

## Week 8 Sequencing Genomes

**Learning Goal:** Appreciate how entire genomes can be sequenced and analyzed

After completing the pre-class assignments, students will be able to:

- Define the terms genome, genome sequencing, sequence assembly, and genome annotation
- Describe the process of sequencing used to generate genome sequences
- Differentiate between small-scale and large-scale genome mutations

After completing the in-class activities, students should be able to:

- Describe how genomics can be used in cancer research
- Assemble sequencing read data based on a reference genome
- Evaluate data from short-read based genome-wide measurements to detect small-scale and large-scale genome mutations
- Interpret circle diagrams of DNA sequence data