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# **UNIVERSITY OF PANNONIA**

## COURSE DATASHEET

Semester: 2016/17/1

Course: Technology and investigation of polymers I.

Code: VEMKSIB212P

**Responsible department:** Department of Hydrocarbon and Coal Processing

Department code: MKOL

Responsible instructor: Dr. Norbert Miskolczi

## Course objectives:

Comprehensive view about the polymers, plastic processing and measurements.

#### Course content:

- 1. Registration week
- 2. The history of plastics and their characteristics. The plastics industry, plastics production volumes and expected future trends. The use of plastic materials.
- 3. Properties of HDPE and PP, production technologies and their applications.
- 4. Properties of ABS, PS, PVC, production technologies and their applications.
- 5. Aliphatic polyamides, polycarbonates, and polyisobutylene, linear and crosslinked polyesters are produced, their properties and applications. Polyurethanes, resins (epoxy, phenolic and aminoaldehid) properties, production and application.
- 6. Thermoplastics Processing-I. Preliminary operations, extrusion.
- 7. Thermoplastics Processing II. Injection molding, casting.
- 8. Thermoplastics Processing III. Calendering, blowing.
- 9. Thermoplastics Processing IV. Rotational molding, foaming.
- 10. Thermosetting plastics processing.
- 11. Measurement techniques-I.
- 12. Measurement techniques-II.
- 13. Laboratory practise, case study
- 14. Laboratory practise, csae study
- 15. Laboratory practise, case study

### Requirements, evaluation and grading:

Requirements:

Please see in HKR.

Possibilities for repeating the subject:

Please see in HKR.

Accepted equivalent subjects:



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Requirements, evaluation and grading:

Learning efforts necessary to satisfy the requirements of the subject:

30h/30h

Required and recommended readings: