**Day 1 - Monday**

09:00-09:10 Welcome and Introduction: Aims and outline of the course

09:10-10:15 **Lecture:** Introduction to NGS and Metagenomics

10:15-10:35 Coffee break

10:35-12:00 **Practical session:** Illumina 16S amplicon generation: part1

12:00-13:00 Lunch break

13:00-14:45 **Practical session:** Illumina 16S amplicon generation: part2

14:45-15:05 Coffee break

15:05-15:45 **Lecture:** Short read sequencing technology

15:45-17:00 **Practical session:** Sequencing on Nextseq2000

**End of day 1**

**Day 2 - Tuesday**

09:00-10:00 **Lecture:** Introduction to long read sequencing

10:00-12:30 **Practical session:** Oxford Nanopore DNA Library preparation

12:30-13:30 Lunch break

13:30-15:30 **Practical session:** Set up and start of GridIONX5 sequencing run

15:30-15:50 Coffee Break

15:50-16:20 **Practical session:** Sequencing data QC in real time

16:20-17:15 FGCZ tour

**End of day 2**

**Day 3 - Wednesday**

10: 09:00-10:00 **Lecture:** Introduction to data analysis; format and QC of raw data

10:00-10:30 **Introduction to SUSHI**

10:30-11:00 Coffee break

11:00-11:30 **Practical:** Data QC

11:30 -12:15 **Lecture:** Introduction to 16S data analysis

12:15-13:15 Lunch

**13:15-14:00 ?**

14:00 -16:30 **Practical:** 16S data analysis with QIIME2 (including coffee break)

**End of day 3**

**Day 4 – Thursday**

09:1

08:15-10:15 **Project discussion**

10:15-11:00 “Avidity Sequencing on the AVITI System - Sequencing Reimagined”

Molly He, CEO of Element Biosciences

11.00-12.00 **Lecture:** Introduction to shotgun metagenomics and Metagenome Atlas

12.00-13.00 Lunch

**13:00-14:00 Guest talk: Dr. Silas Kieser**

**14:00-16:00 Practical:** Metagenomic data analysis with Metagenome Atlas Part 1

**End of day 4**

**Day 5 - Friday**

09:15-11:00 **Practical:** Metagenomic data analysis with Metagenome Atlas Part 2

11:00-12:00 **Lecture and Practical:** Assembly free approach to shotgun metagenomics

12:00-13:00 Lunch

13:00-14:00 **Guest talk: Dr. Jonas Grossmann**

14:00-15:00 **Lecture:** Introduction to metatranscriptomics

**15:00 – 15.15 Coffee break**

**15:15– 16.15** **Practical:** Metatranscriptomic data analysis with Samsa2

16:15-16:30 Course feedback

**End of course**