

Amplicon 16S 18S ITS Sequencing & QC — Hands-on

Develop end to end competence in marker gene (16S, 18S, ITS) amplicon workflows. You will design panels, plan barcoding and library prep, understand run layouts and apply rigorous QC to ensure reliable downstream taxonomic profiling and diversity analysis.

Amplicon 16S 18S ITS Sequencing and QC

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Session 1

Fee: Rs 8800 [Apply Now](#)

Marker Gene Panels & Primer Design

Marker gene basics for microbiome profiling

[16S rRNA bacterial panels](#) [ITS for fungi](#) [18S eukaryotic targets](#)

Hypervariable regions and coverage trade offs

[V1V2 / V3V4 / V4](#) [amplicon length vs platform](#)
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Primer design and in silico evaluation

[degenerate primers](#) [off target checks](#) [mock communities for validation](#)

Session 2

Fee: Rs 11800 Apply Now

DNA Extraction, PCR & Barcoding

DNA extraction strategies for diverse matrices

stool / swab / soil / water **mechanical and chemical lysis** **inhibitors and clean up**

PCR optimization and amplification bias control

cycle number and annealing **polymerase choice** **template input and inhibitors**

Indexing, barcoding and plate layouts

single vs dual index **index hopping awareness** **sample sheets and tracking**

Session 3

Fee: Rs 14800 Apply Now

Sequencing Layouts & Run Planning

Platforms, read structures and throughputs

MiSeq and NextSeq class **read length vs insert** **PhiX and run balance**

Multiplexing and lane / flow cell planning

expected depth per sample **pilot runs and optimization** **run level metadata**

File formats and run outputs

BCL to FASTQ **demultiplexing reports** **basic run QC summaries**

Session 4

Fee: Rs 18800 Apply Now

QC, Controls & Preprocessing

Read level QC and trimming strategies

Theory + guided practical

Chimera checks, control evaluation and run sign off

negative / positive controls **mock communities**
contamination flags

Deliverables: run QC pack and SOP bundle

QC reports and plots **library prep and sequencing**
SOPs **checklists for future runs**