

**Curriculum  
For  
Certificate in Glazing & Decoration  
Six Months Duration Course  
Code: VI81S005  
(2013)**

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## Scheme of Studies

| Serial No. | Modules                 | Theory <sup>1</sup> Days/hours | Workplace <sup>2</sup> Days/hours | Timeframe of modules / sequence |
|------------|-------------------------|--------------------------------|-----------------------------------|---------------------------------|
| 1          | Follow Safety Rules     | 8hrs                           | 4 hrs                             | 12hrs                           |
| 2          | Glaze & Raw Material    | 10hrs                          | 22 hrs                            | 32hrs                           |
| 3          | Glaze Quality           | 20hrs                          | 44 hrs                            | 64hrs                           |
| 4          | Glaze Application       | 44hrs                          | 160 hrs                           | 204hrs                          |
| 5          | Glaze Decoration        | 40hrs                          | 210 hrs                           | 250hrs                          |
| 6          | Glaze Faults & Remedies | 30hrs                          | 160 hrs                           | 190hrs                          |
| 7          | Develop Professionalism | 4hrs                           | 20 hrs                            | 24hrs                           |

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<sup>1</sup> Learning hours in training provider premises

<sup>2</sup> Training workshop, laboratory and on-the-job workplace

## **Introduction**

This course is aimed at introducing and developing the basic skills required for glazing and decoration in various ceramic industries. The trainee is introduced in a step by step manner to the various elements of the discipline and their implications. Ranging from the knowledge and skills required to draw patterns, mix various glaze materials, preparation of ceramic pieces for glazing to using different equipment & machinery involved in the whole process of glazing & decoration.

### **Overall Objectives of the Course**

1. The main objective of this course is to produce semi-skilled & skilled workers i.e. glaze men for the local ceramic tableware, sanitary, refractory & tile industry.
2. Semi-skilled and skilled workers produced by this training would help to reduce unemployment and poverty in the society.
3. This training course is designed to create job opportunities for those primary pass students who fail to continue their schooling due to various social and economic factors.
4. Further, this Curriculum is developed by considering the requirements of local market and need of the trade, enabling the pass-outs to fulfill the need of job market to reduce the shortage of Semi Skilled and Skilled workers in this area.

### **Competencies Gained after Completion of Course**

After completion of this course the student should be able to:

1. Explain the basic ceramic terms used in the whole process of glazing & decoration.
2. Explain all safety & health hazards involved in glazing & decoration operations.
3. Describe materials, their usage & properties.
4. Express the knowledge of applying various glazing techniques i.e. dipping, pouring and spraying etc.
5. Describe basic tests required for glazing

6. Explain the knowledge of essential raw material used in the basic glaze composition.
7. Explain the concept of flocculation & deflocculating, decoration by decal paper / transfer labels, trailing, luster application etc.
8. Demonstrate the knowledge of glaze mixing methods.
9. Demonstrate the knowledge of working with compressor & spray gun.
10. Describe the glazing procedure.
11. Describe knowledge of glaze quality assessment tests.
12. Describe the routine maintenance of tools / equipment.
13. Describe different types of glazes and their properties.
14. Explain different glazing & decoration techniques.
15. Understand glaze defects and their remedies.
16. Describe the importance of professionalism & team work in developing a healthy & efficient work environment.
17. Knowledge of various tools & measuring instruments for glaze and decoration.
18. Do the glazing by Dipping, Pouring and spraying on bisque pieces and green ware.
19. Apply the appropriate thickness of glaze layer on a ceramic piece.
20. Decorate pot by using trailing method.
21. Decorate through coil method.
22. Decorate through embossing technique
23. Make engobe /colored slip decoration.

24. Decorate through engraving.
25. Decorate pot by using brushing technique.
26. Perform screen printing.
27. Draw freehand drawings.
28. Decorate the pot by using decal paper/ transfer label.
29. Decorate the pot by using (under & over glaze) colors/stains.
30. Check and adjust the Air pressure for proper spraying.
31. Check, clean and adjust the ratio between air pressure and glaze suspension in spray gun.
32. Perform quality assessment tests on prepared glaze.
33. Perform routine maintenance of tools / equipment used in glazing and decoration departments.
34. Adjust the thickness of glaze.

### **Sequence of the Modules:**

- Module1 – Follow Safety Rules
- Module2 – Glaze & Raw material
- Module3 – Glaze Quality
- Module4 – Glaze Application
- Module5 – Glaze Decoration
- Module6 – Glaze Faults & Remedies
- Module7 – Develop Professionalism
- Module8 – Time Management

## **Job opportunities available immediately and in the future**

- Ceramic Cottage Industry
- Ceramic Sanitary Industry.
- Ceramic Tile Industry
- Ceramic Training/teaching Institutes
- Ceramic Tableware Industry
- Self employment.

## **Trainee Entry Level**

Minimum Primary

## **Minimum Qualification of Trainer**

Industrial experience of five years (minimum) Or

Certificate course in respective field with two years of industrial experience

## **Medium of Instruction i.e. Language of Instruction**

Urdu, English

## **Time Frame of Assessment**

|                    |          |
|--------------------|----------|
| Duration of course | 06Months |
| Total Hours        | 800hrs   |
| Theory Hours       | 160hrs   |
| Practical Hours    | 640hrs   |



## Overview of the program –Curriculum for Glazing & Decoration in Ceramics

| Module Title and Aim   | Learning Units  | Theory <sup>3</sup><br>Days/hours | Workplace <sup>4</sup><br>Days/hours | Timeframe of<br>modules /<br>sequence |
|--|---|-----------------------------------|--------------------------------------|---------------------------------------|
| Module 1<br>Follow Safety Rules<br><br>Aim : To develop understanding of health & safety requirements.                 | <ol style="list-style-type: none"> <li>1. Wear work clothes</li> <li>2. Wear safety gears</li> <li>3. Prepare the workplace</li> <li>4. Deal with work &amp; health hazards.</li> </ol> | 8hrs                              | 4 hrs                                | 12hrs                                 |
| Module 2<br>Glaze & Raw material<br><br>Aim : To develop basic understanding of glaze, types & raw materials involved. | <ol style="list-style-type: none"> <li>1. Basic Understanding of Glaze, glaze types &amp; compositions</li> <li>2. Basic Understanding of Glaze material</li> </ol>                     | 10hrs                             | 22 hrs                               | 32hrs                                 |
| Module 3<br>Glaze Quality<br><br>Aim : To develop understanding of basic Quality assessment methods.                   | <ol style="list-style-type: none"> <li>1. Check specific gravity of glaze</li> <li>2. Check Viscosity</li> <li>3. Check Residue</li> </ol>  | 20hrs                             | 44 hrs                               | 64hrs                                 |
| Module 4<br>Glaze Application  | <ol style="list-style-type: none"> <li>1. Organize the work place</li> <li>2. Clean the piece</li> <li>3. Check quality of piece</li> </ol>   | 44hrs                             | 160 hrs                              | 204hrs                                |

