineering, Peth

Department of Mechanical Engineering

One week Faculty Development Programme

On

"Advanced Research Methodology"

(Approved by AICTE, New Delhi)

From 26th July to 30th July 2021

❖ About the FDP-

This FDP is conceptualized and designed to enrich the research powers with novel research strategies in engineering. The programme addressed issues in research methods and data analytics like selection of appropriate analytical tools, right software and interpretation of outputs. The program focused on broad range of techniques available in research methods and data analytics for academicians, practitioners and researchers from inter disciplinary domains.

❖ Program Objectives-

- To provide an overview of research methodology.
- To help faculty and research scholar to define research Problem.
- To insight different research design.
- To guide researchers in writing research paper.



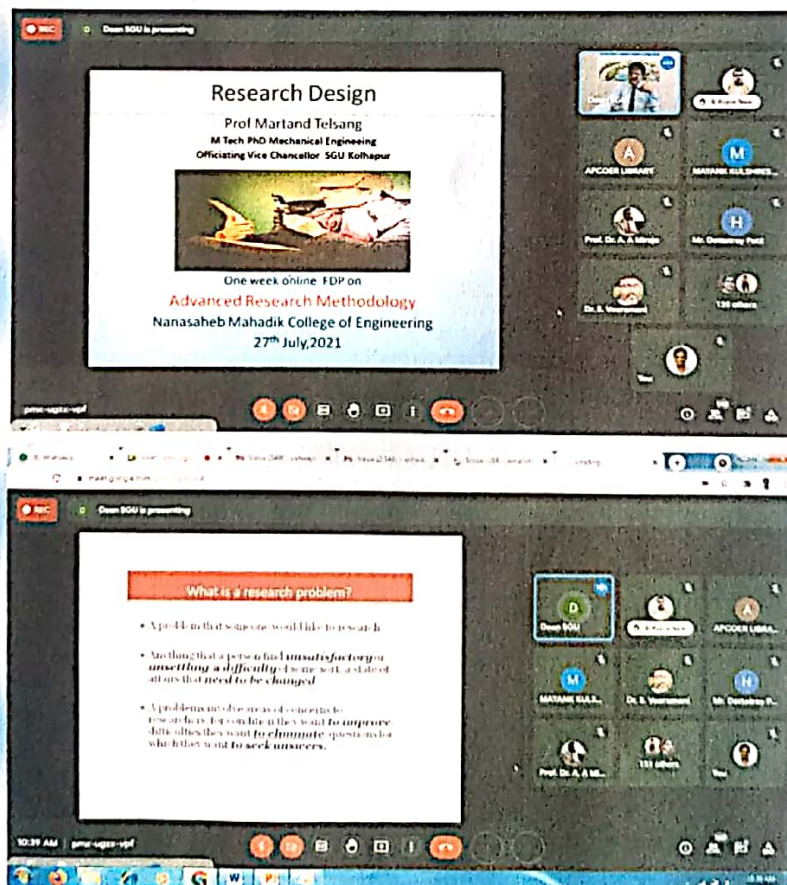
Session 2: Research Design Process

Resource person: Dr. M. T. Telsang, Sanjay Ghodawat University, Atigre.

Date: 27th July 2021.

Content:

- Steps in Research process.
 - Selecting the research topic.
 - Defining the research problem.
 - Establishing research problem.
 - Research Design.
 - Specifying information required.
 - Designing the method of collecting the needed information.
 - Designing the questionnaire.
 - Deciding on the sampling design.
 - Managing and implementing the data collection.



