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

Instructors
Prof. Dr. Kai Oßwald
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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 industrial production processes from CAD over CAM to the shop floor
- Will have an insight on important production issues like Production Metrology, Sensors, Automation and many more
- 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
IT for Production: CAD/CAM
Workpiece transport and handling/Robotics

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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<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

- Production Metrology, Tilo Pfeifer, Oldenbourg Verlag, 2002

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.