<sup>3</sup> Learning hours in training provider premises

<sup>4</sup> Training workshop, laboratory and on-the-job workplace

|  |  |       |        |        |
|--|--|-------|--------|--------|
| <p>Aim : To develop professional glaze application skills.</p>   | <ol style="list-style-type: none"> <li>4. Dipping method</li> <li>5. Pouring method</li> <li>6. Spraying method</li> <li>7. Brushing method</li> <li>8. Handle glazed pieces</li> </ol>  |       |        |        |
| <p>Module 5<br/>Glaze Decoration</p> <p>Aim : To develop professional glaze decoration skills.</p>                       | <ol style="list-style-type: none"> <li>1. Glaze Trailing</li> <li>2. Brushwork on glazes</li> <li>3. Colored Slips</li> <li>4. Washes</li> <li>5. Screen Print</li> <li>6. Sticker application</li> <li>7. Overglazes &amp; Lusters</li> </ol> | 40hrs | 210hrs | 250hrs |
| <p>Module 6<br/>Glaze Faults &amp; Remedies</p> <p>Aim : To develop understanding of basic glze faults and remedies.</p> | <ol style="list-style-type: none"> <li>1. Examine green ware piece for defects</li> <li>2. Pinholes</li> <li>3. Crawling</li> <li>4. Crazing</li> <li>5. Colored Slip / Engobe Faults</li> </ol>   | 30hrs | 160hrs | 190hrs |
| <p>Module 7<br/>Develop Professionalism</p> <p>Aim: To develop professionalism</p>                                       | <ol style="list-style-type: none"> <li>1. Active participation in training</li> <li>2. Interact &amp; Handle the co-workers</li> <li>3. Consult the experts</li> <li>4. Participate in skill /test competition</li> </ol>                      | 4hrs  | 20hrs  | 24hrs  |
| <p>Module 8<br/>Time Management</p> <p>Aim: To develop time management skills</p>  | <ol style="list-style-type: none"> <li>1. Manage time to complete the assigned work</li> <li>2. Manage work load as required by the management.</li> <li>3. Prioritize tasks</li> <li>4. Meet the deadlines</li> </ol>                         | 4hrs  | 20hrs  | 24hrs  |

## Curriculum Contents (Teaching and Learning Guide)

### Module 1: Follow Safety Rules

Objective of the Module: To understand & apply safety requirements and standards

Duration: 12 hours      Theory: 8hours      Practice: 4 hours

| Learning Unit        | Learning Outcomes  | Learning Elements  | Duration<br>Theory<br>+Practical | Materials<br>Required                          | Learning<br>Place            |
|----------------------|--|--|----------------------------------|--|------------------------------|
| 1. Wear work clothes | 1.1. Is able to understand & apply the personal safety<br>1.2. Is able to work while wearing the aprons, gloves & dust masks/ respirators etc<br>1.3. Is able to explain the advantages of the safety gear | Knowledge of:<br>1.1.1 Health & environmental hazards<br>1.1.2 Types of safety gear<br>1.1.3 Use of safety gear<br><br>Ability to:<br>1.1.1 Perform at workplace while wearing safety gear<br>1.1.2 Identify the work environment and selecting proper safety gear | 2+1hrs                           | - Apron<br>- Dust Mask/ Respirator<br>- Gloves | Class Room<br>+<br>Workplace |
| 2. Wear Safety Gear  | 2.1 Is able to understand the purpose of each equipment  | Knowledge of:<br>2.1.1 Safety gears i.e. Apron, dust mask, etc<br>2.1.2 Health hazards at work & their handling<br><br>Ability to:   | 2+1hrs                           | - Apron<br>- Dust Mask/ Respirator<br>- Gloves | Class Room<br>+<br>Workplace |

|                                    |   |   |         |  |                        |
|------------------------------------|---|---|---------|--|------------------------|
|                                    |   | <ol style="list-style-type: none"> <li>1. Use safety gears and equipments</li> <li>2. Identify Health safety requirements</li> <li>3. Perform in safe environment</li> </ol>  |         |  |                        |
| 3. Prepare the Work place          | <p>3.1 Able to know about studio Housekeeping and its advantages</p> <p>3.2 Tools &amp; equipment required to perform the job.</p>                          | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>3.1.1 Housekeeping and work place preparation to start the activity</li> <li>3.1.2 Safe working environment and its advantages</li> <li>3.1.3 Connection between an organized workplace &amp; work efficiency</li> </ol> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Select and identify the tools required</li> <li>2. Place and handle the tools and equipment involved</li> </ol> | 2+1 hrs | <ul style="list-style-type: none"> <li>- Working Table</li> <li>- Clean Equipment</li> <li>- Sponge</li> <li>- Moping Brush/cloth</li> <li>- Dust bins</li> <li>- Water container</li> <li>- Turn table</li> </ul> | Class Room + Workplace |
| 4. Deal with work & health hazards | <p>4.1 Able to understand the work &amp; health hazards</p> <p>4.2 Able to know about the possible injuries</p> <p>4.3 Able to know about the first aid</p> | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>4.1.1 Health hazards</li> <li>4.1.2 Possible work hazards &amp; injuries</li> <li>4.1.3 First aid provision and emergency response</li> </ol> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Remain composed and provide first aid to the fellow who suffers</li> <li>2. Respond and call in the first aid</li> </ol>   | 2+1hrs  | <ul style="list-style-type: none"> <li>- Information sheets</li> <li>- Exercise sheets</li> <li>- Work sheets</li> <li>- First aid box</li> <li>- Container</li> </ul>   | Class Room + Workplace |

## Module – 2 : Glaze & Raw Material

Objective of the Module: To develop basic understanding of glaze, glaze types & composition.

Duration: 32 hours      Theory: 10 hours      Practice: 22 hours

| Learning Unit  | Learning Outcomes   | Learning Elements  | Duration Theory +Practical | Materials Required   | Learning Place         |
|--|---|--|----------------------------|--|------------------------|
| 1. Basic Understanding of glaze, glaze types & composition | <p>1.1 Is able to differentiate between different types of glazes</p> <p>1.2 Is able to recognize the importance of glaze in Ceramics.</p>  | <p>Knowledge of:</p> <p>1.1.1 Under glaze</p> <p>1.1.2 Over glaze</p> <p>1.1.3 Low-fire glazes</p> <p>1.1.4 High fire glazes</p> <p>1.1.5 Green ware</p> <p>1.1.6 Bisque</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Differentiate between under-glaze, over-glaze, low &amp; high-fire glazes.</li> <li>2. Understand the difference between green ware &amp; bisque.</li> </ol> | 5+10 hrs                   | <ul style="list-style-type: none"> <li>- White/Chalk Board</li> <li>- Work Sheets</li> <li>- Information Sheets</li> <li>- Prepared under-glaze</li> <li>- Prepared over-glaze</li> <li>- High fire glazes</li> <li>- Low fire glazes</li> </ul> | Class Room + Workplace |
| 2. Basic Understanding of Glaze Material                   | <p>2.1 Is able to identify glaze material according to their function i.e. glass formers, fluxes, opacifiers etc</p> <p>2.2 Is able to test chemical &amp; physical changes in raw material after firing.</p> | <p>Knowledge of:</p> <p>2.1.1 Basic glazing terminology</p> <p>2.1.2 Glass formers</p> <p>2.1.3 Opacifiers</p> <p>2.1.4 Stabilizers</p> <p>2.1.5 Fluxes</p> <p>2.1.6 Frits</p> <p>2.1.7 Preparing test pieces</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Understand basic glaze chemistry &amp; terminology</li> <li>2. Prepare the test pieces for test firing</li> </ol>       | 5+12 hrs                   | <ul style="list-style-type: none"> <li>- White/Chalk Board</li> <li>- Work Sheets</li> <li>- Information Sheets</li> <li>- Raw material</li> </ul>   | Class Room + Workplace |

