

Microbiome Study Design & Sample Processing — Hands-on

Plan and execute end-to-end sampling for microbiome research across clinical, environmental, food, and aquaculture settings. You'll design studies, select sampling frames, implement contamination-aware collection and preservation, perform nucleic-acid extraction and QC, and prepare MIxS-ready metadata. Includes a mini pilot run to validate your workflow.

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Session 1

Fee: Rs 8800 [Apply Now](#)

Study Design & Sampling Strategy

Objectives, hypotheses & sampling frames

[clinical / soil / water / air](#) [spatial-temporal design](#)
[replicates & power](#)

Bias & contamination controls

[blanks / spikes](#) [randomization](#) [batching](#)

Ethics & permits

[consent & de-identification](#) [chain of custody](#)

Session 2

Fee: Rs 11800 Apply Now

Collection, Preservation & Cold Chain

Sampling methods by matrix

stool / swabs **soil / sediment** **water / air filters**

Preservation & transport

RNAlater / OMNIgene **dry ice / LN2** **stabilizers & time-to-freeze**

Field QA/QC & documentation

field blanks **labels & barcodes** **SOPs**

Session 3

Fee: Rs 14800 Apply Now

DNA/RNA Extraction & QC

Lysis & inhibitor removal

bead-beating **kit selection** **low biomass care**

Quality control metrics

A260/280 & A260/230 **Qubit / TapeStation** **process controls**

Amplicon vs shotgun readiness

amplicon targets **fragment size** **host DNA depletion**

Session 4

Fee: Rs 18800 Apply Now

MixS Metadata & Pilot Run

MixS checklists & sample sheets

FAIR & submission-ready

Randomization & barcoding plan

plate maps **index strategy** **batch tracking**

Pilot run & quick health-check

QIIME 2 / FastQC **read stats & controls** **go/no-go**
criteria