Courses in English
Course Description

Department 09 Engineering and Management

Course title Embedded Systems

Hours per week (SWS) 4

Number of ECTS credits 4

Course objective By the end of the course students will:

• Have knowledge of the operational use of modern information systems and current information technology.
• Know how computers, operating systems and networks function.
• Have understood the methodology of how to select complex information systems for technical and economical use.

Prerequisites Knowledge of software engineering and information systems
IT skills are compulsory!!

Recommended reading

Teaching methods Group discussions, reflection, team work, case work, role plays

Assessment methods Written examination

Language of instruction English

Name of lecturer Prof. Dr. Olav Hinz

Email Olav.hinz@hm.edu

Link

Course content The course covers modern information technology in detail. The basics of modern computer hardware and its infrastructure will be discussed. Technical prerequisites for understanding modern networking technology will also be developed.

Examples of possible content:
• Architecture and infrastructure components of modern integrated information systems.
• Hardware components of modern IT infrastructures in operational practice.
• Concepts and algorithms of modern operating systems.
• Methods of efficient IT operations from small to large data centres and the introduction of ITIL.
• Active and passive network components, network architectures and protocols, TCP/IP as a protocol architecture of the internet, intranet and extranet.
• Encryption and VPNs.
• Overview of current communication technologies such as Voice Over IP and mobile computing.
• Case study on the technology selection of modern infrastructure.

Remarks