UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

SYLLABUS DEL CORSO

Public Health

2627-4-H4102D059-H4102D115M

Aims

The aim of the course is to provide students with the fundamental knowledge of the principles, concepts, and methods of public health, as well as to enable them to independently understand and critically interpret the scientific evidence that characterizes this field.

Knowledge and Understanding
By the end of the course, students will be familiar with:

- the fundamental principles of public health;
- the scientific method used in public health, namely epidemiology;
- the main measures used to describe the health status of a population (measures of frequency);
- the main measures used to describe the relationship between health and its determinants (measures of association).

Applying Knowledge and Understanding
Students will be able to apply the knowledge they have acquired to calculate measures of frequency and of association.
They will also develop the ability to understand and critically interpret the scientific evidence available in the literature, as well as evidence published by institutions of recognized scientific authority in the field of public health.

Making Judgements
Through collaborative group work, students will develop the ability to gather evidence on public health topics, assess its scientific validity, and synthesize it by identifying its strengths and limitations.

Communication Skills
Through structured discussions, students will develop the ability to use the knowledge they have acquired to engage in informed discussions on public health topics.

Learning Skills

The blended teaching approach, which combines lectures with active learning activities based on students' independent study of the concepts introduced during lectures, will enable them to achieve more effective learning.

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

Being a 4th year student in the course of "Medicine and Surgery"

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 | QUALITY EDUCATION