

<b>Óbuda University</b> Bánki Donát Mechanical Safety Engineering Faculty		<b>Institute of Materials Science and Manufacturing</b> Department of Materials Technology		
<i>Name of the subject:</i> <b>Materials Technology</b>		<i>NEPTUN-code:</i> BAXACE3BNE		
<i>Subject leader:</i> Dr. Tünde KOVÁCS Peter VARGA		<i>Title:</i> associate professor assistant professor		
<b>Course description:</b>				
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: 3	Labs: 0	Practice: 1	Consultation by request
Evaluation:	practice mark			

<b>1. Lecture program</b>	
<b>Week</b>	<b>Subject</b>
1	Introduction of the materials technology
2	Rolling and Forming technologies, Open die forging, Forging machines, Closed die forging
3	Shearing of sheet and plate
4	Blanking and piercing operations and dies.
5	Bending of sheets. Bending tools.
6	Test 1
7	Deep drawing operations. Deep drawing tools
8	Fusion welding, solid state welding
9	Special welding technologies, Brazing, soldering
10	Scientific Student Conference (TDK)
11	Test 2, other joining technologies
12	Heat treating
13	Surface treating and surface coatings
14	Synthesis

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

<b>3. Requirements</b>	
<b>a) Taking part on lessons:</b> Taking part on practical lessons is obligatory, visiting lectures is recommended.	
<b>b) Tests and other tasks</b>	
Week	Tests
6	Test #1
11	Test #2
14	Repeater tests
<b>c) Terms of signature and practice mark</b> Students who accomplish semester requirements get signature and practice mark.	
<b>d) Evaluation of practice mark</b> 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.	
<b>e) Repeater tests</b> Failed tests can be rewritten on last week of the lesson period of the semester.	
<b>f) Repeater test in examination period of the semester</b> 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, 2018.09.08.

**Dr. Tünde KOVÁCS**  
associate professor