Syllabus of Module

7. Industrial Engineering

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Module Annotation

In today's highly competitive times, it is essential to increase efficiency in all business processes. Companies that do not do so steal a part of their margin because the increasing costs of the company cannot be passed on to the customer indefinitely. For this reason, the position of an industrial engineer, whose job is nothing more than to search for potential for improvement and thus increasing the productivity of processes, has recently become more and more frequent in enterprises. This module is aimed at:

- Lean Manufacturing Basics, DMAIC – Improvement Cycle
- Prerequisite – elimination of waste
- Continuous improvement – KAIZEN
- Methods and Techniques of Improvement (Workplace Standardisation – 5S, Quick Change – SMED, Total Productive Maintenance – TPM, Jidoka, Poka Yoke)

Module Objective

The aim of the module is to understand the principle of continuous improvement, to learn basic methods and techniques of industrial engineering, but mainly to look for the potential to improve production processes and to use this potential (to improve internal processes).

Literature

1. CHARRON, Rich. The Lean Management Systems Handbook. Boca Raton, FL: CRC Press, 2015. ISBN 9781466564350.
2. CHROMJAKOVÁ, Felicita. Průmyslové inženýrství: trendy zvyšování výkonnosti štíhlým řízením procesů. Žilina: Georg, 2013. ISBN 978-80-8154-058-5.
3. JIRÁSEK, Jaroslav. Štíhlá výroba. Prague: Grada, 1998. ISBN 8071693944.
4. KOŠTURIAK, Ján. Kaizen: osvědčená praxe českých a slovenských podniků. Brno: Computer Press, 2010. Praxe manažera (Computer Press). ISBN 9788025123492.
5. VYTLAČIL, Milan and Ivan MAŠÍN. Dynamické zlepšování procesů: programy a metody pro eliminaci plýtvání. Liberec: Institut průmyslového inženýrství, 1999. ISBN 80-902235-3-2.