

Óbuda University Bánki Donát Mechanical Safety Engineering Faculty		Institute of Materials Science and Manufacturing Department of Materials and Metal Forming		
<i>Name of the subject:</i> Materials Technology I.		<i>NEPTUN-code:</i> BAGAC12NEC		
<i>Subject leader:</i> dr. Pál Rác dr. Tünde Kovács Coskun		<i>Title:</i> associate professor associate professor		
Course description:				
Overview of basic materials processing methods, like casting, rolling, forging, bulk and sheet metal forming, polymer processing, powder metallurgy, etc. Joining of metals, soldering, brazing, welding. Surface coating. Materials and forming technology. Engineering materials and forming processes. Functions, loads, materials and shapes of parts.				
Lessons per Week:	Lectures: 2	Labs: 0	Practice: 1	Consultation by request
Evaluation:	practice mark			

1. Lecture program	
Date	Subject
02.10.	Overview of basic materials processing methods. Classification of forming processes.
02.17.	Basic hot forming processes; rolling, open and closed die forging.
02.24.	Classification of sheet metal forming processes. Shearing operations.
03.03.	Blanking and piercing operations and dies.
03.10.	Bending of sheets. Bending tools.
03.17.	Deep drawing operations. Deep drawing tools.
03.24.	Cold heading, and cold extrusion.
03.31.	Test #1
04.07.	Introduction to welding process. Basic metallurgy of welding.
04.14.	Fusion welding processes.
04.21.	No lessons are this day.
04.28.	Non fusion welding processes.
05.05.	Test #2
05.12.	Other welding processes.

2. References
S. Kalpakjian: Manufacturing Processes for Engineering Materials, Addison-Wesley Publishing Company
J. A. Schey: Introduction to Manufacturing Processes, McGraw-Hill Book Company

3. Requirements	
a) Taking part on lessons: Taking part on practical lessons is obligatory, visiting lectures is recommended.	
b) Tests and other tasks	
Date	Tests
03.31.	Test #1
05.05.	Test #2
05.12.	Repeater tests
c) Terms of signature and practice mark Students who accomplish semester requirements get signature and practice mark.	
d) Evaluation of practice mark Practice mark is mean value of two tests results (or repeater tests) if the mark of them is at least 2. If mark of any of them after repeater tests is 1 then the practice mark is 1 as well.	
e) Repeater tests Failed tests can be rewritten on last week of the lesson period of the semester.	
f) Repeater test in examination period of the semester Failed practice mark can be improved in first two weeks (10 working days) of the examination period. The date of it is given by the reader before the end of the lesson period.	

Budapest, 2014.01.05.

dr. RÁCZ, Pál
associate professor