

**University POLITEHNICA of Bucharest (UPB)**  
**Faculty of Industrial Engineering and Robotics (IIR)**  
**Study Programme: Industrial Engineering (IE)**  
**Level of study: Licence (Bachelor)**

## COURSE SPECIFICATION

Course title	Course code	Semester	Credits (ECTS)
<b>Manufacturing Processes 2</b>	UPB.06.S.06.O.004	6	4

Course structure	Lecture	Laboratory	Project	Total hours
<i>Number of hours per week</i>	2	1	2	6
<i>Number of hours per semester</i>	28	28	28	84

Academic staff	Lecture	Laboratory	Project
<i>Name, academic degree</i>	GHEORGHE Marian, Professor	DIJMĂRESCU Manuela- Roxana, Assistant	
<i>Contact (email)</i>	marian.gheorghe@upb.ro		

### Course description

*Objective* Knowledge and formation of theoretical and practical skills on product structural and technological characteristics, production processes and systems structure, characteristics of manufacturing systems, design methodology of technological processes-simplified structure, detailed structure.

*Structure* • Fundamental Concepts - Technology, Strategy, Product, etc. • Methods of Analysis, Conceive and Decision • Business, Projects, Contracts • Environment and Resources • Sustainable Development • Technology Implementation and Operating • Recovery and Recycling • Reference Technologies.

### Laboratory and project description

*Objective* Formation of practical skills on structural and technological characteristics of products, characteristics of manufacturing systems, simplified and detailed structure of manufacturing technological processes.

*Project Structure* • Theme • General Initial Data • Simplified Structure • Detailed Structure

*Laboratory Structure* • Constructive - Functional Analysis of Manufacturing Systems • Analysis and Execution of Machining Operations • Constructive - Functional Analysis of Manufacturing Fixtures • Analysis of Cold Plastic Deformation Processes and Systems

**Intended learning outcomes**

- Knowledge and best practice of specific notions related to course area.
- Explanation and interpretation of ideas, projects, processes, theoretical and practical contents in the course area.
- Use of methods, techniques and instruments of investigation and implementation, expression of a positive and responsible attitude to scientific field.

Assessment method	% of the final grade	Minimal requirements for award of credits
Written exams	35	Total of min. 50 points, including homework of min. 8 points, laboratory promoting, project of min. 15 points
Homework	15	
Laboratory	25	
Project	25	

**References**

- Gheorghe M., *Manufacturing Processes 2*, Course Notes, UPB, 2015-16
- Gheorghe M., Dijmărescu M.R., *Manufacturing Processes 2*, Lab Works, UPB, 2015-16
- Gheorghe M., *Manufacturing Processes 2*, Project Guide, UPB, 2015-16
- Davim J.P., *Modern Manufacturing Engineering*, Springer, 2015

Prerequisites	Co-requisites (courses to be taken in parallel as a condition for enrolment)
Materials Technology; Manufacturing Processes 1	Engineering Economics

Date: 08.07.2016

**Course Coordinator,**

**Prof.dr.ing. GHEORGHE Marian**