Module 662 Production and Quality Management

1	**Module Code** 662	**Degree Program / Target Group(s)** WNB	**Semester** 5	**Starts in the** ☒ Winter Term ☒ Summer T.	**Duration** 1 Semester	**Module Type** Mandatory	**Workload (h)** 150	**ECTS Credits** 5

2	**Courses**	**Type of Instruction / Form of Learning**	**Language of Instruction**	**Contact Time (h) weekly | total**	**Self Study (h)**	**ECTS Credits**
	a) Production and Quality Management	Lecture	English	4 60	60	5

3	**Table of Qualifications**	Expertise	Methodological Skills	Personal & Social Skills
	Knowledge & Understanding	☒	☒	☒
	Applying Knowl. & Understanding	☒	☒	☒
	Making Judgements & Analyzing	☒	☒	☒
	Creating & Extending Knowledge	☐	☐	☐

4 **Learning Outcomes and Competences**

On completion of the module the students are expected to be able to:

Knowledge and Understanding (Knowledge)

- Influence of product development on production, technology management
- Analyses of different manufacturing structures, necessary steps to plan production lines, sizing of production lines, metrics for process measurement and planning, variant management
- Quality assurance and -management methods

Applying Knowledge and Understanding (Skills)

- Apply various methods of product development, classify customer requirements that affect product and production
- Use methods for production line planning, time measurement and evaluation
- Use of various methods of quality assurance

Making Judgements and Analyzing (Competences)

- Potential for improvement in production systems, calculating and analyzing key figures, including Overall Equipment Effective Factor

Creating and Extending Knowledge (Competences)

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5 **Syllabus/Contents**

It is a basic event in which an overview of the planning problems in production and the methods for solving them are worked out. Students are introduced to different levels of planning (strategic, tactical, operational) and the planning problems in production.

- Relationship between product development and production management
- Analysis of production structures, such as single production, job shop production, mass production
- Production line planning: Life cycle, forecasting, plant dimensioning, variant management, automation level, layout planning
- Quality management and -assurance

6 **Prerequisites**

According to the Examination Regulations (Studien- und Prüfungsordnung):

- none

Recommended:

- Logistics 1

7 **Type of Assessment (Examinations) and Requirements for Credits**

Exam 90 minutes

8 **Module can be used in the following Degree Programs**

WNB

9 **Module Director and other Lecturers involved**

Prof. Frederik Reichert

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10	**Recommended Reading** • Günther, Hans-Otto und Tempelmeier, Horst: Produktion und Logistik, 8. Aufl., Berlin et al., Springer 2009. • Günther, Hans-Otto und Tempelmeier, Horst: Übungsbuch Produktion und Logistik, 7. Aufl., Berlin et al., Springer 2010. • Rother, Mike: Learning to See: Value-Stream Mapping to Create Value and Eliminate Muda : Version 1.3 June 2003.
11	**Contribution of the Module to the Educational Aims of the Degree Program** Basics of understanding of organization and planning in a manufacturing company
12	**Date of last Modifications** 13.03.2019