

**Module title: *Operational Excellence***

**Module summary**

Module code: WINB460K

Module coordinator: Prof. Dr Christoph Roser

Credits (ECTS): 5 CP (45 hours of attendance and 105 hours of self-study including exam preparation)

Semester: 3<sup>rd</sup> or 4<sup>th</sup> curriculum semester

Pre-requisites with regard to content:

Basics of manufacturing, logistics

Pre-requisites according to the examination regulations:

None

Competences:

The students know the basic objectives of manufacturing and logistics (safety, cost, quality, time). They can optimise production and do Kaizen to improve these basic objectives and contribute to the success of the company. For this they also know the influence of inventory on costs and lead times and the fundamentals of production control (plan control, consumption control). They also know and the influence and management of waste, variation and overload in production and logistics. To improve the operations, they also know the main methods for continuous improvement and the procedure for the implementation of improvement projects.

Assessment:

Written exam (90 minutes) or oral exam (30 minutes) or term paper (can be carried out as project report, duration 4 weeks). The specific form of examination will be announced at the beginning of the lecture.

Usability:

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Lecturer: Prof. Dr Christoph Roser

Contact hours: 4 semester hours per week

Availability: Annually. Possibly also every semester, if the students are very interested and there is a sufficient number of participants.

Type/mode: Lecture / obligatory in the specialization production management

Language of instruction: English (if required German)

Content:

Objectives of production and logistics (safety, cost, quality, time). Influence of waste, variability, and overload on goals. Selection of methods to improve these goals such as Lean Manufacturing, Consumption Control, Kanban, Total Quality Management, 5S, Visual Management, SMED, Customer Takt and cycle time, Leveling, Just in Time, Just in Sequence, Ship to Line, Poka Yoke, Standard Work, Value Stream Mapping, Six Sigma, etc.... Continuous improvement project approach including team building, root cause analysis, and PDCA.

Recommended reading:

Blog AllAboutLean.com

Comments: