



**SANDIP FOUNDATION'S**  
**SANDIP POLYTECHNIC, NASHIK**  
**CIVIL ENGINEERING DEPARTMENT**

**SKILL DEVELOPMENT PROGRAM**

**ON**

**HANDS ON PRACTICES IN CIVIL  
ENGINEERING**


**21.11.2022 TO 26.11.2022**

## TIME TABLE

Sr. No.	Topic	Content	Outcome
<b>01</b>	Basic of Mathematics & Scientific Calculator.	<ol style="list-style-type: none"> <li>1. BODMAS Rule.</li> <li>2. Types of load, types of beam, reaction calculation.</li> <li>3. Unit conversion.</li> <li>4. Basic operation of scientific calculator.</li> </ol>	<ol style="list-style-type: none"> <li>A. Effective use of scientific calculator</li> <li>B. Effective use of basic mathematics in solution of numerical.</li> </ol>
<b>02</b>	Foundation Layout	<ol style="list-style-type: none"> <li>1. Center line drawing preparation.</li> <li>2. Laying of center line on ground.</li> <li>3. Diagonal Checking.</li> </ol>	<ol style="list-style-type: none"> <li>A. Ease of marking the center line on ground.</li> <li>B. Use of basic geometry for accurate marking.</li> </ol>
<b>03</b>	Testing of Civil Engineering materials.	<ol style="list-style-type: none"> <li>1. Introduction to Engineering properties of different material.</li> <li>2. Field and Lab testing of different materials.</li> <li>3. Acceptance criteria for use of material on site.</li> </ol>	<ol style="list-style-type: none"> <li>A. Checking of quality of materials.</li> <li>B. To understand the acceptance criteria for use of materials.</li> </ol>
<b>04</b>	Use of soft computing techniques for estimate preparation.	<ol style="list-style-type: none"> <li>1. Use of AUTO CAD for drawing preparation.</li> <li>2. Use of SSR for lead calculation.</li> <li>3. Use of spreadsheet for estimate preparation.</li> </ol>	<ol style="list-style-type: none"> <li>A. Effective use of soft computing techniques.</li> <li>B. To determine the estimated cost of proposed work.</li> </ol>
<b>05</b>	Use of Auto Level for Ground Elevation calculations.	<ol style="list-style-type: none"> <li>1. SI, MKS and CGS System units with conversions.</li> <li>2. Use of auto level for ground elevation calculations.</li> </ol>	<ol style="list-style-type: none"> <li>A. Ground elevation calculations</li> <li>B. Effective use of Auto level.</li> </ol>
<b>06</b>	Civil Engineering drawing by using Auto CAD	<ol style="list-style-type: none"> <li>1. Introduction of CAD&amp; its uses.</li> <li>2. Basic settings &amp; use of different commands to draft a drawing.</li> <li>3. Drafting of building drawing.</li> <li>4. Plotting of drawing.</li> </ol>	<ol style="list-style-type: none"> <li>A. Speed in drafting of civil engineering drawings.</li> <li>B. Printing of drawing on different sizes of sheet.</li> </ol>

# OBJECTIVES

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- Use of soft computing techniques to prepare the detailed estimate and rate analysis.
  - Center line marking of different type of structure with ease.
  - Effective use of Auto CAD for drafting the civil engineering drawings.
  - Use of Auto level for ground level calculations.
  - Field and laboratory testing of civil engineering material.
  - Effective use of basic mathematics and scientific calculator.
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# **Photo Gallery of Program**





# INAUGURATION FUNCTION



# FOUNDATION LAYOUT









# MATERIAL TESTING

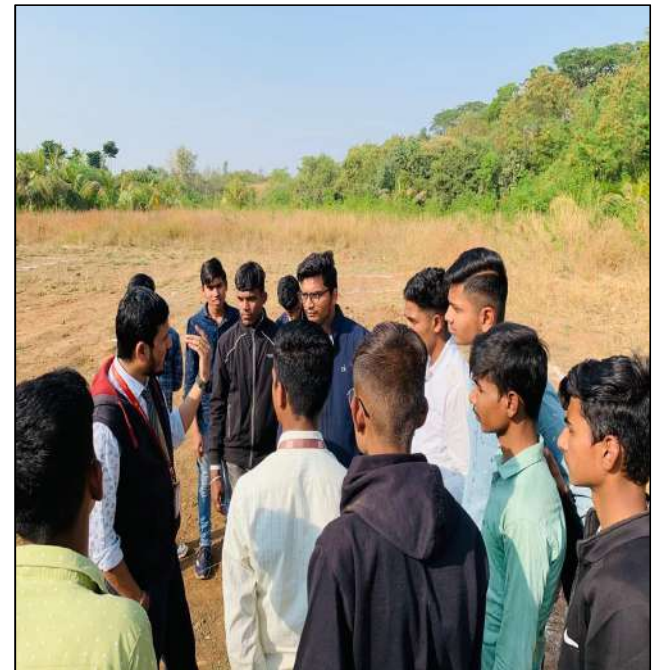






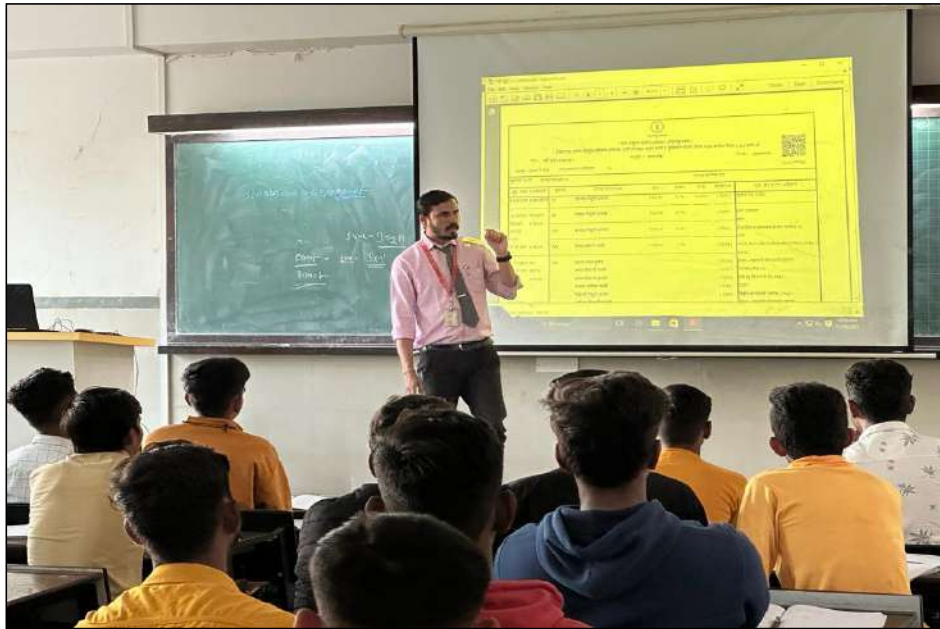


# USE OF AUTO LEVEL





# 7/12 extract and soft computing techniques .



# BUILDING DRAWING





**Thank you.**

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