Course title: Methods of Optimization	**Neptun code: GEMAK413-a**
Course coordinator: Dr. Attila Körei, PhD, 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:	
Modelling of optimisation problems, study of optimisation methods and algorithms. Solving optimisation problems using computer.	
Course description:	
Classification of optimization problems. Classical optimization techniques. Problems in linear and integer programming. Unconstrained and constrained nonlinear optimization problems and their solution methods. Heuristic optimization algorithms. Case studies.	
Required literature:	
1. S. S. Rao: Engineering Optimization: Theory and Practice, 2020, Wiley 2. M. Ancău: Practical Optimization with MATLAB, 2019, Cambridge Scholars Publishing	
Recommended literature:	
1. R. Sioshansi, A. J. Conejo: Optimization in Engineering: Models and Algorithms, 2017, Springer 2. J. Yong: Optimization Theory: A Concise Introduction, 2018, World Scientific Publishing Company 3. G. C. Calafiore, L. El Ghaoui: Optimization Models, 2014, Cambridge University Press	