








BSc Data Science

	Critical and innovative thinking 	Collaboration and management 	Design and programming 	Digital literacy and flexibility 	Sustainability and ethics 
Description of skills	Identify stakeholder needs, desires, and contexts. Know how to address issues with IT-technology and create desirable, feasible, and viable solutions in a scientific way. Ability to critically reflect on solutions and their implications.	Build the right business model, products, IT strategies and governance processes to develop a viable business or accelerate an existing business. Ability to productively work with people from diverse backgrounds, disciplines, and contexts.	Design high quality digital services, experiences, platforms, hardware and software technologies fitting for the task, the users, and the context. Know what coding is and implies, and/or ability to code.	Effectively make sense of information technologies to identify, evaluate, and create content and successfully communicate information and ideas. Ability to adapt swiftly to rapidly shifting trends in a changing ecosystem.	Aware of the potential and challenges of digitalization for humans, organizations, societies, and nature. Demonstrate social and societal responsibility, creativity and originality to ensure sustainable and secure IT solutions.
Programme-specific skills	Identify stakeholder needs that may be addressed via data and re-formulate in terms of a data-scientific problem. Address a data-scientific problem with appropriately adapted standard methods. Critically reflect on the appropriateness of applied methods and the implications of each choice made.	Apply software engineering principles to design, plan, and manage software projects. Efficiently engage with domain experts to identify and acquire the basic understanding of a new domain, such as required to establish and address an underlying data-scientific problem.	Create appropriate visualizations of both data and results. Know the principles of algorithms and data structures for efficient and tailored prototyping or implementation of data analysis tools. Use databases, the SQL language and scripting languages both for simple manipulations of data (extract, clean, transform and load), and for sophisticated queries and transformations.	Ability to understand, apply and implement a new method from a technical description. Swiftly adopt new programming languages and programming frameworks. Communicate both visually, orally, and in writing about all elements of a data science solution, whether these concern data interpretation, technical analysis methods, results, or details on the practical implementation.	Understand the challenges associated with privacy, security and ethics (e.g. bias) inherent to data science problems and assess and discuss these for a given technical solution to determine if machine learning is a viable solution. Reflect on the demand for computational resources associated with a given solution.

	Data scientist in public or private industries
	Further studies towards an MSc, for instance in Data Science or Computer Science