

# Biostatistics

V. Inácio de Carvalho & M. de Carvalho

University of Edinburgh



# Housekeeping

## Announcements

↪ **Instructor:** Miguel de Carvalho (Miguel.deCarvalho@ed.ac.uk)

↪ **Assessment:** 1 individual assignment (50%) + 1 exam (50%).

↪ **Important dates:**

Assignment submission: 29 Nov. 2024 (noon). **E-mail** Miguel.deCarvalho@ed.ac.uk. Re: Biostatistics

Exam: 7 Dec. 2024 (10–12 pm): *Departamento de Química e Bioquímica, sala 1.01*

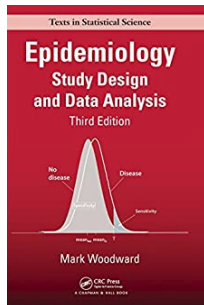
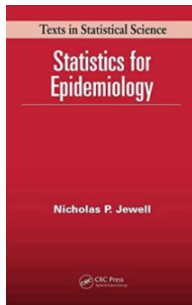
Resit exam: 13 Dec. 2024 (5:30 pm)

### Remarks:

- Students can only improve their exam grade (and not the coursework grade).
- The coursework grade can only be used by those who achieved  $\geq 30\%$  in the Exam.
- Coursework grade remains valid for the resit exam (and it cannot be improved).
- The exam will consist 10 multiple-choice questions. We will deduct 0.5 points for every pair of wrong answers. You may bring two pages of personal notes to the exam.

# Bibliography

Covers from [amazon.co.uk](http://amazon.co.uk)



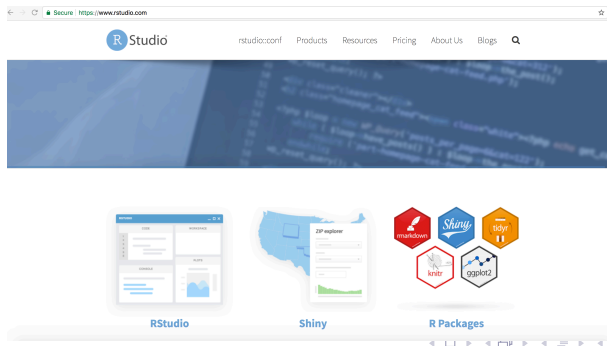
# Software

→ We will use R in this course.



Image from [www.r-project.org](http://www.r-project.org)

→ Rstudio is a nice and useful interface.



# Scope

- ↪ We will study a variety of concepts and techniques used in biomedical and epidemiological research.
- ↪ Topics to be covered may include:
  - 1 Measures of disease occurrence and of disease-exposure association.
  - 2 Study designs.
  - 3 Estimation and inference for measures of association.
  - 4 Causal inference, confounding, and interaction.
  - 5 Unconditional and conditional logistic regression.
  - 6 Analysis of survival data.
  - 7 Diagnostic testing (if time permits).

