BIMM143

Hands-on Lab Session

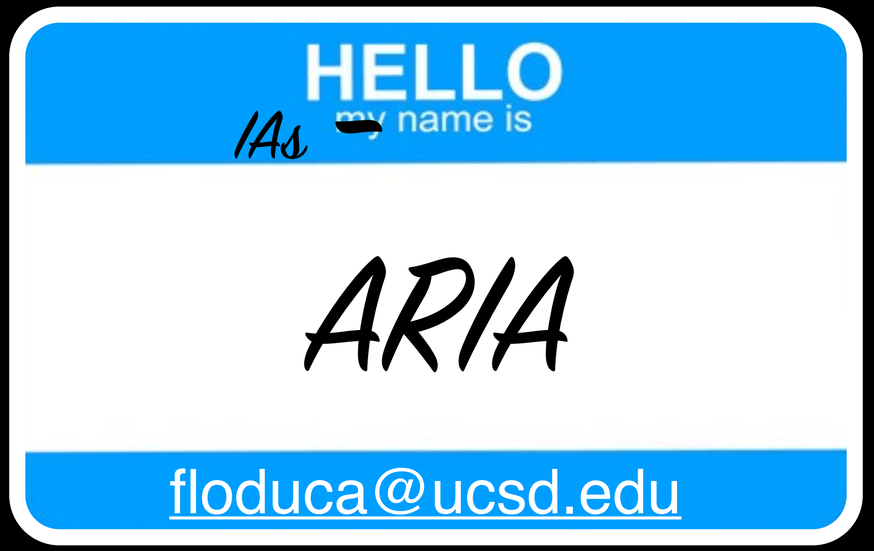
Class 01

Barry Grant

UC San Diego

http://thegrantlab.org


HELLO
my name is
BARRY
bjgrant@ucsd.edu


HELLO
IAs
my name is
ARIA
floduca@ucsd.edu

Introduce Yourself!

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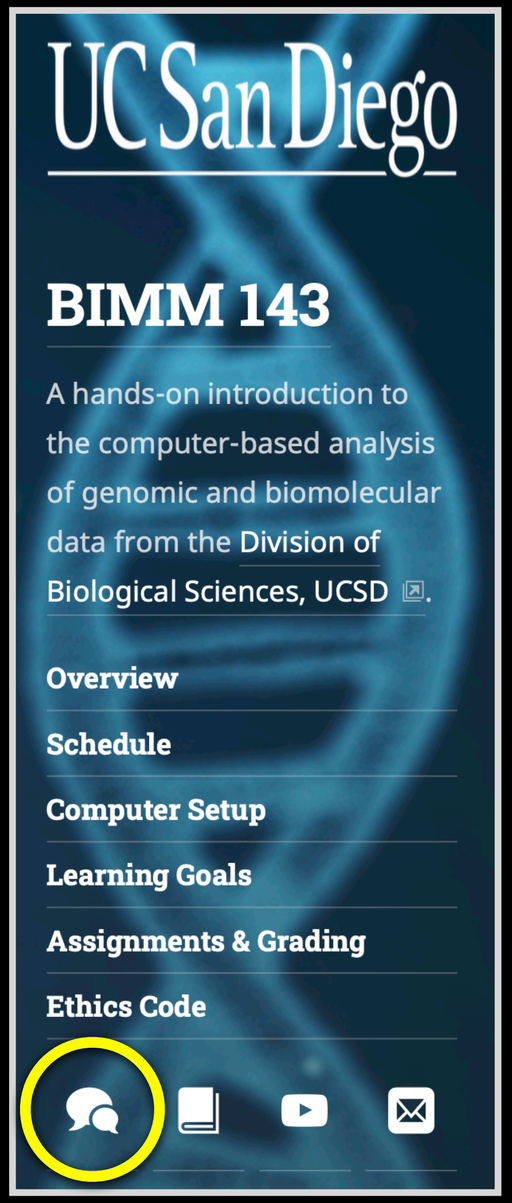
On Piazza…

