Statistical issues in the design and analysis of research projects: a CPD course

Course overview

This three-day course will give delegates an excellent grounding in the basics of statistics. It looks at the most commonly used study designs in biomedical health research, giving the background to the theory but also teaching participants how to apply their knowledge practically and interpret their results.

Who should attend? Is it right for me?

This course is aimed at anyone who requires a basic understanding of statistical techniques.

What is the course schedule?

This course runs online. The lecture videos will be available online and can be watched at any time (from 2 weeks before to 2 weeks after the course is scheduled to take place). A suggested timetable is given in the table below, which highlights the live sessions provided for participants to ask questions. Practical materials can be worked through at the participants' own pace, but opportunities are scheduled for afternoon sessions where questions can be asked about the practical material.

What will delegates learn?

By the end of this course participants will have an understanding of:

- Have an appreciation of variability and types of data - populations, sampling and confidence intervals
- Have a basic understanding of the concepts behind multiple regression analysis, logistic regression and survival analysis
- Have an understanding of SPSS standard statistical software

What does the course cover?

- Variability and types of data
- Populations, sampling and confidence intervals
- Hypothesis testing
- Overview of study design
- Regression and correlation
- Multiple linear regression and an introduction to logistic regression and survival analysis
- Data analysis using SPSS software

Timetable

Date	Session
Day 1 9:30-10:30	Lecture 1: Data Types and Study Design **(recorded video)**
Day 1 10:30-11:30	Lecture 2: Confidence Intervals **(recorded video)**
Day 1 11:45-12:00	**Live Q&A**
Day 1 12:00-13:00	Lunch
Day 1 13:00-14:30	Lecture 3: Hypothesis Tests **(recorded video)**
Day 1 14:30-14:45	**Live Q&A**
Day 2 10:00-11:30	Lecture 4: Correlation and Simple Regression **(recorded video)**
Day 2 11:30-11:45	**Live Q&A**
Day 2 11:45-13:00	Lunch
Day 2 13:00-15:00	**Live SPSS Practical**
Day 3 10:00-11:30	Lecture 5: Multiple Regression **(recorded video)**
Day 3 11:30-11:45	**Live Q&A**
Day 3 11:45-13:00	Lunch
Day 3 13:00-15:00	**Live SPSS Practical**

To find out more

Contact Dr David Hughes (dmhughes@liverpool.ac.uk) in the Department of Health Data Science.

Alternatively, visit the department's website at

https://www.liverpool.ac.uk/population-health/about/health-data-science/courses-and-workshops/.