PROFESSIONAL CERTIFICATE IN BIOINFORMATICS

WHEN

24th July – 4th August 2017

The course will take place directly after ISAG 2017 (the 36th International Society for Animal Genetics Conference), which will be running at UCD from 17th to 21st July 2017.

WHERE

University College Dublin

School of Veterinary Medicine

Belfield Campus, Dublin 4, Ireland

APPLY BY · 12th May 2017

COST · €1500

OUTLINE

Basic scripting

Introduction to next-generation sequencing

Protein structure modelling and analysis

Molecular evolution and phylogenetics

Network biology

SNP data and use in GWAS

Biostatistics in R

Entry Requirements

Undergraduate degree in Agriculture, Life Sciences or Veterinary Medicine.

Contact: Irene.ward@ucd.ie

PROGRAMME OF TOPICS

Genome structure, sequencing, assembly and annotation

Next-generation sequencing

LINUX/UNIX

Biostatistics and exploratory data analysis in R

Intro to evolutionary selection

Population genomics

Genome Wide Association Studies (GWAS)

Scripting for evolutionary simulation

Population genetics, drift and selection

Refining evolution Sims

Tree-thinking/Darwin's big idea

Phylogenetics

Network biology—Theory and Cytoscape

Metabolic modelling/FBA

Protein structure prediction