http://thegrantlab.org/bimm143/



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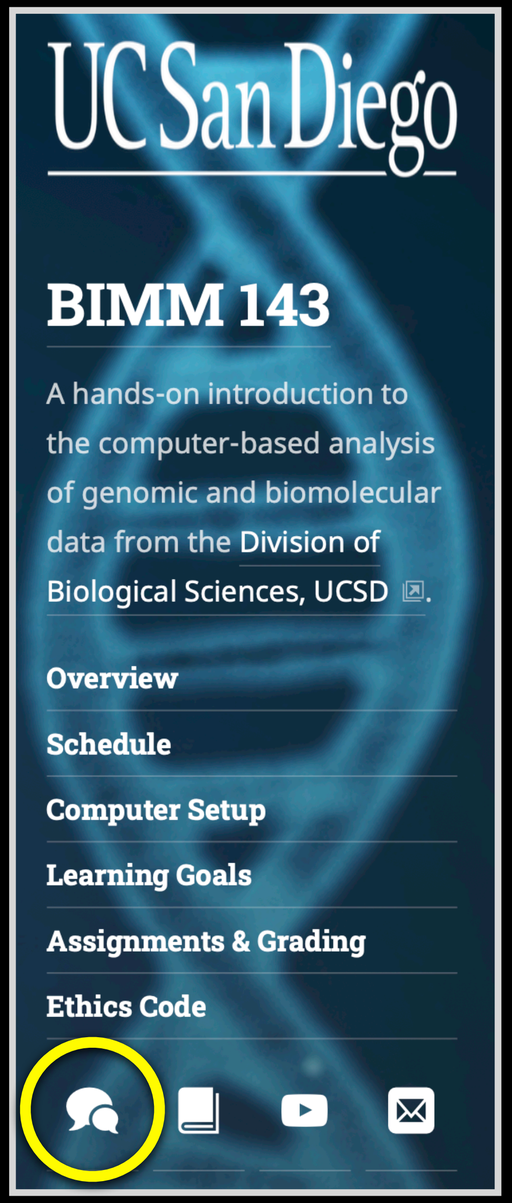


05:00

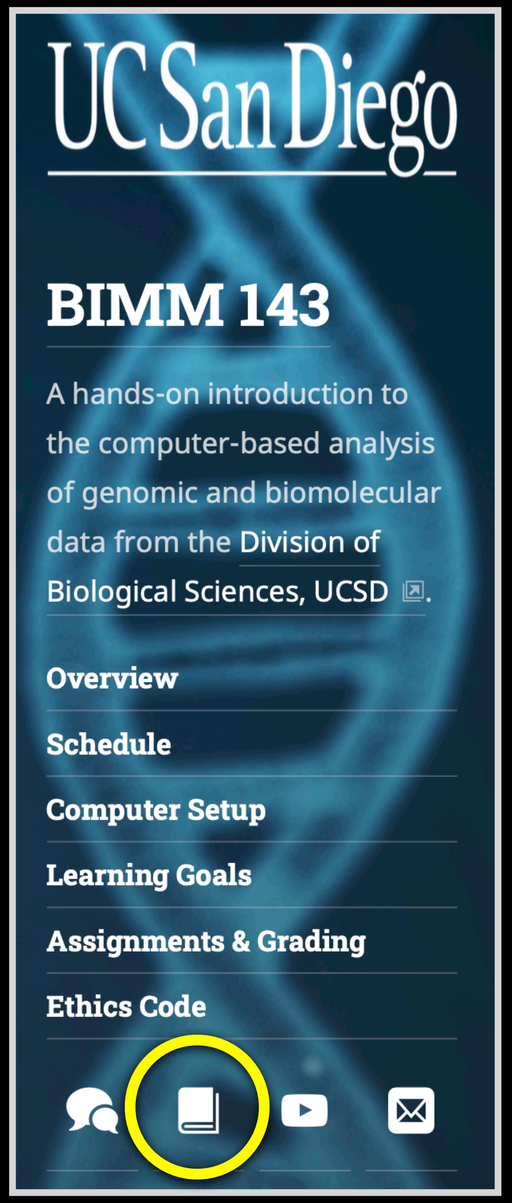
On Piazza…

New Post

[Title:] Your **neighbor's** name & Table Number

[Body:] Place they identify with most,
Major area of study/research,
Fun fact or favorite **joke**!

