



Short term training courses in Surface modification and coating

These special training courses have been designed to improve knowledge and skills of all learners from various fields of science and engineering as well as biological sciences. The training courses can be designed for bespoke need of companies, industries and educational institutes. The courses can be tailored to the corresponding institution's requirements. General courses are also designed for continuing professional development (CPD) packages for small groups. These training courses are developed and being conducted with the motive of improving knowledge of the learners to develop their skills. The modules are designed as short term training course for three groups of trainees:

1. Elementary (people with no or little background in surface science and engineering, e.g., students, non-technical staff, lab technicians)
2. Intermediate (People with background in surface science and engineering, e.g., engineers, teachers, managers, technical staff)
3. Advanced (People with good scientific background but need to develop their skills in the advanced levels, e.g., research scientists, R&D developers, PhD & MSc students, lab managers etc).

This course is aimed at providing exposure in techniques for the modification, characterisation and applications aspects of modified surfaces and their applications in various industrial sectors. Learners can explore various applications in frontier fields and gain knowledge about different instruments or equipment involved in research and industrial fields through the course.

Modules in brief:

1. Elementary:
 - a. Theory: surface interaction with the environment, examples about the effect of environment to the surfaces, corrosion and biofilm formation, simple surface modification and coating techniques
 - b. Practical: simple modification and characterisation methodologies, corrosion and biofilm protection
2. Intermediate:
 - a. Theory: Properties of modified surfaces, procedures for surface modification and coatings, characterisation techniques, surface design and manipulations, examples in applications.
 - b. Practical: experiments on various techniques for preparation, characterisation techniques, design and testing.
3. Advanced:
 - a. Theory: Advanced surface properties and interactions, manipulation techniques, corrosion and corrosion protection, biofilm formation and protection, examples in applications. Advanced characterisation techniques. Case studies according to the trainees need.
 - b. Practical: surface testing, various techniques of surface manipulation, advanced characterisation techniques, corrosion testing and protection, additional studies on various surfaces and their testing.

Each module is for two months duration with 48 hours in total from which 32 hours theory and 16 hours practical. The costs will vary based on the number of trainees, background and requirements. Please enquire about our training courses.