**Genomics Approaches Masterclass 2023**

*Optional – Masterclasses Set 3*

**Workshop leader**: **Dr Nathan Medd (Edinburgh Genomics)**

**Date**: 18 January 2023, 10:30-15:30

**Location:** Edinburgh, **Lister Learning and Teaching Centre room 1.2** (<https://www.accessable.co.uk/the-university-of-edinburgh/central-area/access-guides/lister-learning-and-teaching-centre>) with **catering** hosted in the **Ochil Room** at Charles Stewart House (<https://www.accessable.co.uk/the-university-of-edinburgh/central-area/access-guides/charles-stewart-house>).

**Workshop description:**

The aim of this masterclass is to introduce the students to the concepts involved in genomics, including sequencing technologies, genomic data analysis, and interesting applications. The masterclass will be run by a group of professional bio-informaticians from Edinburgh Genomics and the University of Edinburgh who have extensive experience in analysing large genomic datasets.

**Learning outcomes**:

On completion of the course, the students will be able to:

 • Discuss the pros and cons of current sequencing technologies

 • Understand the concepts and methods behind:

* Genome re-sequencing and variant calling
* Functional genomics
* Genome assembly
* Bioinformatics system management

|  |  |
| --- | --- |
| 10:30 | *Welcome, set up and introductions* |
| 11:00 | **Dr Nathan Medd,** Training Manager, Edinburgh Genomics | Intro: What is genomics? |
| 12:00 | Lunch |   |
| 12:45 | **Dr Javier Santa Lopez,** Head of Facility, Edinburgh Genomics | Advances in Genomic Technologies |
| 13:45 | **Dr Alex Twyford,** IEB, University of Edinburgh | Case Study: The Genomics of Parasitic Plants |
| 14:30 | **Dr Nathan Medd & Tim Booth,** Edinburgh Genomics | Introduction to command line computing (demo) |
| 15:30 | Discussion and Close |  |

**Participation requirements: None**

**Training web-page:** <http://www.eastscotbiodtp.ac.uk/foundation-masterclasses>

For **further info**, please email enquiries@eastscotbiodtp.ac.uk