



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Innovazione Digitale per la Salute

2324-3-H4101D390

---

#### Aims

Understanding big data and fundamentals of digital health resources. Better knowledge and awareness of the role of digital health innovations to deal with real-world use cases and translational medicine applications that complement the broad spectrum of more traditional healthcare processes: opportunities and challenges  
Promoting observational, analytical, and interpretative skills within a digital innovation framework for healthcare.

#### Contents

State-of-the-art, emerging trends, and future perspective of digital health resources that fuel healthcare innovations to deal with challenges of real-world use cases. The rationale for digital health innovations. The importance of digital health literacy, technology transfer and in-depth overview of big data definitions and commonly used methods, techniques, and technology driving the transformation of healthcare. Tailored interventions, telemedicine, early detection, remote and real-time monitoring, and predictive analytics (e.g., digital phenotyping and patient profiling). Ethical concerns.

#### Detailed program

- Setting the scene for digital innovation: case studies and design requirements
- Clinimetric properties and big data: basic principles and definitions for digital health literacy
- Ecological momentary assessment, Technology transfer, and translational data science
- Trends and state-of-the-art of digital innovation in healthcare
- Emerging technologies and Internet of Things: utility of point-of-care technologies and wearables
- From data collection to data interpretation: digital phenotyping and novel approaches for predictive analytics and data visualization

- Expectations and pitfalls: from digitalization requirements to ethical and data protection concerns

## **Prerequisites**

students can attend the course from the third year (Medicine and Surgery)

## **Teaching form**

In-person.

Interactive, based on digital tools (Wooclap, Mentimeter); collaborative learning based on class discussion on real-world cases fostering critical thinking and active participation; journal club format

## **Textbook and teaching resource**

Provided material

## **Semester**

2nd semester, April-June

## **Assessment method**

Student engagement during lectures and participation in the final discussion on the methodologies and related implications covered in the course, also based on data from scientific literature.

## **Office hours**

contact by email to [cristina.crocamo@unimib.it](mailto:cristina.crocamo@unimib.it)

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION | INDUSTRY, INNOVATION AND INFRASTRUCTURE

---

