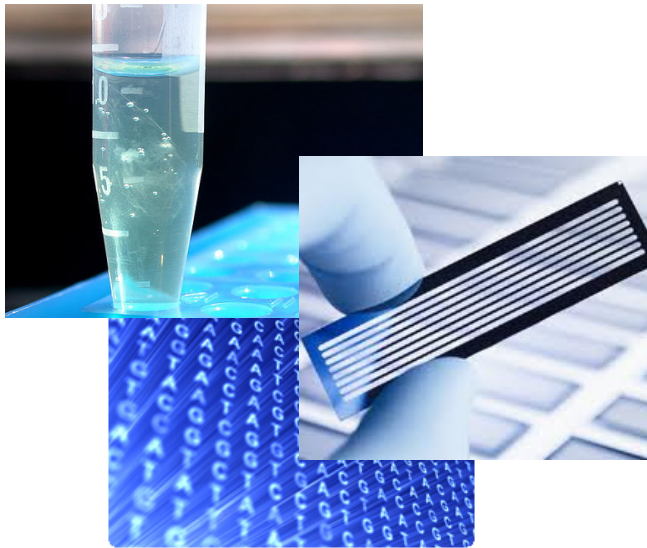




Overview:

- Train and educate students how to choose and utilize high-throughput sequencing platforms
- Students will construct RNA, DNA, and amplicon sequencing libraries and gain experience adapting protocols for specific project needs



Lectures:

1. Principles of high throughput sequencing and how various platforms work.
2. Applications: eQTL, Metagenomics, RNAseq, ChIPseq, Expression analysis, smRNA Genotyping by Sequencing, SNP detection, Whole genome sequencing and more!
3. Data types, Interpretation, and Bioinformatics Intro
4. Future of Genomics/Bioethics

Labs:

1. Prepare RNA, DNA, and amplicon libraries using Illumina and Proton platforms
2. Students with demonstrated high quality material can use their own samples!
3. Assess special considerations for complicated project designs
4. Data – what you get and how to prepare for it