

Reactors and Catalysis

Department of Chemical Engineering, School of Chemical Engineering

College of Engineering and Physical Sciences

Details

Code 17122

Level of study Second Year

Credit value 10

Semester 2

Pre-requisite modules 04 **21831**

[\(/undergraduate/studyabroad/modules/data/13/57/15/02/18/21831.aspx\)](/undergraduate/studyabroad/modules/data/13/57/15/02/18/21831.aspx) Fluid Flow,

Thermodynamics and Heat Transfer04 **17043**

[\(/undergraduate/studyabroad/modules/data/13/56/13/01/70/17043.aspx\)](/undergraduate/studyabroad/modules/data/13/56/13/01/70/17043.aspx) Chemical

and Biochemical Processes

Module description

This module teaches students the fundamentals of reactors and catalysis, particularly in the context of formulation engineering. It will introduce the effects of temperature in ideal reactors, catalysts and catalytic reactors, intra particle transport phenomena, transport phenomena in fixed bed reactors and fluidised beds, reactor design for functional products, introduced through supported metal catalyst formulation and production of a food product. Finally an introduction to biochemical reaction engineering is covered.

The prerequisites for this module are Year 1 Chemical and Biological Processes, where the thermodynamics and kinetics of chemical and biochemical reactions are introduced, and Year 1 Fluid Flow, Thermodynamics and Heat Transfer for the fundamentals of heat transfer. The material in this module is developed further in Year 4 Advanced Reaction Systems, in particular the use of fluidised bed technology.

Teaching and learning methods

Lectures, tutorials, laboratory session

[Privacy](#) | [Legal](#) | [Cookies and cookie policy](#) | [Accessibility](#) | [Site map](#) | [Website feedback](#) | [Charitable information](#)

© University of Birmingham 2015

