Course title: Dynamics of Materials Handling Machines	**Neptun code:** **GEALT409a**
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: spring	
pre-study conditions: -	
The task and purpose of the subject:	
Presentation of operation problems and dynamic effects of material handling machines. Students attended this course gain knowledge for dynamical planning and errorless operation of materials handing machines	
Course description:	
Reasons and types of dynamic problems occurred in materials handling machines. Analysis of dynamic effects. Dynamic models of different materials handling machines. Equations of motions for machines. Solution possibilities, numerical methods and software. Case studies: dynamics of cranes, forklifts and conveyors.	
Required literature:	
[1] Kuliwiec, R. A.: Materials handling handbook, John Wiley and sons, New York, 1985. [2] Craig, J. J.: Robotics. Mechanics and control. Addison Wesley. Sidney 1986 [3] Astashev, V. K., Babitsky, V. I., Kolovsky M. Z.: Dynamics and Control of Machines, Springer, 2000	
Recommended literature:	
[1] Dresig, H., Holzweisig, F.: Dynamics of Machinery, Springer, 2010 [2] Martin, G. H.: Kinematics and Dynamics of Machines, Waveland Press Inc., 1982	