Course	title:	Efficiency	improvement	and	optimization	of	Neptun code:
product	ion pr	ocesses					GEGTT472-a

Course coordinator: Dr. György Kovács, PhD, associate professor

type of lesson: weekly lecture + seminar hours: 2 + 0

method of accountability: colloquium

curriculum location of the subject: autumn and spring

pre-study conditions: -

The task and purpose of the subject:

Introduction of main aims and methods for performance measurement of production processes. Discussion of methods for efficiency improvement of manufacturing processes.

Course description:

Aims, main activities and characteristics of production systems and processes. General types and characteristics of intermittent and continuous production processes: project production, job-shop production, batch production, mass production and process production. Aims and main steps of planning of production processes. Methods for visualization, analysis and improvement of production processes. Performance measurement of production processes, most often used Key Performance Indicators (KPI). Main aims of the efficiency improvement of manufacturing processes. Evaluation methods of manufacturing processes. Efficiency improvement and optimization methods for production processes: e.g. Lean; Facility Layout Design; Combined method; Simulation; MTM (Methods-Time Measurement), etc. Case studies.

Evaluation method:

Written exam. Evaluation: 85-100 points excellent (5) 70-84 points above average (4) 55-69 points average (3) 40-54 points below average (2) 0-39 points unsatisfactory (1)

Required literature:

- 1. Li, Jingshan; Meerkov, Semyon M.: Production Systems Engineering. 2009., ISBN: 978-0-387-75578-6, Springer
- 2. Tullio Tolio: Design of Flexible Production Systems. 2009. ISBN: 978-3-540-85413-5, Springer

Recommended literature:

- 1. Bellgran, M., Säfsten, E. K.: Production Development. Design and Operation of Production Systems. 2010., ISBN: 978-1-84882-494-2, Springer
- 2. Hackman, S. T.: Production Economics. 2008. ISBN: 978-3-540-75750-4, Springer