

Statistics teaching within UK degree programmes in Medicine and allied health sciences, including through undergraduate and postgraduate entry schemes and intercalation

Note. This particular form is not for inclusion of details of statistical teaching in Masters and PhD programmes.

Institution: University of Aberdeen

Overview:

Statistics teaching by the Medical Statistics team focuses on postgraduate taught and PhD students.

We run one course for undergraduate medical students, delivered between 3rd and 4th year medicine. This is what is detailed below.

Type of students:

Medical Dental Biology

Mathematics Other (please state:)

Estimated total number of students: 200

Academic years where medical statistics is taught: 3rd/4th

No. of estimated hours per academic year: 8

Please add fields to the table below, where necessary, to reflect missing subjects. This can easily be achieved by right-clicking in the last row and choosing the option 'insert' to insert individual rows. You can in turn copy-paste the content from an existing row and edit the subject name to suit your purposes.

| Subject | Concept | Calculations/equations* | Descriptions/comments |
|--------------------|-------------------------------------|-------------------------------------|-----------------------|
| Types of variable | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Distributions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Normal, binomial |
| Summary Statistics | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

| | | | |
|-----------------------------------|-------------------------------------|-------------------------------------|---|
| Concepts of population and sample | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Use RSS penguin task as activity, sampling variation |
| Confidence intervals | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Hypothesis testing, p-values | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Comparing two means | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Do live t-test, by randomly assigning 20 students to two groups and using playing cards as change in bp |
| Comparing two proportions | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Linear regression | <input type="checkbox"/> | <input type="checkbox"/> | |
| Logistic regression | <input type="checkbox"/> | <input type="checkbox"/> | |
| Graphs | <input type="checkbox"/> | <input type="checkbox"/> | |
| Survival analysis | <input type="checkbox"/> | <input type="checkbox"/> | |
| Multivariate analysis | <input type="checkbox"/> | <input type="checkbox"/> | |
| Critical appraisal | <input checked="" type="checkbox"/> | <input type="checkbox"/> | |
| Probability | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Simple examples, multiplication rule |
| Standard Normal and z-scores | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| ANOVA | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Non-parametric tests | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Chi-squared tests | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| Relative risks and odds ratios | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |

*If applicable.

Assessment details: **Multiple choice exam – assesses definitions (e.g. what is p-value), concepts and students are given several results / baseline tables from real publications. The questions test their interpretation and understanding of the results.**

Computer package used:

Stata SPSS StatsDirect S-plus R
 NCSS Matlab Other , please state which : NONE

Recommended literature :

Medical Statistics at a Glance – A Petrie & C Sabin

Contact - administration

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Contact - tutors

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Other comments:

Information last up to date: 07/08/2019

Please return to Margaret MacDougall at Margaret.MacDougall@ed.ac.uk