

Course title: Storage Systems	Neptun code: GEALT419-a
Course coordinator: Dr. Péter Tamás, PhD, dr. habil., professor	
type of lesson and number of lessons: lecture (2)	
method of evaluation: colloquium	
curriculum location of the subject: (autumn/spring semester): autumn and spring	
pre-study conditions (<i>if any</i>): -	
The task and purpose of the subject:	
Students of the course will learn the theoretical foundations of the design and operation of modern warehousing systems, and will also become capable of selecting the ideal warehousing infrastructure for a given practical task.	
Course description:	
Structuring of warehousing systems, mathematical description of the structures. Variants and characteristics of warehousing systems' construction. Models and methods for the design and management of warehousing systems. Novel automated warehouses: comparison of characteristics of satellite cart, through-roller conveyor, movable, etc., variants, and selection of the optimal variant. Theory of automatic order picking. Analysis of storage, retrieval, and order picking strategies. Inventory management methods. Methods for designing an information flow system in the warehouse. Automated car parking garages	
Required literature:	
<ol style="list-style-type: none"> 1. Rushton, A., Croucher, P., Baker, P.: The handbook of logistics and distribution management, 3rd edition, Kogan Page Limited, ISBN 9780749446697, 2006 2. Bartholdi, J. J., Hackman, S. T.: Warehouse & Distribution Science, Release 0.85, www.warehouse-science.com 	
Recommended literature:	
<ol style="list-style-type: none"> 1. Bányai, T.: Design of Material flow systems. 2021. ISBN 978-963-358-237-4 2. Klingebiel, K., Wagenitz, A. (2013). An Introduction to Logistics as a Service. In: Clausen, U., ten Hompel, M., Klumpp, M. (eds) Efficiency and Logistics. Lecture Notes in Logistics. Springer, Berlin, Heidelberg. https://doi.org/10.1007/978-3-642-32838-1_22 	