

NUS SOC Summer Workshop 2021

Algorithm, Cloud & Security

Non-invasive Pre-Natal Testing by Cell-Free DNA Screening Course Information

Learning content and Teaching

🤖 What will be covered during “trial” lectures?

- 1.5 hour: Introduction to next generation sequencing and non-invasive prenatal testing by cfDNA sequencing
- 1.5 hour: Introduction to read mapping
- 1.5 hours: Hands-on with mapping tools
- 0.5 hours: Simple quiz.

🤖 What will be covered during the “advanced” seminars?

- 2-3 hours: Algorithms and data structures for read alignment and mapping.
- 2-3 hours: Statistics for calling large-scale fetal DNA genetic variations.
- Exercises: Some take-home tasks for mapping and analyzing NIPT cfDNA sequencing data.