



CSP Training:

Hands-on Training in Illumina Next-Generation Sequencing and Bioinformatics

30 November – 11 December 2026, Addis Ababa, Ethiopia

Day	Theme	Key Practical Content	Primary Output
Day 1	NGS and One Health Genomics	CSP orientation, Illumina principles, biosafety/biosecurity, experimental design, sample and metadata planning	Baseline assessment and sequencing workflow plan
Day 2	Nucleic Acid Preparation and QC	DNA/RNA workflows, sample tracking, quality assessment, quantification, library preparation requirements	QC worksheet and library-ready samples
Day 3	Illumina Library Preparation	Library preparation, indexing, QC, quantification, normalization and pooling	Indexed and pooled Illumina libraries
Days 4-5	Illumina Sequencing	Run setup, flow-cell handling, run monitoring and troubleshooting	Sequencing run completed and documented
Day 6	Linux and Raw-Read QC	File management, FASTQ/FASTA handling, quality control, trimming and filtering	QC report and cleaned reads
Day 7	Mapping, Assembly and Validation	Reference mapping, de novo assembly, assembly quality assessment	Draft assemblies and assembly QC report
Day 8	Variant and Genomic Analysis	Variant calling, consensus generation, annotation, AMR analysis, data handling with Python/R	Genomic characterization results and summary tables
Day 9	Phylogenetics, Visualization and Interpretation	Sequence alignment, phylogenetic analysis, genomic epidemiology and result interpretation	Interpreted figures, phylogenetic trees and results summary
Day 10	Data Management, Repositories and Capstone	Data management, FAIR metadata, repository submission, integrated end-to-end analysis	Final analysis, submission-ready dataset and action plan