Module Description

The aim of the course is to give an overview of nanotechnology and its application in biopharmaceutical and pharmaceutical research and drug delivery. This course addresses the basic principle of nanotechnology, novel nanomaterials and their use as drug delivery nano-carriers with interesting clinical applications. This course focuses on drug delivery frameworks; novel nanomaterials that are suitable as “smart” drug delivery systems; the synthesis, chemical properties and characterization techniques of different categories of nanostructures such as: nanoparticles, polymers, carbon nanoubes (CNT), nanfibres, fullerenes; colloids; dendrimers and other macromolecules; metallic and inorganic nanotubes, nanoporous materials; and nanocomposites. For each category examples of applications would be given to demonstrate the applicability of the properties discussed.