UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

# SYLLABUS DEL CORSO

# Data Visualization

**2627-1-FDS02Q001-FDS02Q00102**

## Aims

By the end of the course, students will be able to analyze, evaluate, and design interactive infographics and narrative explanations.

## Contents

This module teaches the fundamentals of data exploration, insight extraction, visualization, and storytelling, supporting interactive data analysis and adaptable reporting for organizations and data journalism.

## Detailed program

By the end of the course, students will be able to:

- Select and explore datasets relevant to real-world issues.
- Formulate research questions and hypotheses based on data.
- Clean, transform, and analyze data using appropriate tools.
- Design effective and engaging data visualizations.
- Craft compelling narratives and stories from data insights.
- Understand ethical, legal, and quality considerations in data visualization.

## Prerequisites

- Curiosity about data and its potential to tell stories
- Openness to collaborative learning across disciplines
- Interest in data-driven storytelling and visual communication

## Teaching form

- Interactive and frontal-lessons (21 hours)
- Interactive and frontal laboratory lessons (27 hours)

## Textbook and teaching resource

Cairo, A. (2016). The Truthful Art: Data, Charts, and Maps for Communication
Tufte, E. (2001). The Visual Display of Quantitative Information

## Semester

First semester

## Assessment method

No midterm exams or written exams.
Project Work (100% of grade):

- Students create an individual project using the provided template.
- Collaboration is allowed, but each student must analyze the dataset from a unique angle and submit their own work.
- **Developing drafts and revisions during lectures and labs is strongly encouraged to receive instructor feedback and improve the final submission.**
- Final submission: PDF presentation uploaded to the platform.

Optional Oral Exam:

- After the lecture/lab period, students may choose to redo the project and take an oral exam covering all course content.

Evaluation Criteria:
Projects will be evaluated based on:

- Alignment with the provided template
- Originality and clarity of insights
- Reliability of implementation
- Quality of methodology explanation
- Quality and effectiveness of charts

## Office hours

Please send an e-mail to teacher to arrange an appointment: andrea.mauro@unimib.it

## Sustainable Development Goals

QUALITY EDUCATION