## Module – 3 : Glaze Quality

Objective of the Module: To perform basic glaze quality assessment tests

Duration: 64 hours

Theory: 20 hours

Practice: 44 hours

| Learning Unit                      | Learning Outcomes  | Learning Elements   | Duration Theory + Practical | Materials Required   | Learning Place         |
|------------------------------------|--|---|-----------------------------|--|------------------------|
| 1. Check specific gravity of glaze | <p>1.1 Is able to analyze basic factors that determine the quality of glaze</p> <p>1.2 Is able to make basic glaze adjustments</p> | <p>Knowledge of:</p> <p>1.1.1 Glaze gravity</p> <p>1.1.2 Hydrometer</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Handle Glaze</li> <li>2. Use hydrometer</li> <li>3. Adjust the glaze</li> <li>4. Manually calculate specific gravity</li> </ol>                    | 8+14hrs                     | <ul style="list-style-type: none"> <li>- Testing equipment</li> <li>- Prepared Glaze</li> <li>- Raw Material</li> <li>- Water</li> <li>- Information sheets</li> <li>- Exercise Sheets</li> <li>- Work Sheets</li> <li>- Weighing Scale</li> <li>- Turn table</li> </ul> | Class Room + Workplace |
| 2. Check Viscosity or density      | <p>2.1 Is able to check the viscosity of the glaze</p> <p>2.2 Is able to make adjustments to the glaze</p>                         | <p>Knowledge of:</p> <p>2.1.1 Viscosity flow cups</p> <p>2.1.2 Viscometer</p> <p>2.1.3 Thickness Gauge</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Use viscometer</li> <li>2. Use viscosity flow cups</li> <li>3. Adjust glaze density by adding water.</li> </ol> | 7+20hrs                     | <ul style="list-style-type: none"> <li>- Prepared Glaze</li> <li>- Viscometer</li> <li>- Viscosity flow cups</li> <li>- Gloves</li> <li>- Information sheets</li> <li>- Work sheet</li> <li>- Water</li> <li>- Apron</li> </ul>  | Class Room + Workplace |

|                             |  |   |                |  |                                       |
|-----------------------------|--|---|----------------|--|---------------------------------------|
| <p>3. Check the Residue</p> | <p>3.1 Is able to check the Residue of glaze<br/>3.2 Is able to make adjustments to the glaze.</p> | <p>Knowledge of:<br/>3.1.1 Residue testing<br/>3.1.2 Sieves<br/>3.1.3 Glaze adjustment</p> <p>Ability to:<br/>1. Use sieves<br/>2. Make adjustment in glaze</p> | <p>5+10hrs</p> | <ul style="list-style-type: none"> <li>- Glaze</li> <li>- Water</li> <li>- Fine mesh Sieve</li> <li>- Plastic Bowl</li> <li>- Apron</li> <li>- Gloves</li> </ul> | <p>Class Room<br/>+<br/>Workplace</p> |
|-----------------------------|--|---|----------------|--|---------------------------------------|

## Module – 4: Glaze Application

Objective of the Module: .... To develop professional glaze application skills.

Duration: 204 hours      Theory: 44 hours      Practice: 160 hours

| Learning Unit             | Learning Outcomes   | Learning Elements   | Duration | Materials Required  | Learning Place         |
|---------------------------|---|---|----------|---|------------------------|
| 1. Organize Workplace     | <p>1.1 Able to identify &amp; arrange the tools &amp; equipment required to perform the job</p> <p>1.2 Able to understand the relation of organized workplace with productivity</p> | <p>Knowledge of:</p> <p>1.1.1 Required tools &amp; equipment</p> <p>1.1.2 Required material</p> <p>1.1.3 Safety precautions.</p> <p>Ability to:</p> <p>1. Organize the job to execute</p> <p>2. Perform job safely</p> <p>3. Plan the activity for smooth work flow</p> | 2+4 hrs  | <ul style="list-style-type: none"> <li>- Relevant Equipment</li> <li>- Flat Working surface</li> <li>- Relevant Tools</li> <li>- Sponge</li> </ul>                                      | Class Room + Workplace |
| 2. Clean the piece        | <p>2.1 Is able to perform error free cleaning of the ceramic ware.</p> <p>2.2 Is able to handle green ware.</p> <p>2.3 Is able to clean/handle bisque pieces.</p>                   | <p>Knowledge of:</p> <p>2.1.1 Importance of proper cleaning of the piece</p> <p>2.1.2 Green ware</p> <p>2.1.3 Bisque pieces</p> <p>2.1.4 Cleaning method</p> <p>Ability to:</p> <p>1. Handle green ware</p> <p>2. Handle bisque ware</p>                                | 2+10 hrs | <ul style="list-style-type: none"> <li>- Water</li> <li>- Sponge</li> <li>- Green ware pieces</li> <li>- Bisque pieces</li> <li>- Plastic bowl</li> <li>- Flat working table</li> </ul> | Class Room + Workplace |
| 3. Check quality of piece | <p>3.1 Explain the method to check the quality of piece</p> <p>3.2 Demonstrate how to check the quality of piece.</p>   | <p>Knowledge of:</p> <p>3.1.1 Cracks</p> <p>3.1.2 Chipped off pieces</p> <p>3.1.3 Irregular rims</p> <p>Ability to:</p>   | 2+4hrs   | <ul style="list-style-type: none"> <li>- Eye glass</li> <li>- Plastic buckets</li> <li>- Working table</li> <li>- Apron</li> <li>- Gloves</li> </ul>                                    |                        |



|                   |   |   |          |   |                        |
|-------------------|---|---|----------|---|------------------------|
|                   |   | <ol style="list-style-type: none"> <li>1. Identify damaged pieces</li> <li>2. Do thorough examination of the ware</li> </ol>  |          |   |                        |
| 4. Dipping Method | 4.1 Is able to apply an even layer of glaze through dipping | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>4.1.1 Stirring the glaze properly</li> <li>4.1.2 Correct timing of the dipping</li> <li>4.1.3 Stopping glaze accumulation</li> <li>4.1.4 Hand flow</li> <li>4.1.5 Using glaze tong</li> <li>4.1.6 Measuring glaze thickness</li> <li>4.1.7 Cleaning the glaze from the foot of the piece.</li> </ol> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1 Stir the glaze properly</li> <li>2 Calculate dipping time</li> <li>3 Evaluate the thickness of glaze for dipping</li> <li>4 Maintain even thickness of glaze while dipping</li> <li>5 Use Glaze tongs</li> <li>6 Check glaze thickness</li> <li>7 Prepare test pieces</li> <li>8 Clean glaze from the foot of piece</li> </ol> | 4+32hrs  | <ul style="list-style-type: none"> <li>- Water</li> <li>- Plastic Bucket</li> <li>- Sponge</li> <li>- Apron</li> <li>- Glaze Tongs</li> <li>- Flat working table</li> <li>- Gloves</li> </ul> | Class Room + Workplace |
| 5. Pouring Method | 5.1 Able to apply even thickness of glaze through           | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>5.1.1 Glaze consistency</li> <li>5.1.2 Proper cleaning of the piece</li> </ol>  | 12+40hrs | <ul style="list-style-type: none"> <li>- Plastic Bucket</li> <li>- Prepared Glaze</li> </ul>  | Class Room + Workshop  |

