

INTRODUCTORY MEDICAL STATISTICS COURSE

Venue: National Heart and Lung Institute,
Guy Scadding Building, Dovehouse Street, London SW3 6LY

SAMPLE PROGRAMME

Date & time	Lecture title	Summary points covered	Presenter(s)
Day 1			
09.00 - 09.15	Registration and coffee		
09.15 - 10.30	Introduction to the research process: designing studies	<ul style="list-style-type: none"> - <i>experimental and observational study designs</i> - <i>confounding, power, multiple testing</i> 	Paul Cullinan Professor in Occupational and Environmental Respiratory Disease, National Heart and Lung Institute (NHLI)
10.30 - 11.30	Descriptive statistics	<ul style="list-style-type: none"> - <i>means, medians, standard deviation</i> - <i>confidence intervals</i> 	Winston Banya Medical Statistician, Royal Brompton and Harefield NHS Trust
11.30 - 11.45	<i>Tea</i>		
11.45 - 12.15	Introduction to statistical testing	<ul style="list-style-type: none"> - <i>hypothesis testing</i> - <i>“statistical significance”</i> 	Susie Upchurch Medical Statistician, NHLI
12.15 - 1.00pm	Statistical testing 1: continuous data	<ul style="list-style-type: none"> - <i>t-tests</i> - <i>non-parametric tests</i> 	Jessica Harris Lecturer and Medical Statistician, NHLI
1.00 - 2.00	<i>Lunch break</i>		
2.00 - 3.45	Statistical testing 2: continuous data	<ul style="list-style-type: none"> - <i>ANOVA, correlation</i> - <i>agreement</i> 	Jessica Harris
3.45 - 4.00	<i>Tea</i>		
4.00 - 5.00	Statistical testing 3: categorical data	<ul style="list-style-type: none"> - <i>chi-squared test</i> - <i>non-parametric tests</i> 	Susie Upchurch

Day 2			
09.00 - 09.15	Registration, coffee and selection of afternoon paper critique		
09.15 - 10.15	Data analysis demonstration	<ul style="list-style-type: none"> - <i>demonstration of topics covered on previous day</i> 	Stephanie MacNeill Medical Statistician, NHLI
10.15 - 11.15	Power and sample size	<ul style="list-style-type: none"> - <i>numbers needed to detect an effect</i> 	Susie Upchurch
11.15 - 11.30	<i>Tea</i>		
11.30 - 1.05	Interpretation of regression models 1	<ul style="list-style-type: none"> - <i>linear regression models</i> 	Stephanie MacNeill
1.05 - 2.05	<i>Lunch break</i>		
2.05 - 3.30	Interpretation of regression models 2	<ul style="list-style-type: none"> - <i>logistic regression models</i> - <i>survival analysis</i> 	Stephanie MacNeill
3.30 - 5.00	Discussion groups: group exercise and paper critique	<ul style="list-style-type: none"> - <i>study design, statistical analysis</i> - <i>interpretation</i> 	Winston Banya, Jessica Harris, Stephanie MacNeill, Susie Upchurch

**This course is run on different dates for
(a) internal (NHLI and RBHT) staff and students, and (b) external candidates.**

Accreditation:

- a. *NHLI and RBHT candidates* – Accredited by Imperial College’s Academic Training Committee as a recognised ‘B’ equivalent course on the GLSM (Graduate School of Life Sciences and Medicine) Transferable Skills Programme
- b. *External candidates* - CPD (Royal College of Physicians): 12 non-clinical points