

2024 Quantitative Biology Bootcamp, CSHL School of Biological Sciences

Instructors:

- Justin Kinney, jkinney@cshl.edu
- Ivan Iossifov, iossifov@cshl.edu

Teaching assistants:

- Ari Benjamin, benjami@cshl.edu
- Kaiser Loell, loell@cshl.edu

GitHub Repository: https://github.com/jbkinney/24e_qbbootcamp/

Day 1: Tuesday, 3 September 2024, 10am - 6pm, Plimpton Conference Room, Beckman Bldg.

- 10:00am - 10:30am: **Overview of Quantitative Biology (lecture, Justin)**
- 10:30am - 12:00pm: **The Unix command line (tutorial, Ivan)**
- 12:00pm - 1:00pm: *Lunch Break*
- 1:00pm - 1:30pm: **Introduction to Python and Jupyter Notebooks (tutorial, Justin)**
- 1:30pm - 3:30pm: **Python: data types (tutorial, Justin)**
- 3:30pm - 4:00pm: *Break*
- 4:00pm - 6:00pm: **Python: flow control (tutorial, Ivan)**

Day 2: Wednesday, 4 September 2024, 1pm - 6pm, Plimpton Conference Room, Beckman Bldg.

- 1:00pm - 1:30pm: **NextGen sequencing and high-performance computing (lecture, Justin)**
- 1:30am - 3:00pm: **Read mapping using Elzar (tutorial, Justin)**
- 3:00pm - 3:15pm: *Break*
- 3:15pm - 3:30pm: **Introduction to dataframes (lecture, Justin)**
- 3:30pm - 5:00pm: **Pandas I, TF analysis (tutorial, Ivan)**

Day 3: Thursday, 5 September 2024, 10am - 6pm, Plimpton Conference Room, Beckman Bldg.

- 10:00am - 11:30am: **Pandas II, Replication origin analysis (tutorial, Justin)**
- 11:30am - 12:00pm: **Introduction to Data Visualization (lecture, Justin)**
- 12:00pm - 1:00pm: *Lunch Break*
- 1:00pm - 2:30pm: **Matplotlib (tutorial, Ivan)**
- 2:30pm - 3:00pm: *Break*
- 3:00pm - 4:30pm: **Advanced visualization (tutorial, Justin)**