|                   |   |   |       |  |                        |
|-------------------|---|---|-------|--|------------------------|
|                   | pouring method<br>5.2 Able to understand & apply waterfall pouring method<br>5.3 Able to adjust the glaze consistency | 5.1.3 Glaze thickness check<br>5.1.4 Pouring technique<br>5.1.5 Cleaning the foot of the piece<br>5.1.6 Waterfall glazing method<br>5.1.7 Speed of conveyor belt<br>5.1.8 Amount of glaze flow<br>5.1.9 Wetting the piece before glazing<br>Ability to:<br>1. Pour in and out properly<br>2. Adjust the consistency of glaze.<br>3. Prepare Test Pieces<br>4. Apply waterfall glazing method<br>5. Control glaze thickness through RPM adjustment.<br>6. Pump back the excess glaze |       | - Apron<br>- Water<br>- Gloves<br>- White board<br>- Work sheets   |                        |
| 6 Spraying Method | 6.1 Is able to apply even layer of glaze through spray<br>6.2 Is able to follow safety & health instructions.         | Knowledge of:<br>6.1.10 Thickness of glaze<br>6.1.11 Compressor & spray gun<br>6.1.12 Air brush<br>6.1.13 Using fine mesh sieve<br>6.1.14 Turning wheel<br>6.1.15 Glaze adjustment<br>6.1.16 Spray gun nozzle   | 10+25 | - Fine mesh Sieve<br>- Air compressor<br>- Spray gun<br>- Air brush<br>- Apron<br>- Prepared glaze<br>- Gloves | Class Room + Workplace |

|   |                 |  |  |  |  |                        |
|---|-----------------|--|--|--|--|------------------------|
|   |                 | <p>adjustment</p> <p>6.1.17 Maintenance/cleaning of the equipment used</p> <p>6.1.18 Cleaning the foot of the piece</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Check the thickness of glaze</li> <li>2. Use compressor</li> <li>3. Use air brush</li> <li>4. Use spray booth</li> <li>5. Use turning wheel</li> <li>6. Adjust spray gun</li> <li>7. Use sieve</li> <li>8. Adjust glaze thickness</li> <li>9. Prepare test pieces</li> <li>10. Do maintenance /cleaning of the equipment used.</li> </ol> |  | <ul style="list-style-type: none"> <li>- Dust Mask/ respirator</li> <li>- Safety glasses</li> <li>- Needle</li> <li>- Spray Booth</li> </ul> |  |                        |
| 7 | Brushing Method | <p>7.1 Able to use brushing technique to glaze &amp; decorate pieces.</p> <p>7.2 Able to follow the given pattern on the ceramic ware.</p>   | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>7.1.1 Centering the piece on turning wheel</li> <li>7.1.2 Cleaning the piece</li> <li>7.1.3 Thickness of glaze</li> <li>7.1.4 Brushes and their sizes</li> <li>7.1.5 Basic Free hand drawing</li> <li>7.1.6 Brushing technique</li> </ol> <p>Ability to:</p> | 10+35 hrs  | <ul style="list-style-type: none"> <li>- Sponge</li> <li>- Brushes</li> <li>- Prepared Glaze</li> <li>- Turning wheel</li> </ul> | Class Room + Workplace |

|                         |  |  |         |  |                        |
|-------------------------|--|--|---------|--|------------------------|
|                         |  | <ol style="list-style-type: none"> <li>1. Evaluate required thickness</li> <li>2. Use brush properly</li> <li>3. Make freehand drawing</li> <li>4. Follow design/pattern</li> <li>5. Evaluate the flow of the glaze</li> <li>6. Make glaze adjustments</li> <li>7. Prepare test pieces</li> <li>8. Draw patterns.</li> </ol> |         |  |                        |
| 8. Handle glazed pieces | 8.1 Is able to handle/move glazed piece properly | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>8.1.1 Handling of delicate piece</li> <li>8.1.2 Handling of piece with powdery glazed</li> </ol> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Move the delicate glazed piece safely to kiln or shelf.</li> </ol>                                 | 2+10hrs | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Water</li> <li>- Gloves</li> </ul> | Class Room + Workplace |

## Module – 5 : Glaze Decoration

Objective of the Module: .. To develop professional glaze decoration skills

Duration: 260 hours      Theory: 40 hours      Practice: 210 hours

| Learning Unit         | Learning Outcomes  | Learning Elements   | Duration | Materials Required   | Learning Place               |
|-----------------------|--|---|----------|--|------------------------------|
| 1. Glaze Trailing     | <p>1.1 Is able to create interesting glaze effects through trailing.</p> <p>1.2 Is able to apply wax resist decoration to the piece.</p> | <p>Knowledge of:</p> <p>1.1.1 Colorants &amp; stains</p> <p>1.1.2 Compatibility between two glazes</p> <p>1.1.3 Freehand drawing</p> <p>1.1.4 Thickness of prepared glaze for trailing</p> <p>1.1.5 Accurate percentage of Wax resistant, Trailing Stain/colorant used</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Organize the job to execute</li> <li>2. Draw freehand</li> <li>3. Plan the activity to perform</li> <li>4. Prepare test pieces</li> </ol> | 2+25hrs  | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Brush</li> <li>- Wax</li> <li>- Prepared Glazes</li> <li>- Colorants</li> <li>- Trailer set</li> </ul> | Class Room<br>+<br>Workplace |
| 2. Brushwork on glaze | 2.1 Able to do brushwork on glaze  | <p>Knowledge of:</p> <p>2.1.1 Different brush sizes</p> <p>2.1.2 Thickness of glaze for brush application</p> <p>2.1.3 Compatibility of two glazes</p>  | 5+40hrs  | <ul style="list-style-type: none"> <li>- Prepared Glaze</li> <li>- Brushes</li> <li>- Turning wheel</li> </ul>   | Class Room<br>+<br>Workplace |

|                           |   |   |           |   |                        |
|---------------------------|---|---|-----------|---|------------------------|
|                           |   | <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Handle Brushes</li> <li>2. Make freehand designs.</li> <li>3. Centering Piece on turning wheel before applying glaze</li> <li>4. Prepare test pieces</li> </ol>  |           |   |                        |
| 3. Colored Slips /Engobes | 3.1 Is able Make and apply engobe/ colored slip | <p>Knowledge of:</p> <ol style="list-style-type: none"> <li>3.1.1 Slip &amp; stain proportion for various color shades</li> <li>3.1.2 Freehand drawing</li> <li>3.1.3 Engobe thickness</li> <li>3.1.4 Trailers from different line quality</li> <li>3.1.5 Engobe adjustment to ware</li> <li>3.1.6 Various engobe application method like , pouring, dipping, spraying etc</li> </ol> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Mix stain &amp; slip is correct proportions</li> <li>2. Do freehand drawing with colored slip</li> <li>3. Handle different type of trailers</li> <li>4. Prepare engobe body</li> <li>5. Apply engobe through various techniques</li> <li>6. Apply even thickness of engobe where required</li> <li>7. Prepare test pieces</li> </ol> | 10+70 hrs | <ul style="list-style-type: none"> <li>- Casting Slip</li> <li>- Stains</li> <li>- Oxides</li> <li>- Different trailers</li> <li>- Buckets</li> <li>- Tubs</li> <li>- Compressor</li> <li>- Brushes</li> <li>- Sponge</li> <li>- Flat surface</li> <li>- Apron</li> <li>- Gloves</li> <li>- Weighing scale</li> </ul> | Class Room + Workplace |

