



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Public Health

2425-4-H4102D059-H4102D115M

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#### Aims

The aim of the course is to provide students with principles, concepts and methods of public health. In detail:

- to describe the fundamentals of public health.
- to describe the analytical method used in public health, that is epidemiology, and how its results are implemented in health promotion, protection and prevention strategies.
- to provide the tools to compute the main frequency measures that describe the health of a population, and to comment on them critically.
- to provide the tools to compute the main measures of association that describe the interplay between health and its determinants, and to comment on such measures critically.

#### Contents

After an introduction to fundamental concepts of public health, the course will focus on the use of epidemiology as an analytical method to describe the health of a population and its drivers.

Both descriptive and analytical epidemiology will be reviewed, describing the main measures of frequency and association, and their application in real life.

#### Detailed program

##### Introduction

- Basic concepts of public health, with the comparison of medicine and public health perspective.
- Definition of epidemiology.

- Focus on frameworks to describe determinants of health.
- Identification of key concepts of a study.

### **Descriptive epidemiology**

- Definition and aims.
- Definition and computation of prevalence (point and period).
- Definition and computation of incidence (risk and rate).
- Rate standardization and its use to compare different settings.
- The epidemiologic transition.

### **Analytical epidemiology**

- Definition and aims.
- Review of the most common study designs.
- Focus on cohort studies, with definition and computation of relative risk and incidence rate ratio.
- Focus on case-control studies, with definition and computation of the odds ratio.

Easy practical exercises will be included in the lessons, with the aim of solidifying the concepts. The discussion of a final group assignment, focused on a current public health issue, will conclude the course.

### **Prerequisites**

No prerequisites are required.

### **Teaching form**

The course will be held in English and all activities will be held in presence. Lessons will be characterized as follows:

- 4 lessons of 2 hours with a first lecture part, followed by an interactive part with exercises related to concepts explained during the first part;
- 1 interactive lesson of 2 hours, where students will discuss the results of a brief group work that they carried out autonomously.

### **Textbook and teaching resource**

- Slides
- Textbook. Introduction to Epidemiology, Ilona Carneiro, Natasha Howard. McGraw-Hill Education, 2011. Available as an e-book in the UNIMIB online library.
- Other teaching resources that will be made available on the e-learning platform.

### **Semester**

Second semester

## **Assessment method**

Written exam, including:

- Multiple choice questions, with the aim of testing the overall competence acquired on the program
- Open questions to test the skills of critical appraisals regarding the key concepts of the program.
- Exercises to evaluate the acquisition of the basic mathematical concepts of the course.

Optional oral exam, with the discussion of the written exam.

## **Office hours**

Upon request, via e-mail.

## **Sustainable Development Goals**

GOOD HEALTH AND WELL-BEING

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