

Cheminformatic Institute of Science Studies Lucknow

PG Diploma in Paint & Coating Technology (PGPCT)

Program Curriculum

Module 1. Introduction & Principles to Paint Technology

- 1.Part Preparation Processes and Equipment
- 2.Paint Components
- 3.Liquid Organic Coatings
- 4.Paint Manufacturing Process
- 5.Color Matching and Color Control
6. Liquid Paint Application Systems
7. Transfer Efficiency and Spray Technique
8. Testing Paint Materials
9. Cost Analysis for Finishing Systems

Module 2. Powder Coating & Its Technology

- 1.Introduction
- 2.Powder Coating Health & Safety
- 3.Powder Coating Pretreatment
- 4.Powder Coating Application
- 5.Powder Coating Quality Control
- 6.Steps To Successful Application
- 7.Powder Coating Special Effects
8. Powder Coating Troubleshooting

Module 3: Nano Structured Coatings

- 1.Introduction To Nano Science & Nanotechnologies
- 2.Nano Science In Nature
- 3.History Of Nanotechnologies
- 4.Fundamental 'Nano-Effects'
- 5.Overview Of Nano Material
6. Characterization Methods
- 7.Fabrication Methods
- 8.Applications And Implications
- 9.Environment

Module 4: Coatings for Corrosion Protection

- Offshore Oil and Gas Operation
- 1.Introduction
- 2.Protection Mechanisms of Organic Coatings
- 3.Generic Types of Anti corrosion Coatings
- 4.Corrosion-Protective Pigments
- 5.Waterborne Coatings

Module 5: Introduction to Paint Manufacturing

- 1.Introduction
- 2.Characteristic of paint allied coating Products Industry
- 3.Health and Safety y Hazards during the Manufacturing Paint
- 4.Method for Worker Protection

Module 6: Emulsion Polymerization and Latex Applications

- 1.Introduction
2. Effect of Chemical Structure on Polymer Properties
3. Step-Growth Polymerization
4. Reaction Engineering of Step-Growth Polymerization
5. Chain-Growth Polymerization
6. Reaction Engineering of Chain-Growth Polymerization

Module 7: Coating Systems and Painting the Application and Maintenance of Marine Coating Systems

- 1.What is Paint?
- 2.Corrosion
- 3.Paints for Purposes
- 4.Surface Preparation
- 5.Methods of Paint Application
- 6.Alternatives to "Hard" Coatings & Cathodic Protection

Module 8: Wood Coated with Lead Based Paint

- 1.Introduction
- 2.Technology Description
- 3.Demonstration Design
- 4.Performance Assessment
- 5.Cost Assessment
- 6.Implementation Issues