|                                      |  |   |           |   |                        |
|--------------------------------------|--|---|-----------|---|------------------------|
| 4. Washes                            | 4.1 Able to create interesting surface possibilities   | <p>Knowledge of:</p> <ul style="list-style-type: none"> <li>4.1.1 Water &amp; stain ratio</li> <li>4.1.2 Brush application</li> <li>4.1.3 Using sponge to clean the raised areas of design</li> </ul> <p>Ability to:</p> <ul style="list-style-type: none"> <li>1. Mix water &amp; stain in correct proportion</li> <li>2. Cleaning the raised areas of design</li> <li>3. Handle unglazed or glazed piece</li> <li>4. Prepare test pieces</li> </ul>   | 5+15 hrs  | <ul style="list-style-type: none"> <li>- Brushes</li> <li>- Sponge</li> <li>- Water</li> <li>- Stain</li> <li>- Green ware piece</li> </ul>     | Class Room + Workplace |
| 5. Screen Print                      | <p>5.1 Is able to transfer the design through screen printing</p> <p>5.2 Able to differentiate the size of screen.</p> | <p>Knowledge of:</p> <ul style="list-style-type: none"> <li>5.1.1 Thickness of glaze for screen printing</li> <li>5.1.2 Screen adjustment</li> <li>5.1.3 Defects in screen</li> <li>5.1.4 Color separation</li> </ul> <p>Ability to:</p> <ul style="list-style-type: none"> <li>1. Handle Screens</li> <li>2. Control the amount of glaze transferred through screen</li> <li>3. Adjust screen</li> <li>4. Handle color separation</li> <li>5. Clean screens after use</li> <li>6. Prepare test pieces</li> </ul> | 10+25 hrs | <ul style="list-style-type: none"> <li>- Screens</li> <li>- Squeegee</li> <li>- Rubbers</li> <li>- Prepared Glaze</li> <li>- Screens</li> </ul> | Class Room + Workplace |
| 6 Sticker /ceramic decal application | 6.1 Able to decorate with ceramic decal or sticker   | <p>Knowledge of:</p> <ul style="list-style-type: none"> <li>6.1.1 Cleaning the ware</li> <li>6.1.2 Water Slide decals</li> <li>6.1.3 Cutting out from sheet</li> </ul>  | 5+20 hrs  | <ul style="list-style-type: none"> <li>- Ceramic Decal</li> <li>- Apron</li> <li>- Paper</li> <li>- Towel</li> </ul>                            | Class Room + Workplace |

|   |                      |   |  |  |  |                        |
|---|----------------------|---|--|--|--|------------------------|
|   |                      | <p>6.1.4 Soaking in water</p> <p>6.1.5 Positioning of the sticker on ceramic ware</p> <p>6.1.6 Slipping out the backing paper</p> <p>6.1.7 Removing excess water with the help of squeegee</p> <p>6.1.8 Even out wrinkles &amp; bubbles</p> <p>6.1.9 Cleaning the top with damp paper towel</p> <p>6.1.10 Complete drying</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Clean the ware from dust , chemical etc particles</li> <li>2. Check water &amp; air bubbles to avoid blow outs during firing</li> <li>3. Remove any residual water.</li> <li>4. Prepare test pieces</li> </ol> |  | <ul style="list-style-type: none"> <li>- Squeegee</li> <li>- Water</li> <li>- Pan</li> </ul> |  |                        |
| 7 | Over glazes & Luster | <p>7.1 Able to handle over glaze &amp; luster application on fired &amp; glazed piece</p>   | <p>Knowledge of:</p> <p>7.1.1 Thickness of over glazes</p> <p>7.1.2 Water &amp; colorant mixing ratio</p> <p>7.1.3 Thickness of luster</p> <p>7.1.4 Centering the piece on turning wheel</p> | 5+10 hrs   | <ul style="list-style-type: none"> <li>- Gloves</li> <li>- Glazed &amp; fired piece</li> <li>- Colorants</li> <li>- Water</li> <li>- Turning wheel</li> <li>- Plastic Bowl</li> <li>- Solvent – resistant</li> </ul> | Class Room + Workplace |



|  |  |   |  |   |  |
|--|--|---|--|---|--|
|  |  | <p>Ability to:</p> <ol style="list-style-type: none"><li>1. Handle over glaze</li><li>2. Handle luster</li><li>3. Clean the brushes after luster application</li><li>4. Prepare test pieces</li></ol> |  | <p>Brushes</p> <ul style="list-style-type: none"><li>- Turpentine oil</li><li>- Sponge</li><li>- Apron</li><li>- Talc</li></ul> |  |
|--|--|---|--|---|--|

## Module – 6: Glaze Faults & Remedies(pre & post firing)

Objective of the Module: To enable student to identify & rectify the glaze faults

Duration: 190 hours      Theory: 30 hours      Practice: 160 hours

| Learning Unit                                   | Learning Outcomes                               | Learning Elements  | Duration Theory+ Practical | Materials Required   | Learning Place         |
|---|---|--|----------------------------|--|------------------------|
| 1. Examine the green ware piece for any defects | 1.1 Able to sort out cracked and damages pieces | <p>Knowledge of:</p> <ul style="list-style-type: none"> <li>1.1.1 Cracks identification</li> <li>1.1.2 Weak joining</li> <li>1.1.3 Thin base</li> <li>1.1.4 Roughness of surface/</li> <li>1.1.5 Irregular rim</li> </ul> <p>Ability to:</p> <ul style="list-style-type: none"> <li>1. Handle green ware</li> <li>2. Do thorough examination of the piece</li> </ul>   | 2+5hrs                     | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Flat surface</li> </ul>  | Class Room + Workplace |
| 2. Pinholes                                     | 2.1 Able to identify and rectify pinholes       | <p>Knowledge of:</p> <ul style="list-style-type: none"> <li>2.1.1 Pinholes in clay body</li> <li>2.1.2 Filling the pinhole</li> <li>2.1.3 Cleaning dust before glazing</li> <li>2.1.4 Pinholes caused by improper pouring &amp; dipping</li> </ul> <p>Ability to:</p> <ul style="list-style-type: none"> <li>1. Identify pinholes</li> <li>2. Filling the pinhole</li> <li>3. Identify and avoid factors causing pinholes</li> </ul> | 5+15hrs                    | <ul style="list-style-type: none"> <li>- Sponge</li> <li>- Water</li> <li>- Apron</li> <li>- Flat Surface</li> <li>- Gloves</li> </ul> | Class Room + Workplace |

|                               |  |  |           |   |                        |
|-------------------------------|--|--|-----------|---|------------------------|
| 3.Crawling                    | 5.4 Able to prevent glaze from forming small islands to avoid crawling | <p>Knowledge of:</p> <p>5.4.1 Factors involved in causing crawling</p> <p>5.4.2 Thickness of glaze layer</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Maintain even thickness of glaze on dry clay ware</li> <li>2. Completely remove oil, grease dust from the dry clay ware</li> </ol> | 10+30 hrs | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Gloves</li> <li>- Needle</li> <li>- Flat surface</li> </ul> | Class Room + Workplace |
| 4.Crazing                     | 4.1 Able to Prevent crazing through correct application of glaze       | <p>Knowledge of:</p> <p>4.1.1 Glaze layer thickness</p> <p>4.1.2 Factors involved in causing crazing</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Perform glaze layer thickness test</li> <li>2. Calculate dipping, pouring time</li> </ol>  | 6+35 hrs  | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Gloves</li> <li>- Needle</li> </ul>                         | Class Room + Workplace |
| 5.Colored Slip /Engobe faults | 8.2 Able to avoid flaky slip layer after drying                        | <p>Knowledge of:</p> <p>8.2.1 Dryness of the ware</p> <p>8.2.2 Stirring well before application</p> <p>8.2.3 Thickness of slip applied</p> <p>Ability to:</p> <ol style="list-style-type: none"> <li>1. Apply a thin coat of the slip</li> <li>2. Stir &amp; mix slip well before applying</li> </ol>        | 7+75 hrs  | <ul style="list-style-type: none"> <li>- Apron</li> <li>- Gloves</li> </ul>   | Class Room + Workplace |

