### Course Description

**Department**  
10 Business Administration

**Course title**  
Digital Technology: Big Data and Data Analytics

**Hours per week (SWS)**  
4

**Number of ECTS credits**  
5

**Course objective**  
This course is about extracting useful knowledge from (big) data. It covers the fundamental principles or concepts that underlie data science with a main focus on the selection and application of techniques and the interpretation of results. We will study data analytics in a business context, i.e., we will mostly work with examples, case studies and data that are relevant for business. Upon completion of the class, students should be able to recognize the necessity of big data analysis, understand prerequisites and potential challenges as well as select and apply adequate data analysis methods and tools.

**Prerequisites**  
none

**Recommended reading**  
- O'Neil, C. and Schutt, R. (2014), Doing Data Science: Straight Talk from the Frontline, O'Reilly, Sebastopol.

**Teaching methods**  
- Seminar-teaching
- Project work
- Group work
- Presentation

**Assessment methods**  
PA

**Language of instruction**  
English

**Name of lecturer**  
Prof. Dr. Eva Anderl

**Email**  
eva.anderl@hm.edu

**Link**  

**Course content**  
- Importance of data analysis in the field of digital business
- Basic concepts and techniques of applied data science
  - Correlation and supervised segmentation
  - Fitting models to data
  - Avoiding overfitting
  - Similarity and clustering
  - Analysis of model performance
- Data-analytic thinking

**Remarks**  
Workload in hours: presence in lectures / Preparation and follow-up of lectures / self study / revision for assessments 48/14/38/50