[Folder/tag:] check-in



Due Dates

- All assigned work (lab repots and homework) is due on **Monday at 12pm** of the following week.
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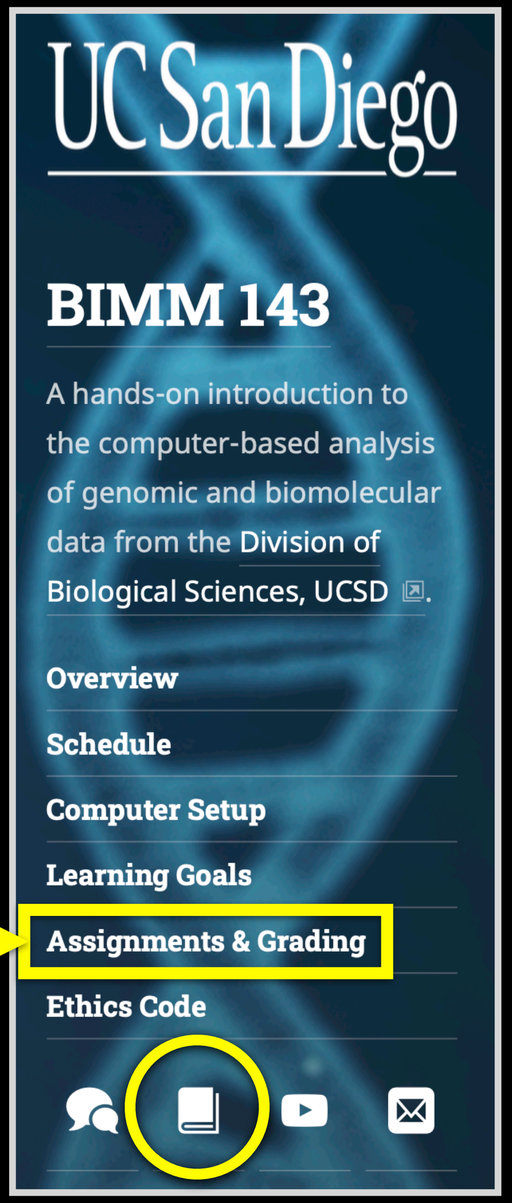

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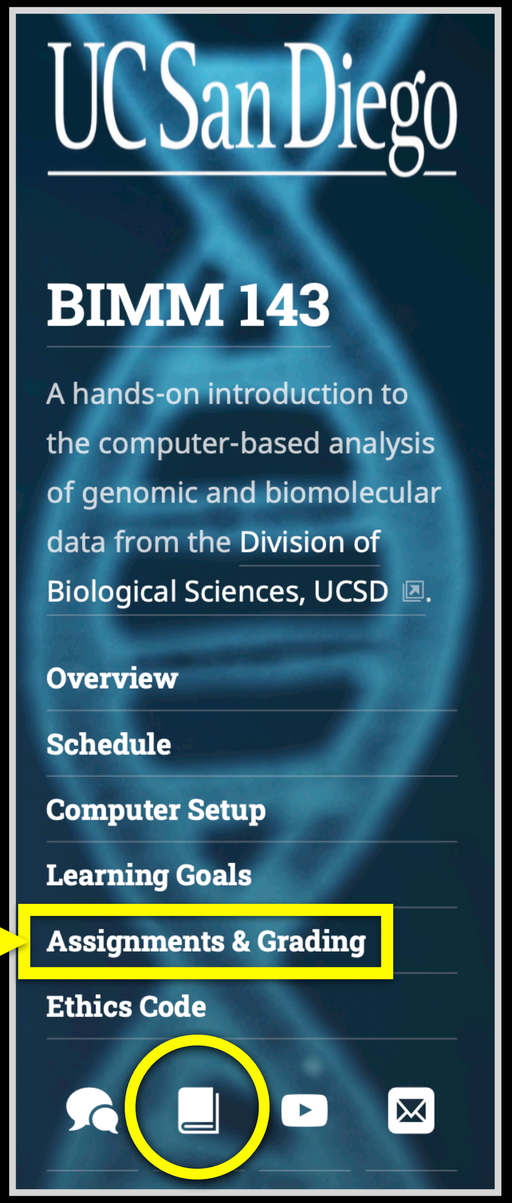

