



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Sanità Pubblica - 1

2627-2-I0102D011-I0102D034M-T1

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#### Aims

The student will know the principles on which public health is based and how to prevent, promote and protect health.

They will know the main factors influencing health (determinants of health) and the epidemiological methodologies applied in Public Health to study these factors and the impact of interventions to reduce their negative or improve their positive effect. They will know the principles, issues and major interventions related to prevention of communicable diseases and the epidemiology and prevention of chronic diseases and their major risk factors.

#### Contents

The course provides to the student the foundations of public health and health education.

At the end of the course, students will develop a basic understanding of the main determinants of population health and epidemiological research methods for analysing these determinants.

#### Detailed program

\*\*1. Fundamentals of Public Health and Global Health

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Introduction to Public Health:

- Definition, history and scope of public health.
- The evolution of the concept of health and disease:
- Moving beyond the classical biomedical model: health as bio-psycho-social well-being (World Health Organisation)

- Demographic and Epidemiological Transition

Determinants of Health:

- Categories of determinants: behavioural, biological, environmental and socio-economic.

## **\*\*2. Principles, Concepts and Tools of Epidemiology**

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Introduction to epidemiology:

- Definition, objectives and scope of epidemiology (descriptive, analytical, experimental).
- Measures of frequency in epidemiology:
- Prevalence: definition, calculation (point prevalence and period prevalence) and factors influencing it.
- Incidence: definition, calculation (cumulative incidence and incidence rate) and relationship with prevalence

Design and types of epidemiological studies:

- Descriptive observational studies: case reports, case series, cross-sectional or prevalence studies, and ecological (correlational) studies.
- Analytical observational studies: case-control studies and cohort studies
- Experimental (or intervention) studies: randomised controlled trials (RCTs). Concepts of blinding (single-blind, double-blind) and randomisation.
- Evidence synthesis studies: systematic reviews of the literature and meta-analyses

Measures of association and effect:

- The concept of a risk factor
- Measures of effect: ABSOLUTE RISK, ATTRIBUTABLE RISK (or difference between risks), RELATIVE RISK (or ratio of risks), ATTRIBUTABLE RISK IN THE POPULATION, ATTRIBUTABLE FRACTION IN THE POPULATION and the ODDS RATIO.

## **\*\*3. Prevention Strategies and Tools in Public Health**

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Prevention in Public Health:

- Definition of prevention and general objectives (eradication, elimination, control of diseases).
- Primary prevention (e.g. vaccines)
- Secondary prevention (e.g. screening)
- Tertiary prevention

## **Prerequisites**

None

## **Teaching form**

8 hours of Lectures and 4 hours of interactive lessons with practice exercises and group work.

## **Textbook and teaching resource**

Ministero della Salute, 2006, Screening oncologici: Raccomandazioni per la pianificazione e l'esecuzione degli screening di popolazione per la prevenzione del cancro della mammella, del cancro della cervice uterina e del cancro del colon retto.

N. Comodo, G.Maciocco. Igiene e Sanità Pubblica – Nuova edizione – 2011- Carocci Faber

Pontello M, Auxilia F. Igiene, medicina preventiva e salute globale. Piccin 2022

Signorelli C (editor). Igiene e Sanità Pubblica. SEU, Roma, 2017

*Detailed information on teaching materials will be published on the e-learning page associated with the course.*

## **Semester**

Il semester

## **Assessment method**

Written exam with multiple choice test with only one correct answer and one exercise.

At the end of the TEST there is a discussion discussion focused on the written paper and all the course topics. of the course, which may lead to a maximum increase of 3 points or a decrease in the mark obtained in the written examination.

There are no examinations in progress.

## **Office hours**

On appointment

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING | REDUCED INEQUALITIES

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