Welcome!

UiO / NORBIS course

IN-BIOS 5000 / 9000

Genome Sequencing Technologies, Assembly,
Variant Calling and Statistical Genomics

NORBIS

- NORBIS is a national research school in bioinformatics, biostatistics and systems biology.

- https://norbis.w.uib.no

- Sponsor of this course

NORBIS

Lectures and hands-on sessions

- Lectures and hands-on session usually from 09.15 to 17.00 Monday-Friday for two weeks

- Always in room 2269 Python

Schedule (simplified)

Monday 17:   Intro to molecular biology, sequencing, Illumina, PacBio

Tuesday 18:   Nanopore, library prep, design, file formats, Fox access

Wednesday 19:   Pre-processing of HTS data, afternoon off

Thursday 20:   *De novo* genome assembly

Friday 21:   *De novo* genome assembly cont.

Monday 24:   Variant calling (VC) in general, human germline VC

Tuesday 25:   Human germline VC cont., somatic variant calling

Wednesday 26:   Statistical genomics

Thursday 27:   Statistical genomics cont., metatranscriptomics

Friday 28:   Machine learning in computational biology

Exam and credits

- Exam part 1:
  - Practical home project
  - Handed out after lectures finished
  - Oral presentation on 1-2 December

- Exam part 2:
  - Written, digital exam on 1 December at 1700-1900 in Exam facilities in Silurveien

- Pass/fail for both master and PhD students

- Only registered students (including guest PhD students) will get official study credits (10)

- NORBIS may create diplomas, if needed, for others

Wifi

- Eduroam (prefered):
  - SSID: **eduroam**
  - Example username: username@uio.no
  - Replace username with your own
  - Replace uio.no with your home institution (or use UiO account)

- Guest network:
  - SSID: **uioguest**
  - Web login form, password by SMS to your mobile phone
  - Temporary access for 12h

- Temporary eduroam account also available
  - Contact Torbjørn

Software needed on laptop

- Terminal
  - Linux, Mac, and Windows 10 /11
  - Older Windows: gitbash recommended
- ssh
- scp

Educloud Fox cluster

To login:

    ssh ec-username@fox.educloud.no

Credentials needed:

1. username (ec-something)

2. One-Time Code (6 digits, provided by Authenticator app)

3. password

More details on course website and on Tuesday.

Mattermost

https://mattermost.uio.no/ifi-undervisning/channels/inbios5000

For discussions and sharing between students and teachers during the course.

Log in to Mattermost with your UiO account at mattermost.uio.no

Food

- Coffee and tea provided each morning at 09.15

- Lunch 12.00-13.15. Canteen at floor 1 on the other end of the building is recommended.

- Dinner at restaurant Olivia at Aker brygge on Thursday 20 October at 19.00

- Pizza on campus on Thursday 27 October at 16.15