

MW55: Digital Science Technology				Study Program:	M
Module Type:	ECTS Points:	Workload:	Semester:	Module Duration:	
Compulsory	16	480	Depending on offer 1st-4th semester	Two semesters	
Courses:			Contact hours:	Independent study:	Planned Group Size:
Modules from the total offer of Bachelor and Master modules of computer science, which do not contain any practical parts and are completed with a graded performance review, with at least 16 ECTS Points all together.			180h	300h	20
Intended Learning Outcomes (ILOs):					
Competencies are acquired that are mentioned in the descriptions of the chosen modules in the Computer Science Module Handbook.					
Key competencies:					
<ul style="list-style-type: none"> - Independent work - Critical thinking - Analytical skills - Ability to transfer knowledge - Reflection skills - Critical faculties 					
Description/Contents:					
<p>In consultation with the Department of Computer Science, the following modules are recommended but not mandatory:</p> <p>A) from the Bachelor's Degree:</p> <ul style="list-style-type: none"> • Programming (WS) • Databases: An Introduction (SS) • Foundations of Computer Networks (SS) <p>B) from the Master's Degree:</p> <ul style="list-style-type: none"> • Master Seminar on User Experience (UX) Design (SS) • Create Your Tech Startup (SS) • Master Seminar on Digital Innovation and Entrepreneurship (WS) <p>A) Programming (takes place annually in the WS):</p>					

B) Databases: An Introduction

Architecture of database systems

- Tasks of a database system
- Data (bank) models; esp. relational model
- Conceptual and logical database design; normalization
- Inquiry languages for relational databases and their basics; relational algebra, tuples and range calculus, SQL

C) Fundamentals of Computer Networks

The Fundamentals of Computer Networks module is designed for students who want to understand how computer networks work from a technical perspective.

The fundamental issues of the field are examined and then it is therefore discussed how these issues are solved on the Internet. The goal of the module is to provide both a solid general foundation in computer networking and practical applicable knowledge.

In addition, the contents are listed in the descriptions of the other modules selected in the module manual of the computer science.

Language:

The course language in Computer Science is usually German, but English is required for literary studies and in some cases for the lecture scripts.

Teaching Methods:

Lectures, self-study, practical exercises if necessary

Module Applicability:

M.Sc. of Business Administration, M.Sc. of "Volkswirtschaftslehre"

Pre-requisites/Requirements:

Admission to study Business Administration or "Volkswirtschaftslehre" for a Master's degree. Admission to the MW55 module is based on a selection procedure at the Faculty of Economics and Business Administration; the number of admitted students currently is 20 students per academic year.

The participation requirements, which are stated in the module manual of Computer Science for the modules, do not apply to students of the Faculty of Economics and Business Administration.

Examination Types:

The examination form of the selected modules can be found in the module handbook of computer science.

The module grade is calculated as the weighted arithmetic mean of the grades of the individual submodules.

Requirements for Award of Credit Points:

Successfully passed final module examination. A module final examination is passed if the evaluation is at least "sufficient" (4.0).

Availability:

The rotation of the modules taken can be found in the Computer Science Module Handbook.

Assessment:

This module is graded and taken into account when calculating the overall grade of your master's degree. For more detailed information on the calculation of the overall grade, please refer to the examination regulations of your respective degree program.

Person Responsible and Main Lecturer:

Prof. Dr. Martin Mauve

Further Information:

The number of participants per academic year is limited to a maximum of 20 students of the Master's programs "Business Administration" and "Volkswirtschaftslehre ". Until September the 20th (for the winter term) or March the 20th (summer term), interested students can register at the Chair of Business Administration, esp. Controlling and Accounting at the following e-mail address (controlling@hhu.de). If the number of applications exceeds the number of available study places after the registration deadline, the participation in the module will be decided by random draw. Students will be informed by mail about the result of the lottery at the latest two weeks after the registration deadline.

If you have any questions about taking the module, please contact the Chair of Controlling and Accounting, Ms. Anne Rubens-Laarmann (anne.rubens-laarmann@hhu.de) in advance.

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