

Course title: Automation and Robotization of Materials Handling Machines and Systems	Neptun code: GEALT405a
Course coordinator: Dr. Péter Telek, PhD, associated professor	
type and number of lesson: lecture/practical lesson 2+0 / week	
method of accountability: colloquium	
curriculum location of the subject: autumn	
pre-study conditions: -	
The task and purpose of the subject:	
Presentation of the planning, operation and control of automated material handling machines and systems. Students attended this course gain knowledge on the planning and operation of automated material handling machines.	
Course description:	
Material handling machines and systems. Automation fundamentals. Automation of handling machines. Problems and solutions during the automated operation. Automated material handling systems. Planning of automated handling processes. Control of automated handling systems. Operation and structure of sensors. Robots in material handling systems.	
Required literature:	
<ul style="list-style-type: none"> [1] Kuliwicz, R. A.: Materials handling handbook, John Wiley and sons, New York, 1985. [2] Müller, T.: Automated guided vehicles. IFS (Publications) Ltd., Berlin, Heidelberg, New York 1983. [3] Craig, J. J.: Robotics. Mechanics and control. Addison Wesley. Sidney 1986 	
Recommended literature:	
<ul style="list-style-type: none"> [1] Telek, P., Bányai T.: Complex design of integrated material flow systems Advanced Logistic Systems: Theory and Practice 7:(1) pp. 105-110. (2013) 	