Data Science: Foundations and Practical Applications

Course number:	6340
Hours per week:	2
ECTS:	2
Scheduled:	Winter term and Summer term
Format:	Seminar-style teaching, practical exercises on the computer, in English
Examination:	Written exam (90 min.)
Lecturer:	Prof. Dr. Holger von Jouanne-Diedrich
Objectives:	Get an overview of the foundations of data science, machine learning and artificial intelligence and learn about practical applications.
Contents:	- Overview of Data Science with practical exercises - Introduction of the R programming language - AI, Machine Learning, Deep Learning - Supervised and Unsupervised Learning - Linear and Logistics Regression, Correlation, OneR, Decision Trees, Random Forests, Neural Networks, Clustering - Large Language Models / Transformers like ChatGPT
Pre-requisites	none
Recommended Reading:	https://blog.ephorie.de/learning-path-for-data-science-with-r-part-i https://blog.ephorie.de