

Quantitative Genetics & Genome Analysis Masters Programmes



Human Complex Trait Genetics Teaching Schedule 2017 - Semester 2, blocks 3 & 4 (Wednesday afternoons)

Theme	14.00-15.00	15.00-16.00	16.00-17.00
1: The structure of human variation. Population structuring of variation, human population diversity, and linkage disequilibrium.	Pippa Thomson (Tutorial)	Jim Wilson	
2: Introduction to complex traits and how to identify a disorder with a genetic component. Introduction to UK Biobank: a national & international health resource	Pippa Thomson		Cathie Sudlow
3: Genetics of Colorectal Cancer. Bioinformatics: Ensembl	Susan Farrington	Philippe Gautier (Ensembl)	
4: Intro to linkage and association. Linkage analysis I: Quantitative traits.	Pippa Thomson	Veronique Vitart	
5: Linkage analysis II: Genetic disorders. Diagnosis, liability classes, penetrance, heterogeneity. Strategies for late-onset diseases.	Pippa Thomson	Pippa Thomson (Practical)	
6: Association studies – design, confounders, familial versus sporadic, endophenotypes.	Caroline Hayward	Kathy Evans (Practical)	
7: Genome-wide association studies of quantitative traits – in healthy populations and in the context of disease, regional/genome-wide prediction.	Sarah Harris	TBC	Andrew McIntosh
8: Genome-wide association studies of genetic disorders (case:control) – identifying genes for complex genetic disorders, computational and bioinformatic tools.	Gail Davies	Gail Davies (Practical)	
9: Animal models I: Modelling disease, gene effects and gene-environment interaction. Introduction to Machine Learning.	Kirsty Millar	Kristin Nicodemus	
10: Animal models II: Cancer. ENU mutagenesis, finding genes and modifiers. Transcriptomics and proteomics – high throughput methodologies, Epistasis, gene expression, protein interactions, pathway analysis.	Sally Cross	Pippa Thomson (Practical)	