UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

Data Visualization

2425-1-FDS01Q001-FDS01Q036M

Aims

At the end of the course, students will have acquired skills in analysis, evaluation and developing complex and interactive infographics.

Contents

The data visualization module covers the essentials of visual design by which to design and evaluate systems that enable the interactive analysis of data and the flexible optimization of reporting (both in an organizational domain and data journalism).

Detailed program

Data visualization

- Introduction to the Human Data Interaction (definitions, main concepts and methodologies)
- Data Transformation into sources of knowledge through visual representation
- Requirements and heuristics for high-quality visualizations
- Charts and standard views: relevance and appropriateness
- Advanced and innovative tools for data visualization and advanced quantitative analysis
  * The evaluation of the quality of visualizations and infographics
  * Qualitative assessment: expert and heuristic
  * Quantitative assessment: user tasks, inferential statistical techniques
- Elements of visual semiotics and social semiotics

Prerequisites

Knowledge of relational model

Teaching form

- 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

There are no midterm exams.

The assessment of the course includes:

- The development of a project (group project) with meta-design activities (mandatory revisions of the design material).
- A written exam (multiple-choice/open-ended questions) on the topics covered in the lectures and theoretical bibliography.
- An oral exam with a critical discussion of the project and theoretical questions on the topics covered in the course (covered in lectures and the theoretical bibliography).

The project evaluation is done as a group; groups can consist of 4 individuals with different skills.
Both the written and oral exams contribute to the individual score.
To pass the exam, a passing grade is required in all three parts.
A passing grade on the project is necessary to be eligible for the written exam.
An initial partial score will be calculated by averaging the grades of the project and the written exam. The oral exam, if sufficient, can lead to an increase or decrease in the partial score.
In the case of an insufficient oral or written exam, developing a new project will not be necessary.

Office hours

Please send an e-mail to teachers to arrange an appointment

Sustainable Development Goals

QUALITY EDUCATION