

## **Introduction of Next Generation Sequencing Application and Analysis**

Next-generation sequencing (NGS) is a massively parallel sequencing technology that can produce an enormous volume of sequences with ultra-high speed, provides many possible applications in research and diagnostic settings. Processing of next-generation sequencing (NGS) data for downstream applications is a critical part of the NGS workflow since it has a direct impact on data interpretation and experimental conclusions. In this class, firstly, we will give a brief introduction of different NGS platforms, and associated applications. Secondly, we will provide an overview of the NGS data analysis workflows for RNAseq, CHIPseq and single cell RNAseq using Illumina platforms.