Topics

- Genome sequencing and assembly
- Haplotypes and Diploid assembly
- BLAST algorithm and sequence alignment
- Hidden Markov Models
- Suffix Trees in Linear Time
- Burrows-Wheeler transform
- Karlin-Althuler statistical theory of local alignment.

Algorithmic Foundations of Computational Biology

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Course Work
- Coding assignments for students with coding background
- Alternative assignments for students with non-coding background

Requirements
- Advanced Undergraduate Course
- Strong background in Mathematics from CS, ENGN, APMA, etc.