

Course title: Technological Processes and Manufacturing Systems	Neptun code: GEGTT401-a
Course coordinator: Dr. Maros Zsolt, associate professor	
type and number of lesson: lecture 2/week	
method of accountability: colloquium	
curriculum location of the subject: spring	
pre-study conditions: --	
The task and purpose of the subject:	
Providing a comprehensive knowledge on structure, elements and planning of advanced technological processes and manufacturing systems.	
Course description:	
Basic concepts of manufacturing and manufacturing systems, company model. Definition and main characteristics of manufacturing processes and systems. The relationship and main tasks of production planning and technological planning. Preliminary design of the manufacturing technology, selection of the production form. Types and structure of manufacturing systems, technological, organizational, and methodological bases of production planning. Flexible manufacturing systems and their tools. Machining, workpiece supply, tool supply, information and chip management subsystem and their components. The role of industrial robots and manipulators in flexible manufacturing systems. Optimization and simulation in the planning of manufacturing processes and systems. Production control methods.	
Required literature:	
<ol style="list-style-type: none"> 1. Chryssolouris, G.: Manufacturing Systems. Springer-Verlag, New-York, 1992., ISBN 0387256830, p602 2. Scallan, P: Process Planning, Elsevier Science & Technology Books, 2002, ISBN 0750651296, p483 	
Recommended literature:	
<ol style="list-style-type: none"> 3. Halevi, G: Process and Operation Planning, Springer-Science 2003, ISBN 978-90-481-6437-0, p335 4. Sharma, H: Production Planning and Control, BookRix 2019, ISBN 3748706278, p73 	