



UNIVERSITÀ  
DEGLI STUDI DI MILANO-BICOCCA

## SYLLABUS DEL CORSO

### Quantitative Approach to Biomedical Research

2425-1002-01

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#### Aims

To introduce the fundamental principles and approaches of statistics in biomedical research.

#### Contents

Welcome and introduction – 2h Maria Grazia Valsecchi  
Taxonomy of the studies – 2h Maria Grazia Valsecchi  
Descriptive statistics – 6h Marika Vezzoli  
Introduction to R – 4h Davide Bernasconi  
Probability, sensitivity, specificity and ROC curve – 6h Laura Antolini  
Statistical Distribution Functions – 4h Alessandra Carobbio  
Inference: hypothesis testing & confidence interval – 4h Maria Grazia Valsecchi + 2h Marika Vezzoli  
Variable transformation – 2h Stefania Galimberti

#### Detailed program

#### Prerequisites

#### Teaching form

## **Textbook and teaching resource**

### **Semester**

April 5th 17.00-19.00 Maria Grazia Valsecchi - STREAMING  
April 6th 9.00-11.00 Maria Grazia Valsecchi - PRE-RECORDED VIDEO  
April 6th 11.00-13.00 Marika Vezzoli - STREAMING  
April 8th 17.00-19.00 Davide Bernasconi - PRE-RECORDED VIDEO  
April 10th 17.00-19.00 Marika Vezzoli - STREAMING  
April 12th 17.00-19.00 Marika Vezzoli - STREAMING  
April 13th 9.00-11.00 Davide Bernasconi - STREAMING  
April 13th 11.00-13.00 Laura Antolini - PRE-RECORDED VIDEO (part 1)  
April 15th 17.00-19.00 Laura Antolini - PRE-RECORDED VIDEO (part 2)  
April 17th 17.00-19.00 Laura Antolini - STREAMING  
April 19th 17.00-19.00 Alessandra Carobbio - PRE-RECORDED VIDEO  
April 20th 9.00-11.00 Marika Vezzoli - PRE-RECORDED VIDEO  
April 20th 11.00-13.00 Alessandra Carobbio - PRE-RECORDED VIDEO (11.00-12.00) + STREAMING (12.00-13.00)  
April 22nd 17.00-19.00 Maria Grazia Valsecchi - STREAMING  
April 24th 17.00-19.00 Maria Grazia Valsecchi - PRE-RECORDED VIDEO  
May 3rd 17.00-19.00 Stefania Galimberti - PRE-RECORDED VIDEO

**COURSE EVALUATION:** June 7th 17.00-19.00

### **Assessment method**

Individual assignment - Multiple choice questions

### **Office hours**

### **Sustainable Development Goals**

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