



# INSTITUTE OF SCIENCE & TECHNOLOGY FOR ADVANCED STUDIES & RESEARCH

(Accredited "A" grade by NAAC)

(Recognized by Section 2(f) & 12(B) of UGC Act. by University Grant Commission, New Delhi)

1st Rank among All Colleges of Gujarat by KCG (GSIRF) – 2021



## M.Sc. SURFACE COATING TECHNOLOGY

Constituent College of CVM University

## **About the Course:**

The course has been framed to cater highly skilled technocrats for the fast growing field of Surface Coating Technology which grows hand in hand with the growth of Construction Industry (Housing & Commercial buildings), Infrastructure development (Ports, Offshore structures, Pipelines, Bridges etc), Automotive Industry, Ship building Industry, Heavy Engineering Industry, Packaging industry (Printing Ink) etc to offer protection & aesthetics to these assets.

## **Unique Features:**

- Only course available in Gujarat and unique in India that is available for science and engineer graduates
- The 2 years (4 Semester) curriculum includes the subjects related to the technology for the manufacturing & application of the Surface Coatings and analysis of their performance properties
- Summer In-plant Training: Every year in the month of May-June, each students need to go for summer in-plant training for the period of 6 weeks at Paint, Coating and Allied Industries in different parts of the country.
- Arrangement of lectures of the professionals from the various fields of Coating Industry.
- Placement: Surface Coating Technology department has Strong Academic -

**Industry interaction** which supports in **In-plant training and** Almost 100% on and Off Campus placement with handsome salary in National and MNC Paint and Coating Industries.

- Visit and participate in National & International Seminars, Exhibitions and Conferences and various Coating Industries
- SICART Training: Three Days Sophisticated Instruments Certificate training were given to each student every year.
- Research & Testing facility available
- Conducting Corporate Training for Civil Engineers like GNFC, IFFCO, Kribhco etc. and consulting for paint application
- M/S Asian Paints Charitable trust, Mumbai have been kind enough to give scholarship to our M.Sc. (SCT) students

## Course Contents: M.Sc. SURFACE COATING TECHNOLOGY

## Semester I

- Chemistry & Technology of Polymer Science
- Chemistry & Technology of Inorganic Pigments
- Surface Chemistry & Surface Engineering
- Practical: Analysis of Pigments, Oils & Resins
- Practical: Analysis of Architectural Coatings
- Comprehensive Viva-Voce
- Process Control & Instrumental Analysis
- Mechanical Engineering for Coating Technologist

#### Semester I

- Technology of Resins for Surface Coatings I Technology of Resins for Surface
- Chemistry & Technology of Organic Pigments, High Performance Pigments, Additives & Solvents
- · Coating Properties & Analysis of Coating
- Practical: Instrumental Analysis and Analysis of Additives, Solvents & Raw material for resin
- Practical: Analysis of Industrial Coatings & Inks
- Comprehensive Viva-Voce
- Chemical Engineering Operations
- Economics & Industrial Management

#### Semester II

- Technology of Resins for Surface Coatings—II
- Technology of Paint Manufacturing
- Technology of Architectural Coatings and Industrial Coatings
- Practical: Processing of Surface Coatings I
- Practical: Processing of Surface Coatings II
- Comprehensive Viva-Voce
- Chemical Reaction Engineering
- Technology of Packaging and Printing Inks

## Semester IV

- Coating Application & Specialty Coatings
- Corrosion Technology & Heavy Duty Protective Coatings
- Technology of Construction Chemicals
- · Practical: Project Work
- Comprehensive Viva-Voce
- Marketing Management
- Environmental Management

## **Eligibility for Admission**

A candidate who has obtained the degree of Bachelor of Science of the University or of any other University recognized as equivalent thereto with Industrial Chemistry, Industrial Chemistry (vocational), Chemistry, Applied Chemistry, Polymer Science, Industrial Polymer Chemistry or any branch of Chemistry or Chemistry as one of the major subject or have studied at least two theory subjects of Chemistry/Industrial Chemistry during graduation and also with Pharm / B Tech / BE., can be admitted to the examination for the degree of M.Sc. in the respective subject (Surface Coating Technology).

Programme outcomes will provide a platform to the students to interact with leading teachers, scientists, and industry practitioners. The Post-graduates

- Will have sound knowledge of principles involved in the area of paint/surface coatings and will play a major role in development of coating industries.
- Will adapt to the various formulations/manufacture of coatings as per the changing technologies and requirements of society.
- Will design and deploy paints/coatings that meet the needs of individuals and the industries.
- Acquainted with the latest development in Surface Coating fields to enable them to take up higher studies, research & developmental work and entrepreneur.
  - Students get placement in Research & Development / Quality Assurance / Production / Technical Sales Services / Paint Application
- Students get absorbed by Paint Manufacturing Industry / Resin Industry / Pigment & Additive Industry / Printing Ink Industry / Paint Shops / In Academic and Research Institution / Paint and Coating Testing Laboratory

ADMISSION

FOR NEXT ACADEMIC YEAR WILL START

FROM MAY

## I S T A R

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