**Syllabus**  BAE2112 – Production Eng. & Manufacturing  WS 2019/20

**Course**  
BAE2112 – Production Engineering and Manufacturing (Produktion 2)  
2 hours per week, 2 credits, English level: upper

**Instructors**  
Prof. Dr. Kai Oßwald  
Office: T2.2.14 office hours: see LSF  
Email: kai.osswald@hs-pforzheim.de

**Overview**  
The course deals with the most important issues of industrial production, focusing on technical subjects and shopfloor related issues. It gives deeper insight in relevant production topics like assembly, workpiece handling, maintenance and quality control.

**Prerequisites:**  
Fertigungstechnik 1 and 2, Konstruktionslehre, Advanced English for Engineers, Elektrotechnik

**Learning Objectives**  
By the end of the course students  
- Will understand automated industrial production processes  
- Will have an overview over the components of automation  
- Will know the specific challenges of manufacturing chains  
- Will know characteristic designs and components of machines and production lines

**Course Topics**  
Automation  
Sensors  
Machine Drives and Actuators  
Machine Components  
Hydraulic Technology  
Pneumatic Technology  
Production Metrology  
Machinery Safety

**Teaching and learning approach**  
The course will be run as a “classical” lecture plus some demonstrations and several exercise elements.
Contribution to program goals

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<th>Goals</th>
<th>Contribution</th>
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<tr>
<td>Engineering Knowledge</td>
<td>Introduction to the industrial and automated production as well as its machines and methods</td>
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Course Material

- RealPars Youtube-Channel: https://www.youtube.com/user/ParsicAutomation/videos

Final Examination

There will be a 60 min written final exam for this course (together with “Produktion I”) at the end of the semester.

Grading

Students will be graded on a scale of 1 = excellent, 2 = very good, 3 = satisfactory, 4 = pass and 5 = fail.

My Teaching Philosophy

I want to contribute to your learning progress in terms of technical understanding and engineering abilities. I will try to show you the practical importance of the issues of this course. Questions – during the course or during my “Kolloquium” – are very welcome and will be answered either in the course or individually.