BioInfo Cloud
Where Science Meets Solutions

Course
Contents

Prepared by :
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Get Certified in Courses

1 A complete package of Bioinformatics

2 Applied Bioinformatics

3 Molecular Breeding Analytics

4 Research Data analysis and MS Writing

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6 Bioinformatics Programming Languages

7 AI in Bioinformatics

Get in touch!

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Key Activities

01
Workshops on different bioinformatics course in online and offline mode

02
Hands on training program

03
Customized Data Analysis

04
Research Consultant

BioInfo Cloud

Why to choose Bioinfo Cloud?

Cost Effectiveness	On Job Practical Training
Quality Learning	Certified Institution
Experienced Teachers	Theoretical + Hands on

Course
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Molecular breeding analytics

This course provides a comprehensive understanding of molecular breeding techniques and data analysis, equipping you with the knowledge and tools needed to enhance breeding programs through genetic insights.

Molecular Breeding Analytics Course Overview:

- **Basic Concept of Molecular Marker and QTL Mapping:** A brief overview of QTL mapping, linkage disequilibrium (LD) analysis, and linkage analysis, Understand the process of QTL mapping to locate regions of the genome linked to quantitative traits.

- **Various Molecular Diversity Analysis:** Explore techniques to assess genetic variation within and between populations using molecular markers. This includes cluster analysis, principal component analysis (PCA), and structure analysis.

Molecular breeding analytics

- **Molecular Marker Data Handling:** Master the skills for collecting, storing, and preprocessing molecular marker data. Learn quality control measures like checking for missing data, minor allele frequency, and Hardy-Weinberg equilibrium.

- **SNP Data Analysis:** Gain proficiency in identifying and analyzing Single Nucleotide Polymorphisms (SNPs), including SNP calling, filtering, and annotation.

- **Genome-Wide Association Studies (GWAS) with TASSEL and GAPIT in R:** Conduct GWAS to associate genetic variations with traits using TASSEL software and the GAPIT R package. Learn to scan genomes for SNPs and relate them to phenotypic traits.

- **Haplotype Analysis:** Understand haplotypes and their analysis to study genetic structure and evolutionary history.

Molecular breeding analytics

- **Basics of R and Data Analysis:** Develop foundational skills in R programming, focusing on data manipulation, statistical analysis, and visualization.

- **Data Representation and Interpretation:** Learn to present data clearly using tables, graphs, and charts. Develop skills to interpret results effectively for meaningful conclusions and decisions.