UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Innovazione Digitale per la Salute

2425-3-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 the scientific literature.

Office hours

contact by email to cristina.crocamo@unimib.it

Sustainable Development Goals

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