

# Glaze Manufacturing for Industry course outline

## Lesson 1

- Defining a glaze
- General categories of glazes
- How to look at a periodic table
- Oxide roles in glazes

## Lesson 2

- Oxide sources from raw materials
- Pros/cons of oxide sources

## Lesson 3

- How to calculate a formula
- Example of a calculated formula and outcome

## Lesson 4

- Mole and Seeger calculations explained
- Example of an actual glaze formula and outcome
- Discussion of glaze calculating programs

## Lesson 5

- Glaze fit – what is it?
- Thermal Expansion Coefficients explained
- Shiver and how to correct
- Craze how to test for craze and how to correct or force

## Lesson 6

- Stain and colorant testing
- Line blend, triaxial, quadraxial procedures explained
- Recreating a color out of triaxial explained
- Examples of line and triaxial color “hunts”

## Lesson 7

- Color theory briefly explained
- Measurement of color
- Mattiness/glossiness explained
- Opacity explained

## Lesson 8

- Glaze batch testing explained
- Test for viscosity
- Test for drying time



- Test for specific gravity
- Test for mill grind

### **Lesson 9**

- Glaze aids and uses explained
- Settling and correction explained
- Adjusting glazes for production application techniques discussed

### **Lesson 10**

- Glaze application methods discussed
- Tips on how to design a glaze application line

### **Lesson 11**

- Types of kilns and how the type of firing can affect glazes
- Quick discussion of single fire and multi-fire processes
- Dissection of a kiln curve from a glaze point of view
- Methods to verify heat work of a kiln firing

### **Lesson 12**

- Discussion of material vs. process defects
- Defects defined
- Different approaches to correct defects are shared
- Is it a defect or a “feature”?