Course title: Recycling Logistics	**Neptun code:** **GEALT417-a**
Course coordinator: Dr. Ágota Tóth Dr. Bányainé, PhD, dr. habil., associate 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 *(if any)*: -	
The task and purpose of the subject:	
The course introduces students to the "circular economy" model, the EU and national harmonised legislative background and recommendations that define its development. The course will cover the typical solutions of logistic systems related to the processing and recycling of hazardous substances, municipal waste and spent consumer durables, as well as the legal and economic methods that operate the system, in addition to the technical solutions.	
Course description:	
Classification of wastes and used products in the closed loop economy (circular economy), their sources, methods for estimating quantities. Optimisation of collection system characteristics: selectivity, collection stages, number of collection points, location, allocation to each other and to the type of waste. Waste stock management. Collection system design methods and techniques for material flow and information flow processes and techniques, collection system management strategies. Design and management models and methods of disassembly and recycling logistics system. Planning and management methods for recycling centres. Virtual logistics company for recycling.	
Required literature:	
1. Tchobanoglous, G., Kreith, F.: Handbook of solid waste management, McGraw-Hill, 2002, ISBN: 9780071356237 2. Langford, J.: Logistics principles and applications, Sole Press, ISBN-10: 0-07-147224-X, 2007.	
Recommended literature:	
1. Lund, H. F.: Recycling Handbook, McGraw-Hill, 2001, ISBN 0070391564 2. Bányai, T., Kaczmar, I.: Green Supply Chain: Competitiveness and Sustainability. London, United Kingdom / England : IntechOpen (2021) ISBN: 9781839683015	