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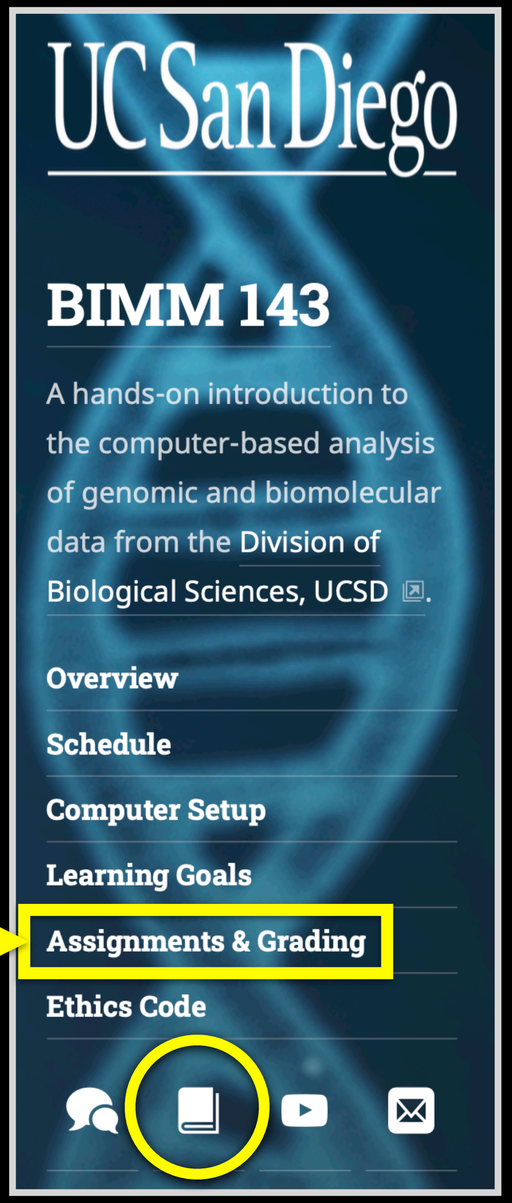

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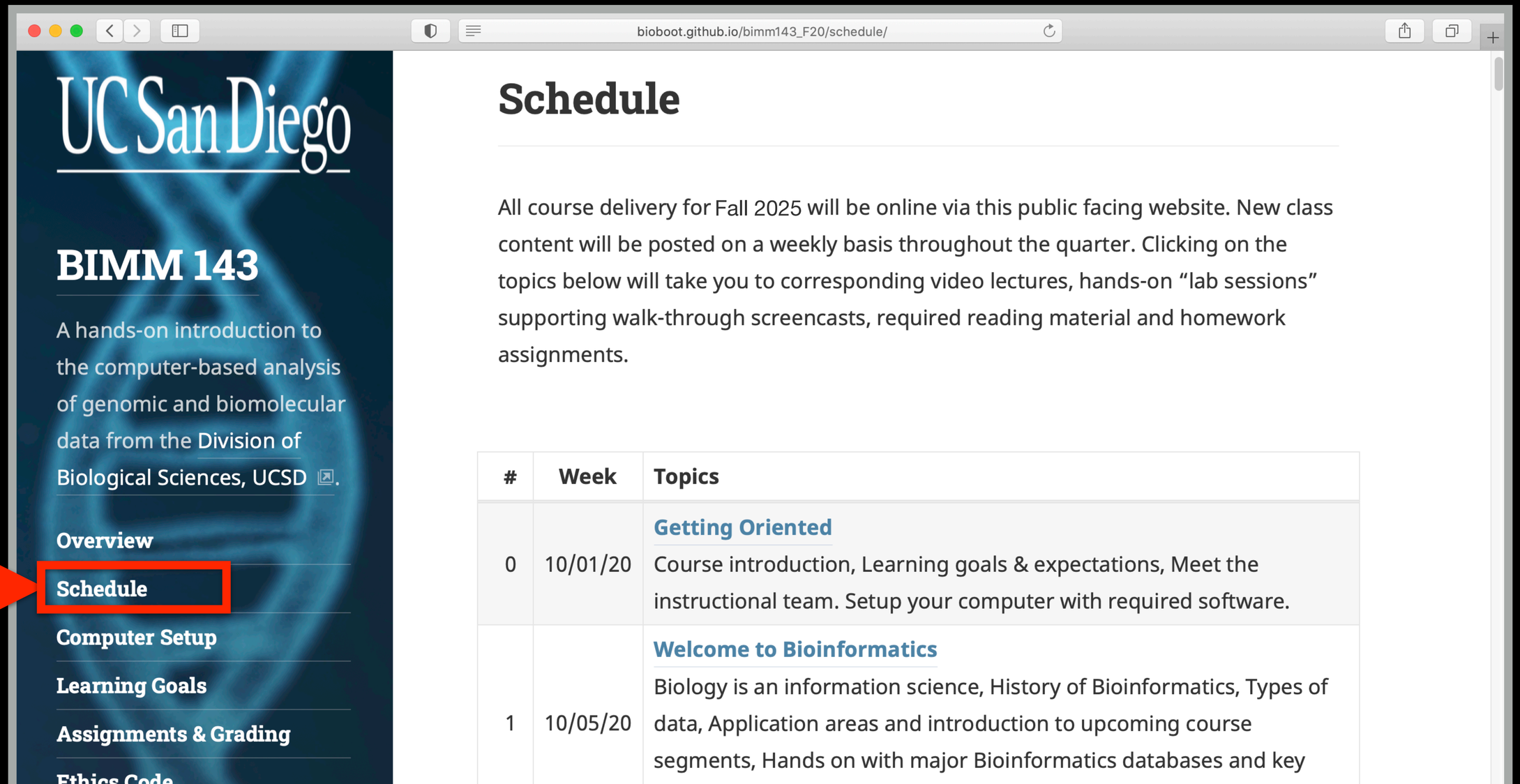
Hands-on section

