Courses in English
Course Description

Department	09 Engineering and Management
Course title	Principles of Computer Science
Course number	
Hours per week (SWS)	4 SWS
Number of ECTS credits	5
Course objective	By the end of the course students will • Know the most important elements of a computer and computer networks and are able to explain their functionalities • Are able to explain and utilize methods for representing information in a computer. • Are able to implement easy standard algorithms • Know the most important elements and the structure of computer programs. • Are able to analyze a given program code for sequence, results, errors and improvements. • Are able to program simple mathematical functions. • Are able to transfer a given specification into an algorithm or program code.
Prerequisites	None
Recommended reading	CORMEN, Thomas H.; LEIERSON, Charles E.; RIVEST, Ronald L. (2014): Introduction to Algorithms. Cambridge: MIT Press. Online verfügbar unter http://gbv.eblib.com/patron/FullRecord.aspx?p=3339142. ISBN: 9780262533058 MEHLHORN, Kurt; SANDERS, Peter (2008): Algorithms and data structures. The basic toolbox. Berlin: Springer. ISBN: 9783540779780
Teaching methods	Seminar and exercises
Assessment methods	Written exam, 90 minutes
Language of instruction	English
Name of lecturer	Prof. Hinz
Email	olav.hinz@hm.edu
Link	
Course content	• Structure and functionality of a computer • Introduction into data structure and algorithms using standard algorithms • Introduction into programming using a current, general accepted programming language and problems taken from the technical and economic Area.
Remarks	