

# Master's in Data Science

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## Course

Open Data and Knowledge Graphs

## Description

The objective of this course is to provide students with theoretical and practical knowledge about open data and knowledge graphs. Students will learn the methodological and technological foundations for the generation and publication of open data, with a special focus on how such data is often being structured and made available as knowledge graphs. The acquired knowledge will be also applicable for the management of knowledge graphs of private data, handled by private organisations. Special emphasis will be made on how such knowledge graphs can be used as data sources for data science activities, as well as how data science is being used for knowledge graph management and curation purposes.

More specifically, the course will deal with the concepts of open data, Semantic Web and Web of Linked Data, graph databases and knowledge graphs, languages and data models for the representation of knowledge graphs, methodologies and technologies to support the generation and publication of knowledge graphs, ontologies and vocabularies used for this purpose, representative open data sources such as DBpedia, Geonames, etc., and applications that make use of knowledge graphs.