Week 1

http://thegrantlab.org/bimm143/



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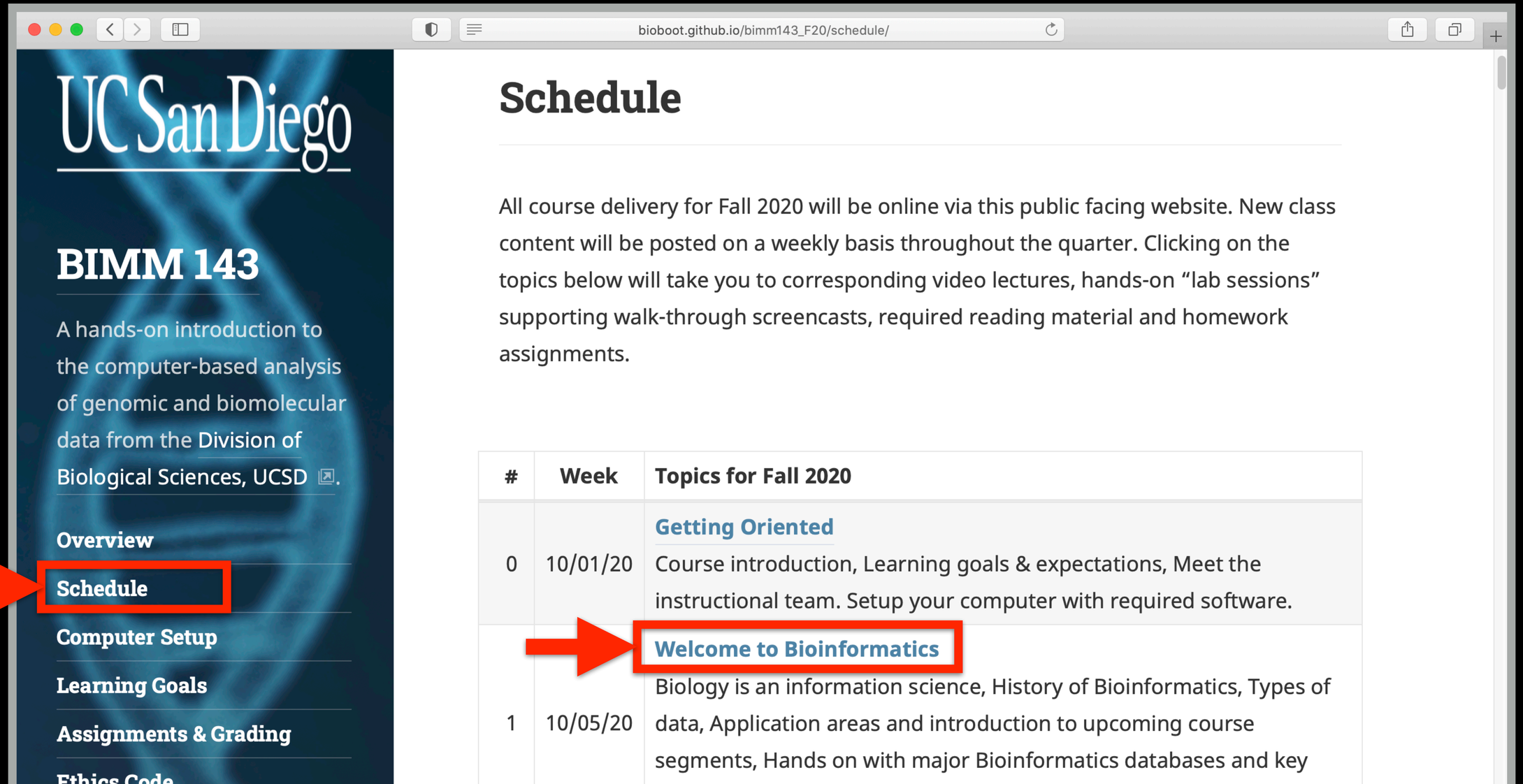

