

## Level 2 Modules: Foundation

Module Title & Description	Module	Average Completion Time (Hrs)	BCF Member*	Non - Member*
<p><b>Coatings for Life – An Introduction</b></p> <p>This module provides a good grounding of the basics of coatings chemistry and an introduction to the coatings industry. The module is perfect for industry newcomers, those employed at coatings companies in non-technical roles (i.e. marketing, customer service, sales) or anyone interested in learning the basics.</p>	200	2	£275	£375
<p><b>General Overview of Coatings</b></p> <p>This foundation level module provides a general overview of paints, lacquers, varnishes, inks, powder coatings and related products used for coating surfaces. It introduces the various divisions of surface coatings and explains the reasons for their use. It then describes the functions of different types of coating, details the components or raw materials used to make these coatings and the properties each contribute.</p>	201	10	£305	£415
<p><b>Media and Solvents</b></p> <p>Media are classified on the basis of their physical properties and then the mechanisms of film formation are described. In this module we look at examples of film formers on the basis of their physical form and outline some of the health hazards that can arise in their use. Some of their commonly determined properties are outlined.</p>	202	7	£305	£415
<p><b>Pigment and their Properties</b></p> <p>This Foundation Level Module describes and classifies various pigments used in the Coatings Industry, both by type and physical form. The main properties of pigments are then considered, in particular, particle size and particle size distribution, are described in some detail, including the importance of oil absorption. The influence of particle size and size distribution on oil absorption are explained in some detail.</p> <p>A number of important aspects of pigment testing are also explained. These include pigment purity, tint strength and lightening power. This leads on to the optical properties of pigments. Colour principles, the nature of visible light and the optimum conditions needed for the assessment of colour are described along with the importance of colour standards. The problem of metamerism and how to minimise it are also described.</p> <p>Finally, the module tackles the important area of health and safety and the hazards associated with the handling of pigments. Four types of pigment hazard are explained and the section also covers the precautions, which must be taken to minimise any risk from these hazards.</p>	203	10	£305	£415
<p><b>Paint and Ink Manufacture: Rheology</b></p> <p>This module explains the purpose and methods of dispersion, some of the important properties, which govern the process and the basic tests, used to confirm that this has been achieved. The manufacturing process for paints and inks is designed to produce a final product which has a uniform consistency and which conforms to appropriate test standards. These tests ensure that the product can be applied by the end-user and that the coating will then dry to provide a film with acceptable properties.</p> <p>The process involves the intimate mixing of several raw materials – some solid and some liquid – so that they form a stable dispersion. The quality of the dispersion can have a profound effect on the storage properties, ease of application, appearance and performance of the coating.</p> <p>This module explains the purpose and methods of dispersion, some of the important properties, which govern the process and the basic tests, used to confirm that this has been achieved.</p>	204	12	£305	£415
<p><b>Evaluation</b></p> <p>A general overview of the reasons for and consequences of testing coatings – mostly at the manufacturers, but also at times by the user. The control of variables such as climatic conditions substrate preparation, film thickness and timing are considered.</p>	205	10	£305	£415
<p><b>Surface Preparation</b></p> <p>This module deals with the first stages in preparing a surfaces prior to the actual application of a surface coatings. What is the composition of the surface? What substances are naturally found on the surface and what do we have to do to remove them so that a subsequent coating applied to the surface will adhere? The module first of all examines the nature of the surface itself and the types of surfaces that are coated, ranging from metals to wood-based substances to plastics to masonry materials. The surfaces themselves differ from some being absorbent and others non-absorbent, while some are alkaline in nature. The principal contaminants, rust and mill-scale, and grease, which are found on substrates are considered and general methods of removing them are introduced.</p>	206	10	£305	£415

\* All Prices £ (ex VAT) as of October 2020

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<p><b>Powder Coatings – Overview</b></p> <p>This module describes the various stages in the development of powder coatings to the market, comparing and contrasting them with liquid coatings. The study material covers the basic properties of powders, the methods used in their production and the techniques used to apply them. It also discusses particle size, one of the most important factors in the manufacture of powder coatings.</p>	207	10	£305	£415
<p><b>Powder Coating Application and Cure</b></p> <p>This module provides an understanding of the most important methods used to apply both thermosetting and thermoplastic powder coatings. It begins by introducing these two types of powder, the market areas in which they are used and the two main methods of application. This is followed by an explanation of the principles of electrostatics and electrostatic spraying and continues with a description of electrostatic spraying equipment, including guns, booths and recovery systems. Stoving methods and equipment are then described. Finally, a detailed explanation of the fluidised bed method of powder application and the equipment used completes the module.</p>	208	10	£305	£415
<p><b>Paint and Ink Application</b></p> <p>Provides a general overview of paints, lacquers, varnishes, related products used for coating surfaces. It introduces the various divisions of surface coatings and explains the reasons for their use. It then describes the functions of different types of coating, details the components or raw materials used to make these coatings and the properties each contribute.</p>	209	10	£305	£415

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Brought to you by



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