

Syllabus  
**BAE4711 Produktionsdesign**  
Lukas Morys  
Summer Semester 2023/24

<b>Level</b>	Bachelor	
<b>Credits</b>	3	
<b>Student Contact Hours</b>	2	
<b>Workload</b>	90 h	
<b>Prerequisites</b>	You should have attended Operations Management 1 and 2.	
<b>Time</b>	s. LSF	
<b>Room</b>	s. LSF	
<b>Start Date</b>	s. LSF	
<b>Lecturer(s)</b>	<b>Name</b>	Lukas Morys
	<b>Office</b>	k.A.
	<b>Virtual Office</b>	k.z
	<b>Office Hours</b>	Nach Vereinbarung
	<b>Phone</b>	k.A.
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## **Summary**

This course is part of the concentration „Operations Management“ but can equally be chosen as elective.

Through this course, you will gain practical expertise on how to design and organize future-proof production facilities. You will learn which economic, ergonomic and IT-related considerations must be taken into account. You will then be able to evaluate and improve production concepts from the perspective of management, operators and IT.

## **Outline of the Course**

- Manufacturing logistics and factory planning
- Lean Management and Lean Methods
- Performance Reporting, Continuous Improvement and Shopfloor Management
- Total Productive Maintenance and Sustainable Problem-Solving
- Questioning techniques and leadership on the Shopfloor
- Strategies and success factors in digitizing manufacturing
- Financial control in manufacturing and ROI calculation

## Course Intended Learning Outcomes and their Contribution to Program Intended Learning Outcomes / Program Goals

Program Intended Learning Outcomes	Course Intended Learning Outcomes
After completion of the program the students will be able...	After completion of the course the students will be able
<b>1 Expert Knowledge</b>	
1.1 ...to demonstrate their solid key knowledge in Technical Basics.	...to see basics of designing workplaces and production layouts from a technical point of view.
1.3 ...to demonstrate their distinguished and sound competencies in General Business Administration.	...to apply the fundamentals of workplace design and production layouts from a business, IT and ergonomic perspective.
1.4 ...to demonstrate their distinguished and sound competencies in Economics.	... to know interdependencies between production design and cost accounting
1.8 ...to demonstrate profound expert knowledge in their field of specialization.	... to have first experiences in applying appropriate lean management methods for specific challenges
<b>2 Digital Skills</b>	
2.1 ...to know and understand relevant IT software tools used in business and their features and have a solid understanding of digital technologies.	... to know success factors for ERP and other Smart Factory Software from a manufacturing perspective.
2.3 ...to effectively use digital technologies to interact, to collaborate and to communicate.	... to have a sound overview about advantages and prerequisites for digital supported work instructions, operator guidance and KPI reporting

### Teaching and Learning Approach

I offer an appropriate mix of practical reports, group exercises / presentations and theory input.

### Literature and Course Materials

- Learning to See, Mike Rother, John Shook
- The Toyota Way, Jeffery K. Liker
- Podcast Factory21 (German only)

### Assessment

The course requires student presence and active contribution.

50% of the grade will be depending on presentation and active contribution.

50% of the grade will be assessed by a written examination.

**Grading scale:** (see SPO, allg. Teil, Neufassung vom 01.09.06, p. 20):

1 = excellent (pass grade) = outstanding work;

2 = good (pass grade) = work which is far above average

3 = satisfactory (pass grade) = average work;

4 = sufficient (pass grade) =work with shortcomings which still meets requirements

5 = insufficient (fail grade) = work with severe shortcomings, does not meet requirements

### Schedule

Course	Date	Topic
1	25.03.24	<ul style="list-style-type: none"> <li>• Manufacturing logistics and factory planning</li> <li>• Lean Management</li> <li>• Shopfloor Management</li> <li>• Total Productive Maintenance</li> <li>• Questioning techniques / Leadership on Shopfloor</li> </ul>
2	08.04.24	
3	15.04.24	
4	29.04.24	
5	06.05.24	
6	13.05.24	

7	27.05.24	<ul style="list-style-type: none"> <li>• Digitizing manufacturing</li> <li>• Financial control in manufacturing and ROI calculation</li> </ul>
8	03.06.24	Exam

## Prerequisites in general

You should have gained first experiences in manufacturing and lean management. You should furthermore intend to work later in production or production-related positions in manufacturing companies. The course is taught in English and comprises student presentations and intense discussions – therefore good English skills – oral and written – are required – minimum requirement is B2-level

Furthermore, an open mindset, disposition towards English language texts and activities and the ability and willingness to actively participate and contribute in discussions is required.

## Code of Conduct for Students

You are encouraged to discuss the course, including issues raised by the assignments. However, the solutions to assignments should be individual original work unless otherwise specified. If an assignment makes you realize you don't understand the material, ask a fellow student a question designed to improve your understanding, not one designed to get the assignment done. To do otherwise is to cheat out of understanding, as well as to be intolerably dishonorable.

Furthermore, compliance of academic standards is a must.

[Link to the Code of Conduct for online Teaching](#)

## Teaching Philosophy

I care about your learning, helping you is important to me. If you are having a problem/question with some aspect of the course, do not hesitate to send an email. I will respond quickly and if it is necessary, we can make an appointment.

I will do anything to help you learn the subject as well as its real world implications. If you have problems or questions, please speak up in class. If you do not want to ask in class, please e-mail or see me at my office. If you have problems with your progress in the course or with a teammate or your group please see me as early as possible. The longer you wait the fewer options I will have to help you. I really want you to graduate, but you must earn it!