

|            |       | Day 1 - Thursday   | Day 2 - Friday                                       | Day 3 - Saturday  |   | Day 4 - Monday  | Day 5 - Tuesday |  |  |  |
|------------|-------|--|--|---|---|---|-----------------|--|--|--|
|            | 08:30 | Arrival  | Arrival  | Arrival   |   | Arrival   | Arrival         |  |  |  |
| AM 1       | 09:00 | Introductions - ARTIC, Instructors & participants                                  | Overview of next steps in lab protocol               | Demo/showcase of ONT flow cells, MinION, MinKNOW, EPI2ME                                    | Intro to phylogenetics and phylodynamics  | Recap of the week   |                 |  |  |  |
|            | 09:30 | Introduction to course, course overview  | Theory of SPRI, EP, barcoding                        |   |   |   |                 |  |  |  |
|            | 10:00 |  | Real world data talk                                 | Computational analysis wrap up and Discussion   |   |   |                 |  |  |  |
| Break      | 10:40 |  |  |   |   |   |                 |  |  |  |
| AM 2       | 11:00 | Introduction to genomic epidemiology   | Intro to lab in a suitcase                           | Lab session 4 (adapter ligation, cleanup, library prep, flow cell checks, priming, loading) | Overview of ARTIC bioinformatics (fieldbioinformatics, Amplicon-nf, other tools)              | Discussion session 1: Result interpretation, deriving actionable epidemiological insights, conducting phylogenetic analyses |                 |  |  |  |
|            | 11:30 |  | Lab session 2 (PCR pooling, cleanup, quantification) |   |   |   |                 |  |  |  |
|            | 12:00 | Intro to nanopore sequencing and ARTIC protocol overview                           |  |   | Computational session 1 (Running amplicon-nf)   |   |                 |  |  |  |
|            | 12:30 |  |  |   |   |   |                 |  |  |  |
| Lunch      | 13:00 |  |  |   |   |   |                 |  |  |  |
|            | 13:30 |  |  |   |   |   |                 |  |  |  |
| PM 1       | 14:00 | Principles of safe sample handling, H&S, extraction of viral nucleic acids, RT-PCR | Lab session 3 (EP, Barcoding, cleanup)               | Lab session 4 cont'd  | Computational session 2 (going through results, SNP calling, building a tree, other analyses) | Discussion session 2: BEAST/Phylogenetics Demo  |                 |  |  |  |
|            | 14:30 |  |  |   |   |   |                 |  |  |  |
|            | 15:00 | Outbreak scenario overview   |  |   |   |   |                 |  |  |  |
| Break      | 15:40 |  |  |   |   |   |                 |  |  |  |
| PM 2       | 16:00 | Overview of week/Group allocation  | Lab session 3 cont'd                                 | Sequencing monitoring, RAMPART, diagnosing problems, laptop bootcamp                        | Computational session 2 cont'd  | Discussion session 3: use of genomic data for real time epidemiology  |                 |  |  |  |
|            | 16:30 | Lab session 1 (samples, samplesheet, multiplex PCR)                                |  |   |   |   |                 |  |  |  |
|            | 17:00 |  |  |   |   |   |                 |  |  |  |
|            | 17:30 |  |  |   |   | Wrap up, Certificates, and awards   |                 |  |  |  |
| End of day | 18:00 |  |  |   |   |   |                 |  |  |  |
|            | 18:30 |  |  |   |   |   |                 |  |  |  |
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