

List of classes taught in English available for exchange students

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This list provides you with an overview of all courses regularly taught in English or offering a particular track for incoming students (“English friendly”). Incoming students can attend classes from all programmes. Bachelor students from abroad, who want to attend Master courses at the IWS, need the permission from the responsible lecturer. This overview depends on the current version of our programmes. Due to changes in the curriculums after reaccreditations there may be minor changes in the academic years 2026/27 and 2027/28.

Course Code: DIS 3.2	Semester: Winter
Course Title: Information Retrieval	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English friendly	Type of exam: Test, oral exam
<i>Course description:</i> Students will be able to understand how retrieval systems work, question their functionality, and evaluate them using objective criteria. They will be able to identify the requirements for retrieval systems and distinguish them from related systems such as databases. To this end, they will learn the basics of individual components of indexing pipelines, ranking methods, and evaluation techniques. With the knowledge acquired in the lecture and consolidated in the exercise, students will be able to understand and analyse how retrieval systems work and communicate these findings in a professional manner.	

Course Code: DIS 3.5	Semester: Winter
Course Title: Information Sources and Information Research	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English friendly	Type of exam: Test, oral exam
<i>Course description:</i> Students acquire extensive source knowledge, research and information skills in the fields of economics and information science and are instructed in the systematic and structured communication of national and international information sources. They do this by becoming familiar with these sources (including AI tools for research), researching and adequately assessing and analysing them in order to be able to apply them to real-life practical examples and questions and to distinguish objective information from disinformation and ‘fake news’ in order to carry out correct data analyses and meaningful information research and make knowledge-based decisions accordingly.	

Course Code: DIS 4.1	Semester: Summer
Course Title: Project 1: Project Management	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English friendly	Type of exam: Presentation
<i>Course description:</i> Through the project module, students acquire the skills to plan and implement projects independently and in a team. In doing so, they combine theoretical knowledge with practical skills, apply project management methods, integrate relevant models and theory from previous modules, and further develop their social and communication skills. They are enabled to recognise and build on their own subject-specific and interdisciplinary strengths and to successfully complete professional project tasks.	

Course Code: DIS 4.2	Semester: Summer
Course Title: Search Engine Technology	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English	Type of exam: Presentation
<i>Course description:</i> Students can set up and configure their own search engine for a (semi-)structured data set and adapt it to different requirements. They analyse the performance of the systems they have set up and their components in order to identify and implement potential improvements. With the help of standard software libraries such as <i>Solr</i> or <i>ElasticSearch</i>, they install, configure and, if necessary, expand their own search engine. Using evaluation methods, test collections and tools such as <i>trec_eval</i>, the current solution approach is continuously evaluated and compared with the results of the other participants via a leaderboard. Later, students will be able to use the tools and processes for any data and use cases (e.g. intranet, websites, product catalogues or log data).	

Course Code: DIS 4.5	Semester: Summer
Course Title: Information Analysis & Market Intelligence	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English friendly	Type of exam: Project
<i>Course description:</i> Students learn to identify the strengths and weaknesses of companies and organisations as well as markets and industries, and to conduct structured surveys and analyses of data, facts and information from a market and competitive perspective. They do this by applying information research tools and methods (including secondary sources) and market and competition analysis models and tools to derive predictions and trends for the respective companies and organisations, markets and industries from the extensive research and analysis, and to prepare the findings as a basis for decision-making.	

Course Code: DIS 6.2	Semester: Summer
Course Title: Natural Language Processing	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English	Type of exam: Presentation
<i>Course description:</i> Students learn methods and techniques for machine processing of natural language. This enables them to process even large and unstructured amounts of text in such a way that they can be analysed, structured and formally represented. The course therefore focuses on methods of syntactic and statistical parsing, formal knowledge representation and information extraction. The methods are presented both theoretically and applied practically in the form of laboratory exercises, thus deepening knowledge of how they work and their possibilities. After completing the course, students will be able to transfer the methods and techniques they have learned to any other data and use cases (e.g. for analysing full texts of books, articles, internet forums or other digitally available sources).	

Course Code: DIS 6.3	Semester: Summer
Course Title: Deep Learning	
Programme: Data & Information Science (BA)	ECTS: 6
Status: English	Type of exam: Project
<i>Course description:</i> The course teaches the fundamentals and techniques for evaluating data sets using neural networks. The learning outcomes are as follows: Students will be equipped with the technical skills to systematically plan and implement data analysis for specific economic and scientific questions by learning how to pre-process, clean and transform data using Python. They will also learn to understand, apply and optimise analysis methods such as neural networks and deep learning, analyse real-world large data sets, visualise and interpret results, and report on them in order to derive recommendations for action and decisions from the findings obtained from extensive analyses and result models and prepare them for science and industry.	

Course Code: OR 61	Semester: Summer
Course Title: Deep Dive II: Innovation Management	
Programme: Digital Journalism (BA)	ECTS: 6
Status: English	Type of exam: Project
<i>Course description:</i> The students get in-depth knowledge in design thinking and agile project management tools to create innovative communicative approaches in journalism, content marketing, or public relation. The module provides the students with necessary background knowledge in market analysis, trend analysis and business model analysis to identify relevant market segments. They run through a full design thinking project to identify user needs and create an innovative communicative solution in a case study.	