## Module – 7 : Develop Professionalism

Objective of the Module: .. is to develop understanding about the professionalism

Duration: 24 hours      Theory: 4 hours      Practice: 20hours

| Learning Unit                       | Learning Outcomes  | Learning Elements  | Duration<br>Theory+<br>Practical | Materials<br>Required                      | Learning<br>Place           |
|-------------------------------------|--|--|----------------------------------|--|-----------------------------|
| 1. Active Participation in Training | 1.1 Able to understand the importance of active participation in training<br>2.2 Able to develop the required mind-set for training. | Knowledge of:<br>1.1.1 Training sessions<br><br>Ability to:<br>1. Train people<br>2. Perform foaming on the cast                         | 1+5hour                          | - Training material & activity             | Class Room<br>+<br>Workshop |
| 2. Interact & handle the co-workers | 2.1 Able to make the working environment comfortable<br>2.2 Able to develop a healthy working relationship with co-workers           | Knowledge of:<br>2.1.1 Human psyche<br>2.1.2 Relationship Building<br><br>Ability to:<br>1. Create a healthy & positive work environment | 1+5hour                          | - Debates/discussions in diversified areas | Class Room<br>+<br>Workshop |
| 3. Consult the experts              | 3.1 Able to consult the experts<br>3.2 Able to analyze & apply the observation of expert   | Knowledge of:<br>1.1.1 Using expert's opinion for improving the work<br><br>Ability to:<br>1. Demonstrate confidence during discussions  | 1+5hour                          | - Debates/discussions in diversified areas | Class Room<br>+<br>Workshop |
| 4. Participate in skill /test       | 4.1 Able to understand the importance of   | Knowledge of:<br>4.1.1 Participation in skill  | 1+5hour                          | - Pencil                                   | Class Room                  |

|             |  |   |  |              |            |
|-------------|--|---|--|--------------|------------|
| competition | active participation in skill test competitions<br>4.2 Able to analyze & improve performance | test competition<br><br>Ability to:<br>1. Participate in skill test competition |  | - Work sheet | + Workshop |
|-------------|--|---|--|--------------|------------|

## Module - 8 : Time Management

Objective of the Module: .. to develop time management skills

Duration: 24 hours      Theory: 4 hour      Practice: 20 hours

| Learning Unit                                      | Learning Outcomes  | Learning Elements   | Duration | Materials Required       | Learning Place               |
|--|--|---|----------|--------------------------|------------------------------|
| 1. Manage time to complete assigned work           | 2.1 Able to calculate & manage time to meet the deadline.<br>2.2 Able to analyze tasks and assigned time for each task | Knowledge of:<br>2.1.1 The assigned task<br>2.1.2 Preparing schedule charts<br><br>Ability to:<br>1. Execute work in the given time frame | 1+5hrs   | - Pencil<br>- Work Sheet | Class Room<br>+<br>Workplace |
| 2. Manage work load as required by the management. | 2.1 Able to analyze workload<br>2.2 Able to execute work in the given time frame.                                      | Knowledge of:<br>2.1.1 Work management<br>2.1.2 Time Management<br><br>Ability to:<br>1. Manage both time and work.                       | 1+5hrs   | - Pencil<br>- Work Sheet | Class Room<br>+<br>Workplace |
| 3. Prioritize tasks                                | 3.1 Able to analyze work<br>3.2 Able to prioritize work  | Knowledge of:<br>3.1.1 Identifying priorities<br><br>Ability to:<br>1. Manage work as per set priorities                                  | 1+5hrs   | - Pencil<br>- Work Sheet | Class Room<br>+<br>Workplace |
| 4. Meet the deadlines                              | 4.1 Able to Complete work in time  | Knowledge of:<br>4.1.2 Time Management<br>4.1.3 Setting the priorities<br>4.1.4 Organize tasks  | 1+5hour  |                          | Class Room<br>+<br>Workplace |

|  |  |   |  |  |  |
|--|--|---|--|--|--|
|  |  | Ability to:<br><ol style="list-style-type: none"><li>1. Manage both work &amp; time</li><li>2. Complete the task in given time frame.</li></ol> |  |  |  |
|--|--|---|--|--|--|

# Assessment Template

## Module – 1: Follow Safety Rules

| Learning Units                                  | Theory Days/hours | Workplace Days/hours | Recommended formative assessment  | Recommended Methodology             | Scheduled Dates |
|---|-------------------|----------------------|---|-------------------------------------|-----------------|
| 1. Wear work clothes                            | 8hrs              | 4hrs                 | 1.1 Select and use the safety clothes according to the work and environment.              | 1.1 Direct Observation              |                 |
| 2. Wear safety gears                            |                   |                      | 2.1 Identify and select the safety gears for work operations.                             | 2.1 Objective / Short answer / Oral |                 |
| 3. Prepare the workplace                        |                   |                      | 3.1 Demonstrate the preparation/organization of workplace for various processes involved. | 3.1 Direct Observation              |                 |
| 4. Deal with work hazards, accidents & injuries |                   |                      | 4.1 Knowledge of work hazards, injuries and required first aid during various processes.  | 4.1 Objective / Short answer / Oral |                 |



## Module – 2: Glaze & Raw Materials

| Learning Units   | Theory Days/hours | Workplace Days/hours | Recommended formative assessment   | Recommended Methodology          | Scheduled Dates |
|--|-------------------|----------------------|--|----------------------------------|-----------------|
| 1. Basic Understanding of glaze, glaze types & composition | 35hrs             | 80hrs                | 1.1 Explain different glaze types & their composition.<br>1.2 Explain the processes of adding oxide and stain in glaze | 1.3 Objective/ Short answer/Oral |                 |
| 2. Basic Understanding of glaze Material                   |                   |                      | 2.1 Explain glaze material, properties & their role in glaze making.   | 2.2 Objective/ Short answer/Oral |                 |

