

# Polymer Processing

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## Lecturer

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## Target group

The course is offered for all students of the Kerpely Doctoral School, especially in the field of polymer science.

## Language

English or Hungarian.

## Scope

The aim of the course is to introduce the students into the up to date technologies of polymer processing and processing parameters which determines the product quality.

## Methodology

The transfer of knowledge is mainly through discussions. After a review of a topic, we discuss the issues raised in the consultation.

## Constituent topics

### 1. Topic: Relationships between processing technology and material properties.

Material characteristics that define the processing technology  
Changes in material properties due to processing technology  
Material testing methods in processing technology

### 2. Topic: Processing of thermoplastic materials

Extrusion and extrusion based technologies.  
Injection moulding technologies, especially special methods.  
Reactive extrusion and injection moulding  
Product faults in extrusion and injection moulding

### 3. Topic: Processing of thermosets

Components of composite systems  
Differences between thermoplastic and thermoset technologies  
RTM technologies  
Processing of SMC, BMC, DMC materials.

## Recommended literature

1. Osswald, T., Hernandez, J.: Polymer Processing, Modeling and Simulation, Hanser, 2006
2. Advances in Polymer Processing (Ed.: Thomas&Young), Woodhead Publishing, 2009