Ceramic Manufacturing Technology course outline

Module I
Lesson 1: Course Introduction
Lesson 2: Review of Ceramic Products
Lesson 3: Ceramic Raw Materials
Lesson 4: Typical Ceramic Compositions

Module II: Mainline Manufacturing Technology
Lesson 5: Raw Material Preparation
Lesson 6: Batching of Ceramic Compositions
Lesson 7: Body Preparation
Lesson 8: Mainline Forming Processes
Lesson 9: Drying Technology
Lesson 10: The Ceramic Firing Process
Lesson 11: Ceramic Kilns
Lesson 12: Important Properties of Glass
Lesson 13: Glass Manufacturing Technology
Lesson 14: Glaze Technology
Lesson 15: Ceramic Finishing

Module III: Special Manufacturing Technology
Lesson 16: Introduction to Special Processes
Lesson 17: Injection Molding
Lesson 18: Additive Manufacturing
Lesson 19: Vapor and Plasma Deposition
Lesson 20: Gel and Sol-gel Processing
Lesson 21: Isostatic Hot Pressing
Lesson 22: Nanotechnology and Reactive Sintering
Lesson 23: Processing from the Melt Phase

Module IV: Ceramic Manufacturing Control
Lesson 24: Measurement of Properties
Lesson 25: Statistical Process Control

Module V: The Ceramic Manufacturing Environment
Lesson 26: Maintenance
Lesson 27: Health and Safety
Lesson 28: Environmental Issues
Lesson 29: The Global Marketplace
Lesson 30: Automation and Artificial Intelligence