

COURSE DESCRIPTION – ACADEMIC YEAR 2020/2021

Course title	Social and Security Aspects of Data Science
Course code	73017
Scientific sector	INF/01
Degree	Master in Computational Data Science (LM-18)
Semester	1
Year	2
Credits	6
Modular	No
Total lecturing hours	40
Total lab hours	20
Attendance	Attendance is not compulsory, but non-attending students have to contact the lecturer at the start of the course to agree on the modalities of the independent study.
Prerequisites	Minimal programming and data management skills
Course page	https://ole.unibz.it/
Specific educational objectives	<p>The course belongs to the type "affini o integrative – formazione affine" in the curriculum "Data Management".</p> <p>The course will provide a scientific and technical background of the vast domain of social and security aspects of data science, concentrating on data privacy and ethical aspects of data management, providing a deep knowledge about IT aspects of GDPR by using real-world use cases and examples</p>
Lecturer	Andrea Molinari
Contact	E3.10, andrea.molinari@unibz.it , +39 0471 013278 / 013279
Scientific sector of lecturer	ING-INF/05
Teaching language	English
Office hours	Before or after lecture: arrange beforehand by email.
Lecturing Assistant (if any)	--
Contact LA	--
Office hours LA	--
List of topics	<ul style="list-style-type: none"> • Data protection • Data security • Data privacy • Legal aspects • Data ownership • Ethical aspects
Teaching format	<p>Frontal lectures for the theoretical parts</p> <p>Lab sessions on specific topics and use cases</p>
Learning outcomes	<p>Knowledge and understanding:</p> <ul style="list-style-type: none"> • D1.1 - Knowledge of the key concepts and technologies of data science disciplines

	<ul style="list-style-type: none"> D1.12 - Basic knowledge of the main ethical and social implications of data science <p>Applying knowledge and understanding:</p> <ul style="list-style-type: none"> D2.12 - Ability to analyse and improve data privacy and data security features in the context of complex software infrastructures <p>Making judgments</p> <ul style="list-style-type: none"> D3.2 - Ability to autonomously select the documentation (in the form of books, web, magazines, etc.) needed to keep up to date in a given sector <p>Communication skills</p> <ul style="list-style-type: none"> D4.1 - Ability to use English at an advanced level with particular reference to disciplinary terminology D4.2 - Ability to present one's work in a clear and comprehensible way in front of an audience, including non-specialists <p>Learning skills</p> <ul style="list-style-type: none"> D5.2 - Ability to autonomously keep oneself up to date with the developments of the most important areas of data science
Assessment	<ul style="list-style-type: none"> Project work to test knowledge application skills and communication skills Written exam with verification questions and questions to test knowledge application skills
Assessment language	English
Assessment Typology	Monocratic
Evaluation criteria and criteria for awarding marks	<ul style="list-style-type: none"> 70% Final paper/project revisiting a proposed Data Science controversy 30% Presentation and discussion of the paper <p>Relevant for assessment 1: skill in applying knowledge in a practical setting, ability to summarize in own words, ability to recall and reuse principles and methods used in data science</p> <p>Relevant for assessment 2: clarity of answers, skill in applying knowledge acquired during the course to a scientific presentation</p>
Required readings	Materials in the form of slides and scientific papers provided by the teacher
Supplementary readings	None
Software used	None