

<b>Course title: Technology of Metal Forming</b>	<b>Neptun code: GEMTT532-a</b>
<b>Course coordinator: Dr. Zsolt Lukacs, associate professor, PhD</b>	
type and number of lessons: lecture, 2 hours/ week	
method of accountability: colloquium	
curriculum location of the subject: autumn	
pre-study conditions: Theory of Metal Forming (GEMTT531-a)	
<b>The task and purpose of the subject:</b>	
Plastic forming is for PhD students choosing the metal forming science field the introduction of technology procedures, the various sheet and volume forming technologies.	
<b>Course description:</b>	
Aspects of the material structure of the forming processes, macro- and microstructural changes. Classification of metal forming processes. Analysis of sheet forming processes. Characteristic and analysis of Material separation technologies. Cutting process with shearing, deformation and stress state. Stain and stress state of sheet metal processes (bending, stretch drawing, deep drawing, flanging, etc.). Aspects and methodology of the technological design of sheet metal components. Classification of cold forming processes. Cold forming processes (upsetting, extrusion) and analysis of its stress and strain state. Questions of design method of metal forming dies.	
<b>Required literature:</b>	
<ol style="list-style-type: none"> <li>1. Lenard, J.: Metal Forming Science and Practice, Elsevier Publication, Toronto, 2002. ISBN 9780080536316 3.</li> <li>2. Banabic, D. (ed): Formability of Metallic Materials, Springer, Berlin, Heidelberg, New York, 2000. ISBN 3540679065</li> </ol>	
<b>Recommended literature:</b>	
<ol style="list-style-type: none"> <li>1. Saanouni, K.: Damage Mechanics in Metal Forming, John Wiley, London, 2012. ISBN 978-1-84821-348-7 2.</li> <li>2. Mielnik, E.: Metal Working Science and Engineering, McGraw Hill Co., New York, 1991. ISBN 0-07-041904-3</li> </ol>	