BSc Data Science

School of Computer Science & Digital Technologies

Statistics, data modelling and decision support in data-intensive organisations.

Statistics, data modelling and decision support in data-intensive organisations. The programme combines scientific foundations with project-based engineering practice, delivered in structured semesters with supervised teaching.

Qualification	Recognised secondary qualification or equivalent
Academic credits	180
Duration	6 semesters
Language of instruction	Deutsch / English
Start	1 October 2027
Tuition	EUR 2,450 per semester, EUR 14,700 in total
Application deadline	15 July 2027

Curriculum

Semester 1

· Calculus I
· Programming I (Python)
· Linear Algebra
· Probability and Statistics
· Academic Skills and Scientific Writing

Semester 2

· Calculus II
· Algorithms and Data Structures
· Database Systems
· Data Mining
· Technology Ethics and Responsibility

Semester 3

· Optimisation
· Machine Learning
· Data Engineering and Pipelines
· Data Visualisation
· Foundation Laboratory

Semester 4

· Deep Learning
· Big Data Architectures
· Time Series Analysis
· Bayesian Statistics
· Interdisciplinary Team Project

Semester 5

· Natural Language Processing
· Image Processing and Computer Vision
· MLOps and Model Operations
· Cloud Computing
· Capstone Project

Semester 6

· Industrial Placement Semester
· Elective Modules
· Bachelor's Thesis and Colloquium

Learning outcomes

· Apply scientific method to technical problems
· Design, model and evaluate complex systems
· Communicate results to specialist and international audiences
· Assess technological developments in ethical and legal terms

Admission requirements

· Recognised secondary qualification or equivalent — higher education entrance qualification including mathematics and one natural science (overall grade 2.5 or better)
· Evidence of proficiency in the language of instruction — English C1 (IELTS 7.0 / TOEFL iBT 95) or German C1 (TestDaF 4x4 / DSH-2), depending on the language of instruction
· Complete application documentation — transcripts, language certificate, CV and identity document

Career opportunities

· Development and design roles in technology-driven organisations
· Research and development in institutes and industry
· Project and systems responsibility in interdisciplinary teams
· Progression to master's or doctoral study

Contact and application

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