UNIVERSITÀ
DEGLI STUDI DI MILANO-BICOCCA

COURSE SYLLABUS

2526-2-F8203B057-F8203B057-1

Learning objectives

The course aims to provide the basic concepts and the tools for the planning and the statistical interpretation of an epidemiological study aimed to an IRCCS questions. The IRCCS will furnish real data to answer to clinical questions. At the end of the course students should be able to properly write th research protocol, to orient oneself between different designs and to provide a statistical contribution to the writing of a research report. For some topics are planned practical exercises conducted mainly with language SAS.

Knowledge and understanding

This course will provide knowledge and understanding related to:

-Epidemiological reasoning
-How to design an epidemiological study
-How to aplly the traditional analysis in an epidemiological study

Applying knowledge and understanding

By the end of the course, students will be able to:

-Critically read the results of a epidemiological study
-Correctly analyze real data
-Interpret summary measures using concise and technical language

Contents

The protocol of an epidemiological research

Main approches to analize data from an epidemiological study

Development of a project to answer IRCCS clinical questions

Detailed program

The main epidemiological measures of frequency
The main epidemiological measures of association
Confounding and effect modification
Matching
Logistic regression
Extension of logistic regression: conditional logistic regression
Extension of logistic regression: ordinal logistic regression
Development of a project to answer clinical research questions at the IRCCS

Prerequisites

No formal prerequisites

Teaching methods

Lectures and computer lab classes on real data

Assessment methods

Final test mode for attending and non attending students

The final test will consist of a first moment in which the working groups will present a short seminar of the practical activity carried out organized as a scientific article: introduction to the problem, materials and methods used, main results, discussion and conclusions. The vote attributed to the seminar will summarize the students' organizational and communication skills as well as the clarity of exposition and the correctness of the statistical methodologies used and the conclusions drawn from the analyzes. Morevoer, questions will also be asked to each member of the group to further assess their individual contribution to the work carried out.
For non-attending students, limited datasets and a specific research question will be provided by the instructor. Please contact the instructor to define the details.

Textbooks and Reading Materials

Students attending and non attending the course

Slides from http://elearning.unimib.it/. Other material will be provided by the teacher

Semester

II semester, I period (from march to may).

Teaching language

The language of the course is the Italian. The work for the seminar (bibliographic research, research of data form national or international sites, etc) are in English language

Sustainable Development Goals

GOOD HEALTH AND WELL-BEING | QUALITY EDUCATION