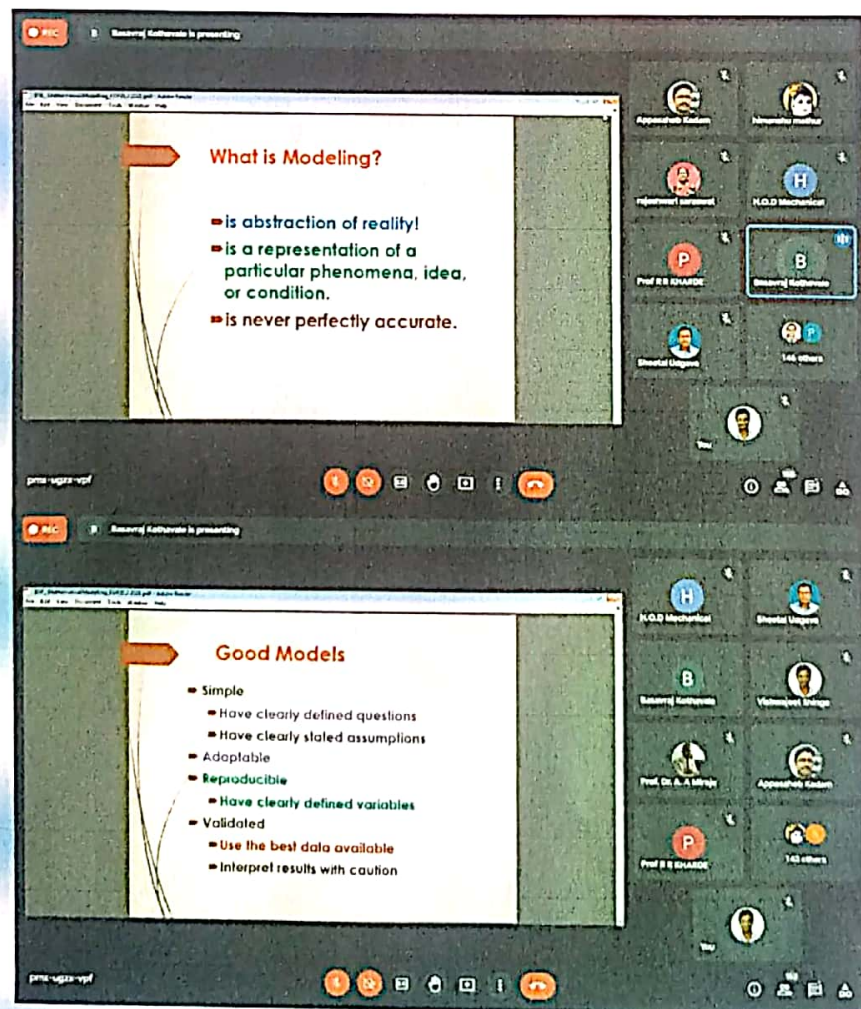
Session 3: Data Processing, Mathematical modeling and analysis.

Resource person: Dr. S. B. Kothavale, MIT World Peace University, Pune.

Date: 28th July 2021.

Content:

- Data.
- What is modelling.
- Why modelling.
- Applications
- Types and processes.
- Mathematical modeling and engineering problem solving.
- Nonlinear analysis.
- Asymptotic analysis.
- Sensitivity analysis.



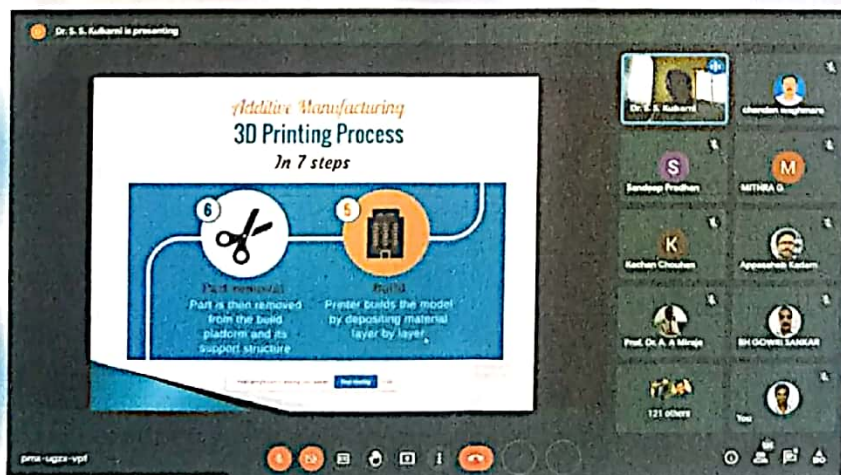
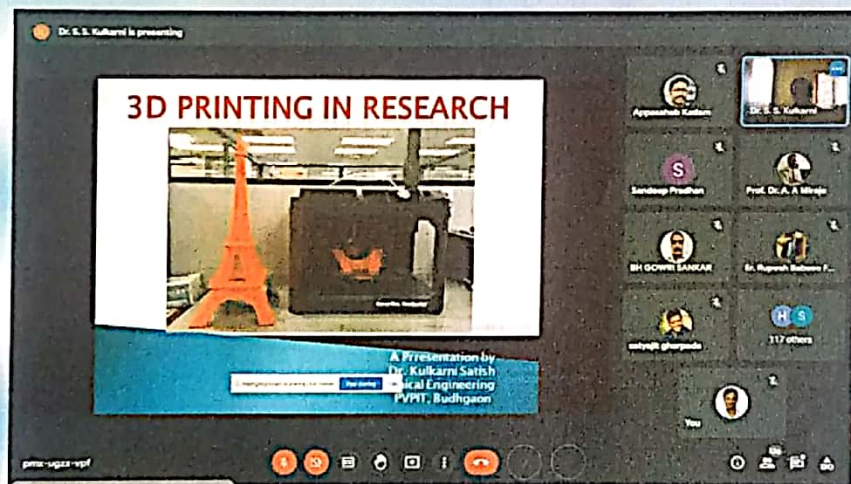
Session 4: Research in 3 D printing.

