



UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Prevenzione Sanitaria

2526-1-I0301D004

Aims

This integrated course aims to provide students with:

- knowledge and understanding of the historical evolution of medicine, fundamentals of health psychology, occupational risks, and the biological effects of ionizing radiation, with particular attention to prevention in healthcare settings;
- the ability to apply acquired knowledge to adopt safe and professional behavior in relation to patient management, communication, and radiation protection;
- independent judgment to analyze professional risk factors, ethical issues, and challenges related to healthcare communication and work organization;
- communication skills to effectively interact with patients and colleagues, including in complex situations, using appropriate technical language;
- learning skills to autonomously update their knowledge and competencies in the field of health promotion and clinical prevention.

Contents

The course is organized into multiple modules that provide students with a comprehensive foundation in cultural, scientific, and regulatory topics relevant to healthcare prevention. Covered topics include:

- the historical development of medicine;
- the prevention of occupational hazards;
- basic psychological principles in healthcare;
- biological effects and protection against ionizing radiation;
- essential principles of patient management in clinical practice, with module content tailored to each degree program.

Detailed program

HISTORY OF MEDICINE

Pre-Hippocratic medicine. The birth of rational medicine in the classical world (Hippocrates and his writings, Hellenistic medicine, medical sects, Galen). Medieval medicine (Salernitan Medical School, monastic medicine, Arabic medicine). Medicine and the Scientific Revolution (Vesalius, Harvey, iatrochemistry and iatromechanics). Medicine and society between the 18th and 19th centuries (Ramazzini, Enlightenment medicine, Frank, the use of statistics in medicine and the rise of epidemiology, the birth of public health). The 19th-century emergence of biomedicine and the major medical discoveries of the 1800s (anesthesia, antisepsis, the development of semiotics and clinical methods, synthetic drugs). The evolution of the concept of health in the 20th century (WHO and major international conferences, the rise of universal healthcare systems, the Italian National Health Service). The evolution of medicine in the 20th century (the pharmacological revolution, advances in surgery and transplantation, the rise of medical technologies).

OCCUPATIONAL MEDICINE

Introductory concepts of prevention. Classification of risk factors. Regulatory framework. Obligations and responsibilities within the prevention system. Characteristics, assessment, and management of risks in healthcare settings. Occupational risks for pregnant workers. Biological risk. Biomechanical overload. Occupational stress. Other workplace hazards.

PSYCHOLOGY

Psychology in healthcare settings. Thinking and reasoning: cognitive biases and diagnostic errors. The modern concept of health. Health communication.

RADIOBIOLOGY

The biological effects of radiation at the atomic, molecular, cellular, tissue, and clinical levels. Stochastic and deterministic effects. Basic concepts of radiopathology. Radiation-induced oncogenesis.

RADIATION PROTECTION

The doctrine of radiation protection. Methods and instruments for measuring radiation. Protection of workers: classifications, maximum permissible doses, radiation protection legislation. Environmental radiation protection. Management of radioactive waste. Estimation of patient doses.

PATIENT MANAGEMENT

Specific to each degree program.

Prerequisites

No prerequisites

Teaching form

Lectures and interactive sessions in person. Some modules include practical exercises.
Language of instruction: Italian.

Textbook and teaching resource

Cesana G, Riva MA. Medicina e Società. Firenze: Società Editrice Fiorentina, 2017

Bertazzi PA. Medicina del Lavoro. Milano: Raffaello Cortina Editore, 2013

Additional teaching materials will be provided by the lecturers of each module.

Semester

Year 1, Second semester

Assessment method

Written exam plus possible oral exam upon request of the teachers or the student.

The written test will consist of:

- multiple choice questions and open questions on Patient Management to check preparation on the exam program and to evaluate communication skills in a disciplinary context
- multiple choice questions on Radiation Protection to check preparation on the exam programme
- Radiobiology multiple choice questions to check preparation on the exam programme
- multiple choice questions on Occupational Medicine to check preparation on the exam programme
- multiple choice questions on the History of Medicine to check your preparation on the exam programme
- in-depth study of a scientific article (Monza) / 2 open questions (Bergamo) in Psychology to check preparation on the exam program and evaluate communication skills in a disciplinary context.

Office hours

By appointment, by contacting the lecturer of each module via email.

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING
