

Chair / Professor	Requirements		
Prof. Dr. Christian Bizer	<ul style="list-style-type: none"> • Data Mining <i>or</i> • LSDM <i>or</i> • Decision Support 	at least 1 specialization Course of the DWS Group	Programming skills in JAVA <i>and</i> if any Python <i>or</i> R
Prof. Dr. Heiko Paulheim	Data Mining	at least 1 specialization Course of the DWS Group	Programming skills in JAVA <i>or</i> Python
Prof. Dr. Heiner Stuckenschmidt	One of the following: <ul style="list-style-type: none"> • IE694 Industrial Applications of AI • Participation in one of our team projects • IS515 Process Management and Analytics AND IE692 Advanced Process Mining • IE675b Machine learning AND at least 1 course from the Area Operations Management (see MMM module Handbook) • Attended a seminar or team project with Prof. Stuckenschmidt 	Programming skills in Python (preferred) or JAVA	
Prof. Dr. Rainer Gemulla	<ul style="list-style-type: none"> • IE675b Machine learning <i>or</i> • IE 678 Deep Learning <i>or</i> • CS 560 Large-Scale Data Management <i>or</i> • CS 707 Data and Web Science Seminar 	At least 3 fundamental or specialization courses of the DWS group	Programming skills in Java and/or Python
Prof. Dr. Matthias Krause	<ul style="list-style-type: none"> • Algorithmics (CS 550) <i>or</i> • Kryptographie II ((CS 651) <i>or</i> • Courses in Algorithmics / Data Structures or Cryptography or Theoretical Computer Science or Complexity Theory at B.Sc. or M.Sc. level 	Good programming skills in JAVA or C/C++	
Prof. Dr. Simone Ponzetto	<ul style="list-style-type: none"> • LSDM <i>or</i> • Decision Support 	<ul style="list-style-type: none"> • Information Retrieval & Web Search <i>or</i> • Text Analytics <i>or</i> • Hot Topics in Machine Learning <i>or</i> • Data Mining and Matrices 	programming skills in at least one high-level programming language (e.g. Java, Python, C++, C#, R and Matlab)
Prof. Dr. Guido Moerkotte	<ul style="list-style-type: none"> • Seminar of Prof. Moerkotte <i>or</i> • Seminar of Prof. Krause <i>or</i> • Seminar of Prof. Gemulla 	Data Base Systems II	Programming skills
Prof. Dr. Colin Atkinson	Advanced Software Engineering	Ability to program in an OO language (e.g. Java, Python etc.)	
Prof. Dr. Frederik Armknecht	<ul style="list-style-type: none"> • Algorithmics <i>or</i> • Cryptography II <i>or</i> • Data Security (as of FSS2020) <i>or</i> • Cryptography I <i>or</i> • Selected Topics in IT-Security 	Good programming skills (e.g. in JAVA or C++)	

Prof. Dr. Armin Heinzl	<ul style="list-style-type: none"> • successful completion of a seminar of the Area IS 		
Prof. Dr. Roland Leiða	<p>At least one course/one seminar in the area of</p> <ul style="list-style-type: none"> • Algorithmics • Software Engineering • Programming Languages • Concurrent programming • Graphics • Image Processing • Security 	Good programming skills in JAVA or C/C++	
Jun.-Prof. Dr. Philipp Kellmeyer	At least 1 specialization course of the DWS Group	Experience and advanced skills in academic writing	
Prof. Dr.-Ing. Margret Keuper	<p>At least 1 of the following courses:</p> <ul style="list-style-type: none"> • CS668 Generative Computer Vision Models • CS646 Higher Level Computer Vision • CS647 Image Processing 		
Prof. Dr Ratkovic	<p>Background in applied data analysis and at least 2 of:</p> <ul style="list-style-type: none"> • Causal Inference • Machine Learning • Natural Language Processing • Mathematical statistics 	<ul style="list-style-type: none"> • Programming skills in Python and R • Work on LLMs/deep learning with applications to social sciences • Mathematical training 	