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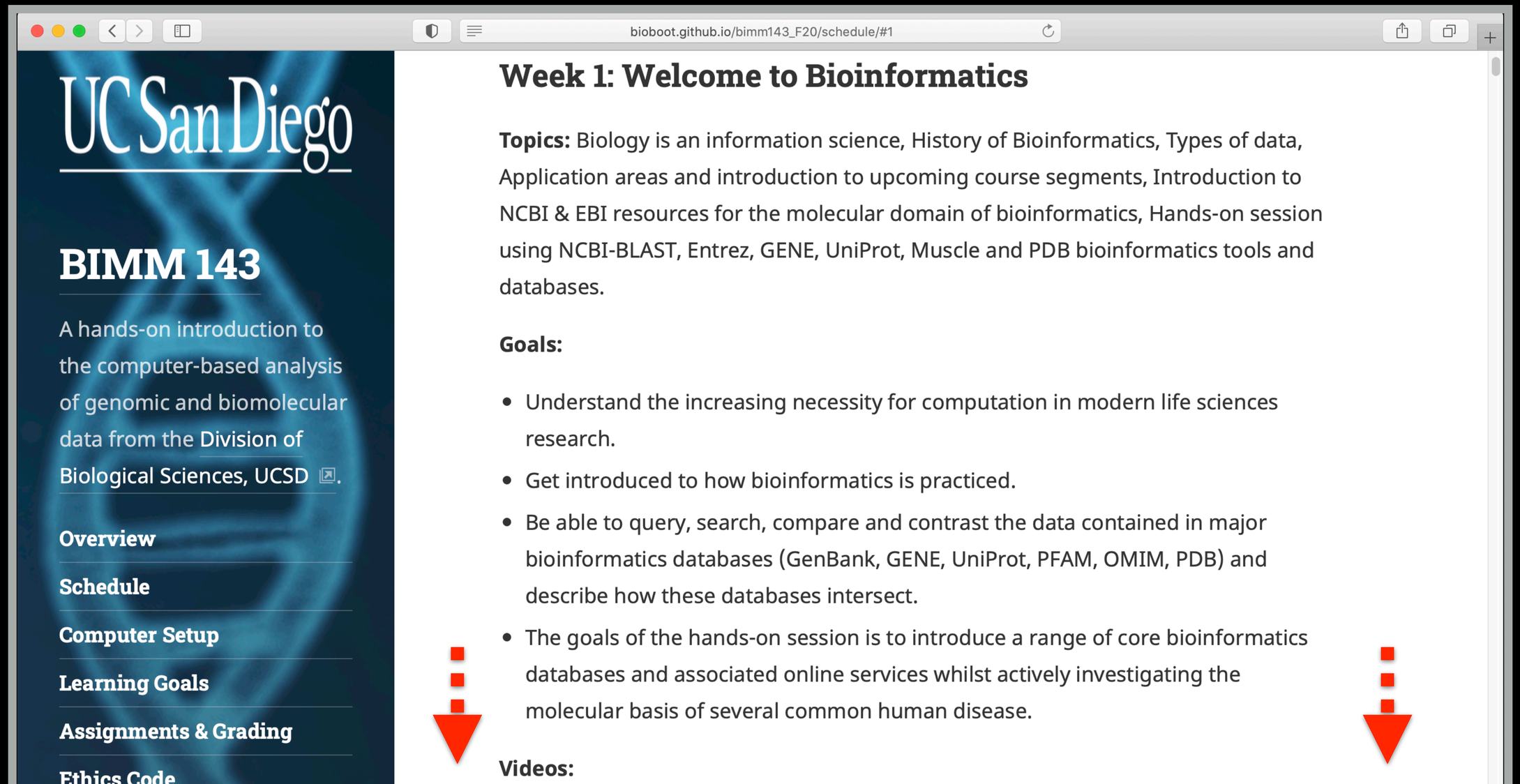