Resource person: Dr. S. S. Kulkarni, PVPIT, Budhgaon.

Date: 29th July 2021.

Content:

- PROS of 3 D printing.
 - Minimizing waste.
 - Cost effective.
 - Ease of access.
 - Environmentally friendly.
- Stereo lithography (SLA).
- Digital light process (DLP).
- Selective laser sintering (SLS)



Session 5: Effective paper writing for referred journals.

Resource person: Dr. S. R. Desai, Sakharale.

Date: 30th July 2021.

Content:

- Purpose of a Research paper.
- Research writing structure.
- Introduction.
- Literature review.
- Title.
- Abstract.
- Keywords.
- Preparation of the manuscript.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Important Elements of Writing a Research Paper" with a list of bullet points: "Availability of Research Data", "Structure of a Scientific Paper", "Preparation of the first draft of the Paper", "Plagiarism Check of the Paper", "Selection of a Journal", and "Submission of the Manuscript". The slide is attributed to "Dr. Sandeep Desai, Associate Professor, AIIT, KTI". The right sidebar shows a grid of participant icons, including "Sankar Kumar G M (PAW...)", "MITHRA G", "Mall Tarek", "Shrutika Deshpande", "Sandeep Desai", "anish sharma", "H.O.D. Mechanical", and "120 others". The bottom status bar shows "petra-ug2a-vpf" and various Zoom controls.

The screenshot shows a Zoom meeting interface. The main window displays a presentation slide titled "Research Writing Structure (IMRD Structure)". It includes a diagram of the "IMRD: Basic Structure" with sections: INTRODUCTION (labeled "WHY?"), LITERATURE REVIEW, METHOD (labeled "HOW?"), RESULTS (labeled "WHAT?"), DISCUSSION (labeled "SO WHAT?"), and CONCLUSION. To the right of the diagram is a flowchart with steps: "1. Select a topic", "2. Define the problem", "3. Formulate a hypothesis", "4. Design the experiment", "5. Collect data", "6. Analyze data", "7. Draw conclusions", and "8. Write the paper". The slide is dated "17/07/2021" and attributed to "Dr. Sandeep R. Desai". The right sidebar shows participant icons, including "Sandeep Desai", "MITHRA G", "Mall Tarek", "Shrutika Deshpande", "H.O.D. Mechanical", "D. RAJMOHAN Babu", "P. Prashant Purayya", and "120 others". The bottom status bar shows "petra-ug2a-vpf" and various Zoom controls.



Valedictory Function:

Valedictory function of FDP was conducted on 30th July 2021 at 12.30 PM in presence of Executive director Prof. M. B. Joshi, Principal Dr. A. A. Miraje, Vice-principal Mr. N. M. Sane, all deans, Head of departments and all faculties.

802 participants were registered for the FDP all over the India and abroad. Many faculties expressed their valuable feedback and vote of thanks for FDP. Mr. V. R. Shinge, Mr. S. D. Ghorpade, Mrs. S. T. Nangare and Mechanical department faculties coordinated this FDP.



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महाराष्ट्र सरकारचे पत्र		
महाराष्ट्र विधान सभेच्या निवडणुका १९६०-६१ या निवडणुकांमध्ये (१९६१) महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये	महाराष्ट्र विधान सभेच्या निवडणुका १९६०-६१ या निवडणुकांमध्ये (१९६१) महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये	महाराष्ट्र विधान सभेच्या निवडणुका १९६०-६१ या निवडणुकांमध्ये (१९६१) महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये महाराष्ट्र विधान सभेच्या निवडणुकांमध्ये

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८०२ प्रभाषणक व मंशोधक यांनी सहायण नोंदवून सध्याचे मासिक राहणूक मोदीकर, कायदांचे मालकांक, प्रा. मोहन जोशी, प्राचाय डाँ. ए. ए. मरते यांच्या माध्यामदर्शनासाठी हा कार्यक्रम झाला.

मंशोधनासाठी आद्यनेते व सर्वोच्च उपाय, सामाजिक नियमकारिताकडून शोधनसंस्थे मादरीकरण, प्रातः सध्याच पडतो हाच विषय निघण्यावर तज्ज्ञांनी सद्योत्तर माध्यामदर्शने केले व उपमितीसाठी मवाद मालकां. सध्याचे कायदांचे मालकांक, प्रा. मोहन जोशी यांनी माध्यामदर्शने केले, मेमोरिअल दस्तिसिवाय विभागाच्या पुढाकारानुसार कार्यकर सध्या झाला. उपाकारकांचे प्रा. मोहन जोशी, प्रा. दत्तात्रय पाटील, प्रा. जालिंद तावठे, सध्याचक प्रा. निरव्याज तावठे, प्रा. सुरेंद्र नाथे यांनी सभेकर केले, प्रा. सत्यजित घोषाडे यांनी आचार मानले.