Course Code: OR 41	Semester: Winter
Course Title: Web Project	
Programme: Digital Journalism (BA)	ECTS: 9
Status: English friendly	Type of exam: Project
<i>Course description:</i> This module covers the development of content strategies and the creation of a problem-solving strategy within the framework of a web-based project. One or more web projects are to be planned, developed, designed and implemented. This involves creating content (text, sound, images, web-specific forms) for a web application and entering editorial content with the help of tools or content management systems. Students should put into practice the specific working techniques of an online editor that they have learned in other modules. In particular, they should also learn interdisciplinary key skills such as organisational skills, teamwork, time management and social skills. The learning objective of the module is the target group-specific planning, conception, organisation and creation of content for a website, as well as critical reflection on the implementation of the project.	

Course Code: BdK 4.1.1	Semester: Summer
Course Title: Financial Management and Public Funding	
Programme: Library Management (BA)	ECTS: 3
Status: English friendly	Type of exam: Test
<i>Course description:</i> In the course, students learn the basics of public budget law and the financing principles of public enterprises. They will understand the structure and composition of budgets and be able to apply the budgetary system (titles, chapters, budget items). They will be able to plan and implement the expenditure of public funds in accordance with budgetary principles. They will understand the basics of cost accounting for libraries and the resulting need for budget planning and management (global budget, budgeting). Students collect and analyse financial and budgetary data that is available or generated in the library context and evaluate it according to various criteria, such as the development of personnel costs, the media budget or ongoing material costs. Students are able to read and understand budgets, draw up budget estimates and, in accordance with the requirements of the new control model, prepare and evaluate cost accounting in accordance with the principles of double-entry bookkeeping (as opposed to single-entry bookkeeping), thereby assessing the financial situation of the library.	

Course Code: BdK 4.5.1	Semester: Summer
Course Title: User Research	
Programme: Library Management (BA)	ECTS: 3
Status: English friendly	Type of exam: Test
<i>Course description:</i> Students can examine user interactions with media, spaces or other people on the basis of specific social science research methods and plan, manage and implement related projects on their own or in a team, by evaluating and applying quantitative and qualitative methods for analysing customer interaction and ethnographic methods for getting to know library users, as well as planning and implementing user-centred research approaches with instruments.	

Course Code: BdK 6.1.1	Semester: Summer
Course Title: Library Management	
Programme: Library Management (BA)	ECTS: 3
Status: English friendly	Type of exam: Test
<i>Course description:</i> Students can understand the various tasks of management using the management cycle and plan them independently, including portfolio analyses, SWOT analyses, environmental analyses and stakeholder analyses from analytical preparatory work for strategy development, develop their own library strategies using various process models, systematically collect and record data from the various areas of the library, and use this data to create key figures and metrics for various library areas (library metrics). They do this by collecting, structuring and evaluating and analysing the data that is available in the library context and generated during use (internal data) as well as data provided by the supporting institutions (external data) according to various criteria. Students are able to develop comprehensive and long-term strategies for libraries or individual areas with the help of internal and external data analysis, and to support the organisation and control of the process.	

Course Code: MuM 2.4	Semester: Summer
Course Title: Project Media Research	
Programme: Market and Media Research (MA)	ECTS: 12
Status: English friendly	Type of exam: Presentation
<i>Course description:</i> Students of this module develop, design and carry out (where possible, international) projects based on current research findings. They evaluate these projects, thereby initiating research and innovative change in practice. Through group work, coaching and counselling, students are actively involved in teaching and experience practical issues and their implementation in a project in all its complexity and diversity. The module promotes the application and transfer of previously learned scientific tools of market and media research to practical issues. In the process, teamwork and planning skills are deepened.	

Course Code: MuM 3.2	Semester: Winter
Course Title: Artificial Intelligence in Market Research	
Programme: Market and Media Research (MA)	ECTS: 6
Status: English friendly	Type of exam: test
Course description: Students examine the technological and mathematical foundations of AI applications such as large language models and their use in all areas of market research and at all stages of a market research project, from sampling to data analysis. Students critically reflect on the opportunities, limitations and specific challenges of using AI technology in market research at the methodological, social and ethical levels, for example with regard to biases. As future market and media researchers, they will be able to integrate and apply AI tools in market research projects in a targeted, creative and socially responsible manner. They will be able to cooperate with developers of these models, analyse requirements and formulate them as tasks.	

Course Code: MuM 3.3	Semester: Winter
Course Title: Usability and User Experience	
Programme: Market and Media Research (MA)	ECTS: 6
Status: English friendly	Type of exam: Portfolio
Course description: Students acquire extensive theoretical knowledge in the field of (web) usability and user experience (UX) in order to apply it in practice, reflect on it and use it as a basis for optimisation processes. Students learn the basics of usability and UX. They also gain an overview of the methodological approaches and fields of application of usability and UX. They can test and apply what they have learned in practice using current issues. With the theoretical and empirical evaluation skills they have acquired, students are able to transfer research results to practice, and make methodologically sound decisions about optimisation processes.	

Course Code: MuM 3.4	Semester: Winter
Course Title: Project Market Research	
Programme: Market and Media Research (MA)	ECTS: 12
Status: English friendly	Type of exam: Project
Course description: Students of this module develop, design and carry out (where possible, international) projects based on current research findings. They evaluate these projects, thereby initiating research and innovative change in practice. Through group work, coaching and counselling, students are actively involved in teaching and experience practical issues and their implementation in a project in all its complexity and diversity. The module promotes the application and transfer of previously learned scientific tools of market and media research to practical issues. The students' skills in teamwork and planning are deepened.	

Additionally, the Master programme **Digital Sciences: Data and Information Science (M.Sc.)** offers a wide range of courses taught in English. Since the scope of this offer would go beyond the scope of this document, reference is hereby made to the web resource of the study programme. There, you will find a list of the courses offered in English as well as a detailed description of the course contents: <https://digital-sciences.de/en/overview/modules/index.html>