

Chemical Engineering: Coating Technology (M. Eng.)

At the end of this Master's programme, graduates will have gained a broad knowledge of the chemistry and technology of coating materials.

They are able to formulate and solve technical, economic and managerial problems applicable to the coatings industry.

They have an extensive knowledge of the properties of the raw materials needed for coatings and their function and behaviour in coating materials. They are able to formulate and optimise coating materials and to adapt them to the specific applications. They understand the colloid chemical and interfacial phenomena in coating materials, lubricants, cosmetics and related fields.

The graduates are familiar with the production methods for coating technology, their characteristics and limits. They have a principal knowledge of up-scaling processes from bench scale to production scale. They are able to choose the correct application and curing method depending on the substrate material, geometry and dimensions, and are also familiar with testing methods for coatings.

They have a fundamental knowledge of chemistry and also, to a certain degree, biochemical processes in respect of structure, process selection and economic aspects.

They are able to solve optimising problems in the field of coating technology efficiently and effectively while using a variety of data sources as well to produce a plan of experiments i.e. with the DOE method (design of experiments). Based on these or other results, they are able to set up regressions and use appropriate mathematical tools to find the optimal sensitive process parameters as required.