Course title: Theory of Production Systems and Processes	**Neptun code: GEIAK401-a**
Course coordinator: Dr. Samad Dadvandipour, 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:	
The theory of production systems and processes is crucial for manufacturing companies to meet market demands, optimize resources and operate sustainably.	
Course description:	
The theory of production systems and processes deals with the planning, managing, and developing of production activities. This theory aims to create efficient, flexible, and sustainable production processes. Below, we review the main concepts and components: 1. Production system 2. Production process 3. Production management 4. Lean production 5. Technological innovations Task and purpose of the subject: To familiarize students with the basic description of production systems. Since the stock plays a central role in the operation of the production system, it is necessary to review the basic stocks. We are also looking for an answer to how the basic sets are related to the production system. Students also gain insight into different production process systems' design and testing processes to visualize and analyze aspects of a production process system more efficiently. They learn what an organization's value-added process, activity analysis, and production process mean.	
Required literature:	
1. Heizer, J., Render, B., & Munson, C. (2020). Operations Management: Sustainability and Supply Chain Management. Stevenson, W. J. (2017). Operations Management. 2. Slack, N., Brandon-Jones, A., & Johnston, R. (2019). Operations Management. 3. Li, Jingshan; Semyon, M. Meerkov 2009. Production Systems Engineering. Springer.	
Recommended literature:	
1. Evans, J. R., & Lindsay, W. M. (2016). Managing for Quality and Performance Excellence. 2. Groover, M. P. (2016). Automation, Production Systems, and Computer-Integrated Manufacturing. 3. Goldratt, E. M., & Cox, J. (2004). The Goal: A Process of Ongoing Improvement.	