Genome Quality Assessment — Completeness & Contamination — Hands-on

Learn how to move from raw MAG bins to quality controlled, standards compliant genomes ready for downstream taxonomic and functional analysis. You will apply completeness and contamination metrics, interpret strain heterogeneity, assign quality tiers and generate clear QA reports aligned with community guidelines.

Genome Quality Assessment — Completeness & Contamination

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Session 1
Fee: Rs 8800   Apply Now
Concepts, Metrics & Community Standards

Why MAG quality assessment matters

link to downstream analyses   comparative genomics readiness   reusability and public archives

Key MAG QC metrics and interpretations

completeness and contamination   strain heterogeneity thinking   N50 and genome size context

Community standards and reporting guidelines

MIMAG style tiers minimum information for MAGs expectations for public submissions

Session 2
Fee: Rs 11800 Apply Now

Marker Sets, Tools & QA Workflows

Marker gene sets and lineage aware assessments

single copy marker concepts lineage specific marker panels limits of marker based QC

Toolchain for MAG quality assessment

concepts behind tools like CheckM BUSCO style thinking running at scale over bin sets

Designing reproducible QA workflows

workflow managers and scripting tracking versions and databases aggregating run outputs for review

Session 3
Fee: Rs 14800 Apply Now

MAG Tiering, Dereplication & Reporting

Assigning quality tiers to MAGs

high, medium and low quality rules near complete and draft genomes filters for downstream analyses

Dereplication and redundancy handling

ANI style similarity concepts cluster representatives building non redundant MAG sets

Summarizing QC in tables and dashboards

per MAG QC tables project level QC overviews flags

for manual review

Session 4
Fee: Rs 18800 Apply Now

Mini Capstone: MAG QA Pack & Methods Text

End to end QA on a MAG set

Theory plus guided practical

From raw tool outputs to curated QC reports

cleaned QC tables and plots tier assignments and justifications project specific QC thresholds

Deliverables: MAG QC pack and reusable methods block

summary spreadsheets and figures methods and parameter appendix templates for future projects