## Module – 3: Glaze Quality

| Learning Units                     | Theory Days/hours | Workplace Days/hours | Recommended formative assessment   | Recommended Methodology                                       | Scheduled Dates |
|------------------------------------|-------------------|----------------------|--|---|-----------------|
| 1. Check specific gravity of glaze | 35hrs             | 80hrs                | 1.1 Explain glaze specific gravity and how to test it.<br>1.2 Demonstrate how to calculate specific gravity of glaze | 1.1 Objective/ Short answer/Oral<br>1.2 Practical/ skill test |                 |
| 2. Check viscosity or density      |                   |                      | 2.1 Explain glaze density or viscosity and how to test it.<br>2.2 Demonstrate how to calculate glaze density         | 2.1 Objective/ Short answer/Oral<br>2.2 Practical/ skill test |                 |
| 3. Check the residue               |                   |                      | 3.1 Explain how to check the residue of glaze<br>3.2 Demonstrate how to calculate residue                            | 3.1 Objective/ Short answer/Oral<br>3.2 Practical/ skill test |                 |

## Module – 4: Glaze Application

| Learning Units            | Theory Days/hours | Workplace Days/hours | Recommended formative assessment  | Recommended Methodology                                       | Scheduled Dates |
|---------------------------|-------------------|----------------------|---|---|-----------------|
| 1. Organize Workplace     | 35hrs             | 80hrs                | 1.1 Explain the benefits of organizing the workplace in relation with productivity<br>1.2 Demonstrate how to organize workplace | 1.1 Objective/ Short answer/Oral<br>1.2 Direct Observation    |                 |
| 2. Cleaning the piece     |                   |                      | 2.1 Explain the importance of proper cleaning and its method.<br>2.2 Demonstrate cleaning both green ware & bisque piece        | 2.1 Objective/ Short answer/Oral<br>2.2 Practical/ skill test |                 |
| 3. Check quality of piece |                   |                      | 3.1 Explain the method to check the quality of the piece<br>3.2 Demonstrate how to check the quality of piece.                  | 3.2   |                 |
| 4. Dipping method         |                   |                      | 4.1 Explain important factors involved in dipping method<br>4.2 Demonstrate how to glaze through dipping                        | 3.1 Objective/ Short answer/Oral<br>3.2 Practical/ skill test |                 |
| 5. Pouring Method         |                   |                      | 5.1 Explain important factors involved in pouring method<br>5.2 Demonstrate how to glaze through pouring                        | 3.3 Objective/ Short answer/Oral<br>4.2 Practical/ skill test |                 |
| 4. Spraying Method        |                   |                      | 5.3 Explain important factors involved in spraying method<br>5.4 Demonstrate how to glaze through spray method                  | 5.1 Objective/ Short answer/Oral<br>5.2 Practical/ skill test |                 |

|                       |  |  |  |   |  |
|-----------------------|--|--|--|---|--|
| 6 Brushing Method     |  |  | 6.1 Explain important factors involved in brushing method<br>6.2 Demonstrate how to glaze using brushing technique | 6.1 Objective/ Short answer/Oral<br>6.2 Practical/ skill test |  |
| 7 Handling Glaze Ware |  |  | 7.1 Explain how to handle glazed pieces.<br>7.2 Demonstrate handling of glazed pieces                              | 7.1 Objective/ Short answer/Oral<br>7.2 Direct Observation    |  |

## Module – 5: Glaze Application

| Learning Units           | Theory Days/hours | Workplace Days/hours | Recommended formative assessment   | Recommended Methodology                                       | Scheduled Dates |
|--------------------------|-------------------|----------------------|--|---|-----------------|
| 1. Glaze trailing        | 35hrs             | 80hrs                | 1.1 Explain the important factors involved in the process of glaze trailing<br>1.2 Demonstrate how to perform glaze trailing     | 1.1 Objective/ Short answer/Oral<br>1.2 Practical/ Skill test |                 |
| 2. Brushwork on glaze    |                   |                      | 2.1 Explain the process and key factors involved in on glaze brushwork<br>2.2 Demonstrate the technique of brush application     | 2.1 Objective/ Short answer/Oral<br>2.2 Practical/ skill test |                 |
| 3. Colored slips/Engobes |                   |                      | 3.1 Explain important factors involved developing & applying engobes<br>3.2 Demonstrate how to use engobe                        | 3.1 Objective/ Short answer/Oral<br>3.2 Practical/ skill test |                 |
| 4. Washes                |                   |                      | 4.1 Explain important factors involved in different washes<br>4.2 Demonstrate how to create interesting surfaces applying washes | 4.1 Objective/ Short answer/Oral<br>4.2 Practical/ skill test |                 |
| 5. Screen print          |                   |                      | 5.1 Explain important factors involved in screen printing<br>5.2 Demonstrate how to do screen printing                           | 5.1 Objective/ Short answer/Oral<br>5.2 Practical/ skill test |                 |

|                                     |  |  |   |   |  |
|-------------------------------------|--|--|---|---|--|
| 6 Sticker/Ceramic Decal application |  |  | 6.1 Explain important factors involved in sticker application<br>6.2 Demonstrate how apply sticker  | 6.1 Objective/ Short answer/Oral<br>6.2 Practical/ skill test |  |
| 7 Overglaze and Lustrous            |  |  | 7.1 Explain important factors involved in over glazing and lustrous.<br>7.2 Demonstrate how to remove defects of over glazing and lustrous. |   |  |

## Module – 6: Glaze faults & Remedies

| Learning Units                                  | Theory Days/hours | Workplace Days/hours | Recommended formative assessment  | Recommended Methodology                                       | Scheduled Dates |
|---|-------------------|----------------------|---|---|-----------------|
| 1. Examine the green ware piece for any defects | 35hrs             | 80hrs                | 1.1 Explain the types of defects that can be found in a green ware piece.<br>1.2 Demonstrate green ware examination | 1.1 Objective/ Short answer/Oral<br>1.2 Practical/ Skill test |                 |
| 2. Pinholes                                     |                   |                      | 2.1 Explain pinholes and the causes of pinhole occurrence<br>2.2 Demonstrate how to fill a pinhole                  | 2.1 Objective/ Short answer/Oral<br>2.2 Practical/ skill test |                 |
| 3. Crawling                                     |                   |                      | 3.1 Explain factors causing crawling<br>3.2 Demonstrate proper application of glaze                                 | 3.1 Objective/ Short answer/Oral<br>3.2 Practical/ skill test |                 |
| 4. Crazing                                      |                   |                      | 4.1 Explain important factors involved in crazing<br>4.2 Demonstrate how to apply glaze to avoid crazing            | 4.1 Objective/ Short answer/Oral<br>4.2 Practical/ skill test |                 |
| 5. Colored slip/engobe Faults                   |                   |                      | 5.1 Explain important factors involved in a faulty engobe<br>5.2 Demonstrate how to prepare & apply engobe          | 5.1 Objective/ Short answer/Oral<br>5.2 Practical/ skill test |                 |

## Module – 7 : Develop Professionalism

| Learning Units                            | Theory Days/hours | Workplace Days/hours | Recommended formative assessment  | Recommended Methodology                                    | Scheduled Dates |
|---|-------------------|----------------------|---|--|-----------------|
| 1. Active Participation in Training       | 4hrs              | 20hrs                | 1.1.Explain the importance of active participation in training<br>1.2 Describe the individual & collective benefits                         | 1.1 Objective/ Short answer/Oral                           |                 |
| 2. Interact & handle the co-workers       |                   |                      | 2.1 Explain the importance of team work<br>2.2 Demonstrate how to maintain healthy work environment   | 2.1 Objective /Short answer/Oral<br>2.2 Direct Observation |                 |
| 3. Consult the experts                    |                   |                      | 3.1 Explain the importance of getting consultation from experts<br>3.2 Demonstrate & identify the benefits of meetings for the organization | 3.1 Objective /Short answer/Oral<br>3.2 Direct Observation |                 |
| 4. Participate in skill /test competition |                   |                      | 4.1 Explain the importance of active participation is competitions<br>4.2 Demonstrate the individual benefits                               | 4.1 Objective /Short answer/Oral<br>4.2 Direct Observation |                 |



