

---

## Data literacy education and the Center for Data Science & Simulation at TU Dortmund University

Henrike Weinert, Alexander Munteanu and Katja Ickstadt  
TU Dortmund University, Germany  
[henrike.weinert@tu-dortmund.de](mailto:henrike.weinert@tu-dortmund.de)

On this poster, we show how teaching of key competencies in the areas of data literacy, statistical literacy, and AI literacy is supported and strengthened at TU Dortmund University. We present the structure and content of the “Data Competence Network” (DaCoNet) certificate program and the TU Dortmund - Center for Data Science & Simulation (DoDaS), our interdisciplinary center that combines data and simulation-related research and teaching.

Data literacy is a key competence in today’s world, and the requirements in all areas of our daily lives and work are constantly changing. Our DaCoNet program therefore aims to provide basic data literacy education to all students, regardless of whether their main focus lies on traditionally data-related or non-data-related subjects. Our certificate program consists of several modules: the compulsory “Introduction to Data Literacy” teaches data awareness in everyday life. Additional basic skills in statistics, data management, computer science, and ethics are taught in various courses. These include important topics such as data types, data analysis with statistical software, data representativeness, basic ideas of AI processes and data ethics. These aspects are accompanied by a critical reflection on all steps in the process of creating value from data.

The Data Competence Network is located at DoDaS, which coordinates activities of several faculties involved in data generation and analysis such as mathematics, statistics, computer science, natural sciences and engineering. Key teaching and research areas of DoDaS include artificial intelligence, machine learning, and scientific computing. Interdisciplinary full degree programs such as B.Sc. and M.Sc. in Data Science are offered in addition to the introductory courses on data literacy. The interdisciplinary center DoDaS aims to extend to and include new stakeholders, for instance researchers in the humanities and social sciences through externally funded projects such as “Digital Humanities Ruhr”.