PrA - Engineering of Systems

Course number	7248
Hours per week:	2
ECTS:	2
Scheduled:	Winter Term
Format	Lecture and Lab The students may decide whether to perform the presentations and exams in German or English.
Examination:	Study Work with oral examination
Lecturer:	Prof. Dr.-Ing. Michael Mann
Objectives:	**Knowledge:** The students know the engineering of complex systems in theory and practice. **Skills**: The students autonomously acquire theoretical fundamentals and methods. They command a variety of planning tools, apply the tools in practice and check for errors. **Competences:** The students are empowered to conceptualize assemblies and subassemblies of complex systems in teams. The definition and handling of interfaces can be implemented taking the impact on the entire system into account. The individual assemblies can be analyzed and optimized. Inconsistencies can be analyzed and evaluated methodically to generate solutions.
Contents:	- Theory of planning tools - Planning and realization of prototypes - Testing and failure analysis - Authoring of project reports and presentations
Pre-requisites	none
Recommended Reading:	Depending on the current project: Engineering Design, A Systematic Approach: Gerhard Pahl, Wolfgang Beitz, Jörg Feldhusen, Karl-Heinrich Grote , ISBN: 978-1-84628-318-5 (Print) 978-1-84628-319-2 (Online) Das Ingenieurwissen: Entwicklung, Konstruktion und Produktion: Karl-Heinrich Grote, Frank Engelmann, Wolfgang Beitz, Max Syrbe, Jürgen Beyerer, Günter Spur ISBN: 978-3-662-44392-7 (Print) 978-3-662-44393-4 (Online) Pahl/Beitz Konstruktionslehre, Methoden und Anwendung erfolgreicher Produktentwicklung Jörg Feldhusen, Karl-Heinrich Grote ISBN: 978-3-642-29568-3 (Print) 978-3-642-29569-0 (Online)

Frank Konrad
Planung von Photovoltaik-Anlagen

Ismail Kasikci
Planung von Elektroanlagen

K. W. Helbing
Handbuch
Fabrikprojektierung

Thomas Bindel• Dieter Hofmann
Projektierung von
Automatisierungsanlagen

All books in the current edition.