## Module – 8 : Time Management

| Learning Units                                    | Theory Days/hours | Workplace Days/hours | Recommended formative assessment  | Recommended Methodology                                    | Scheduled Dates |
|---|-------------------|----------------------|---|--|-----------------|
| 1. Manage time to complete assigned work          | 4hrs              | 20hrs                | 1.1 Explain the importance of time management in connection with assignments<br>1.2 Demonstrate time management in given assignments                                      | 1.1 Objective/ Short answer/Oral<br>1.2 Direct Observation |                 |
| 2. Manage work load as required by the management |                   |                      | 2.1 Explain the work load management in connection with deadline.<br>2.2 Demonstrate how to manage work load of a given task keeping the dead line in mind.               | 2.1 Objective /Short answer/Oral<br>2.2 Direct Observation |                 |
| 3. Prioritize tasks                               |                   |                      | 3.1 Explain the importance of analyzing tasks keeping in view the department capacity & requirements.<br>3.2 Demonstrate & identify the importance of prioritizing tasks. | 3.1 Objective /Short answer/Oral<br>3.2 Direct Observation |                 |
| 4. Meet The deadline                              |                   |                      | 4.1 Explain the importance of work & time management.<br>3.2 Demonstrate completing a task in given time frame.   | 4.1 Objective /Short answer/Oral<br>4.2 Direct Observation |                 |

# Supportive Notes

## Assessment Context

Student Assessments can be:

1. Formal, Informal, Written and Oral, depending on the module and nature of work/ project assigned.
2. All module assessments will be graded and documented to award a Diploma/ Certificate to the student.
3. Grading will be done at the end of each module and the total sum of grades acquired by each student will be calculated to assess the overall proficiency of the student before the Diploma/ Certificate is awarded.
4. Assessments will be conducted by the instructor supervising the module and in some cases by a panel of Tutors / Instructors or External Examiners.
5. Student work in all modules must be of a certain quality to qualify for a Diploma/Certificate.

### **Critical Aspects:**

- All students are required to complete the 6 month Course and no Diploma/Certificate will be awarded unless the student fulfills this requirement.
- If a module/ modules are missed, Diploma/Certificate will not be awarded to the student.

### **Assessment Condition:**

- All module assessment will be carried out in a fair and transparent atmosphere.
- The tutor's / instructor's/ external examiner's or the panel's decision will be final.
- All students will receive a written document at the end of each module stating his/her performance in that particular module.
- All assessments will be conducted at the parent intuition i.e.: The Lecture Theater/ Examination Hall, Workshop/ Studio.

### **Resources Required for Assessment**

- Responsibility of the Institution

## List of Tools and Equipment

(FOR CLASS OF 25 STUDENTS)

|                           |  |
|---------------------------|--|
| <b>Name of Trade</b>      | <b>Glazing &amp; Decoration Techniques in Ceramics</b> |
| <b>Duration of Course</b> | <b>6 – Months</b>                                      |

| <b>Sr. No.</b> | <b>Name Equipment / Tools/Machinery</b>                                  | <b>Quantity</b> |
|----------------|--|-----------------|
| 1.             | Wooden tools set.  | 25 set          |
| 2.             | Plastic tub of different sizes/jug/mugs                                  | 25 set          |
| 3.             | Weighing scale (minimum 5kg capacity)                                    | 1 No.           |
| 4.             | Cylinder 100ml, 500ml and 1000ml   | 25 set          |
| 5.             | Analytical balance (1kg capacity)  | 1 No.           |
| 6.             | Air compressor complete with all accessories                             | 1 No.           |
| 7.             | Spray gun 0,1,2 and 3 No sizes   | 3 set           |
| 8.             | Brushes (various sizes)  | 25 set          |
| 9.             | Geometry boxes equipped with all tools.                                  | 3 boxes.        |
| 10.            | Colors kit (each 1 kg) includes the following colors)<br>➤ Cobalt oxide. | 25 kits.        |

|     |  |          |
|-----|--|----------|
|     | <ul style="list-style-type: none"> <li>➤ Chromium oxide.</li> <li>➤ Iron oxide.</li> <li>➤ Manganese dioxide.</li> <li>➤ Nickel oxide.</li> <li>➤ Zirconium silicate.</li> <li>➤ Zinc oxide.</li> <li>➤ Barium oxide.</li> <li>➤ Calcium oxide.</li> <li>➤ Potassium oxide.</li> <li>➤ Tin oxide.</li> <li>➤ Titanium oxide.</li> <li>➤ Bismuth carbonate.</li> <li>➤ Selenium oxide.</li> <li>➤ Cadmium oxide.</li> <li>➤ C.M.C.</li> <li>➤ Maroon color stain.</li> <li>➤ Yellow color stain.</li> <li>➤ Mustered color stain.</li> <li>➤ Black color stain.</li> <li>➤ Turquoise color stain.</li> <li>➤ Sky Blue color stain.</li> <li>➤ Chocolate brown color stain.</li> </ul> |          |
| 11. | Gloves   | 25 Pairs |
| 12. | Aprons   | 25       |
| 13. | Dust Masks/Respirators   | 25       |
| 14. | Safety Glasses   | 10       |
| 15. | Needle   | 10       |
| 16. | Pastel & mortar set  | 25 set   |
| 17. | Foam sheets (24" x 24" x 4")   | 4        |

|     |  | Dozen(approx.) |
|-----|--|----------------|
| 18. | Plastic bottles with nozzle lid            | 25 No.         |
| 19. | Gold liquid 16% & 8% (125 gram bottle)     | 4 No each      |
| 20. | Luster (500 gram bottle) different colors) | 5 bottles.     |
| 21. | Hydrometer                                 | 1 No.          |
| 22. | Viscometer                                 | 01             |
| 23. | Sieves 100-200mesh                         | 10             |
| 24. | Ball Mill                                  | 01             |
| 25. | Pit(Thressure)                             | 01             |

## List of Consumable Supplies

|                      |                                 |
|----------------------|---------------------------------|
| <b>Name of Trade</b> | <b>Glazing &amp; Decoration</b> |
| <b>Duration</b>      | <b>6 Months (800 hrs)</b>       |

| <b>Sr. No.</b> | <b>Name of Consumable Supplies</b> |
|----------------|------------------------------------|
| 1              | Prepared Slip                      |
| 2              | Prepared Glazes                    |
| 3              | Green ware Pieces                  |
| 4              | Water                              |
| 5              | Sponges                            |
| 6.             | Gloves                             |
| 7.             | Dust Masks                         |
| 8.             | Aprons                             |
| 9.             | Stains & colorants                 |
| 10.            | Luster                             |

## **REFERENCE BOOKS FOR TEACHER**

1. The Ceramic Glaze Handbook  
By Mark Burlison
2. Clay & Glazes for the Potter  
By Daniel Rhodes
3. Browsing on Internet

## Contributions for Development of This Curriculum

### DACUM Working Group

|  |   |
|--|---|
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### **DACUM Coordinator**

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