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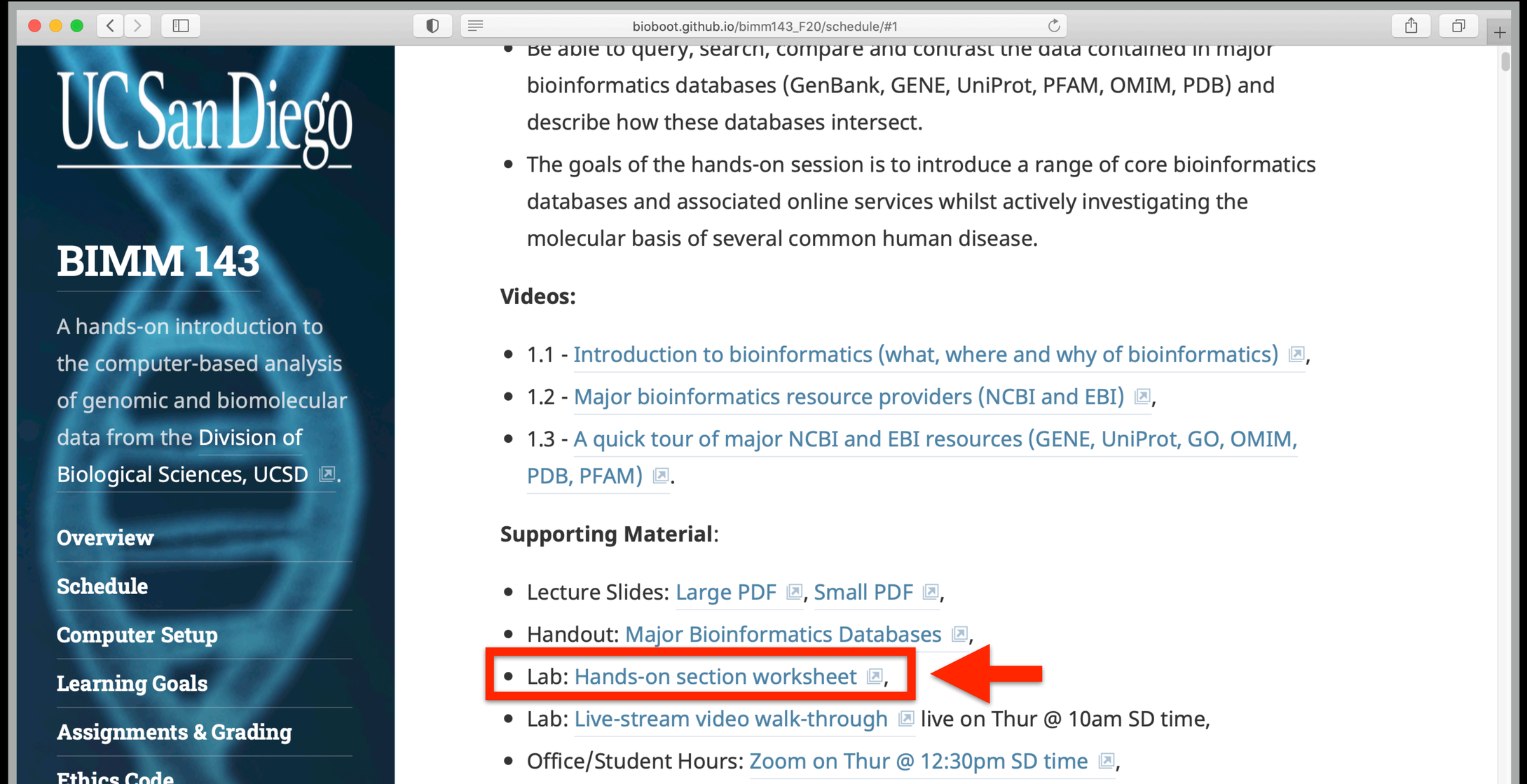

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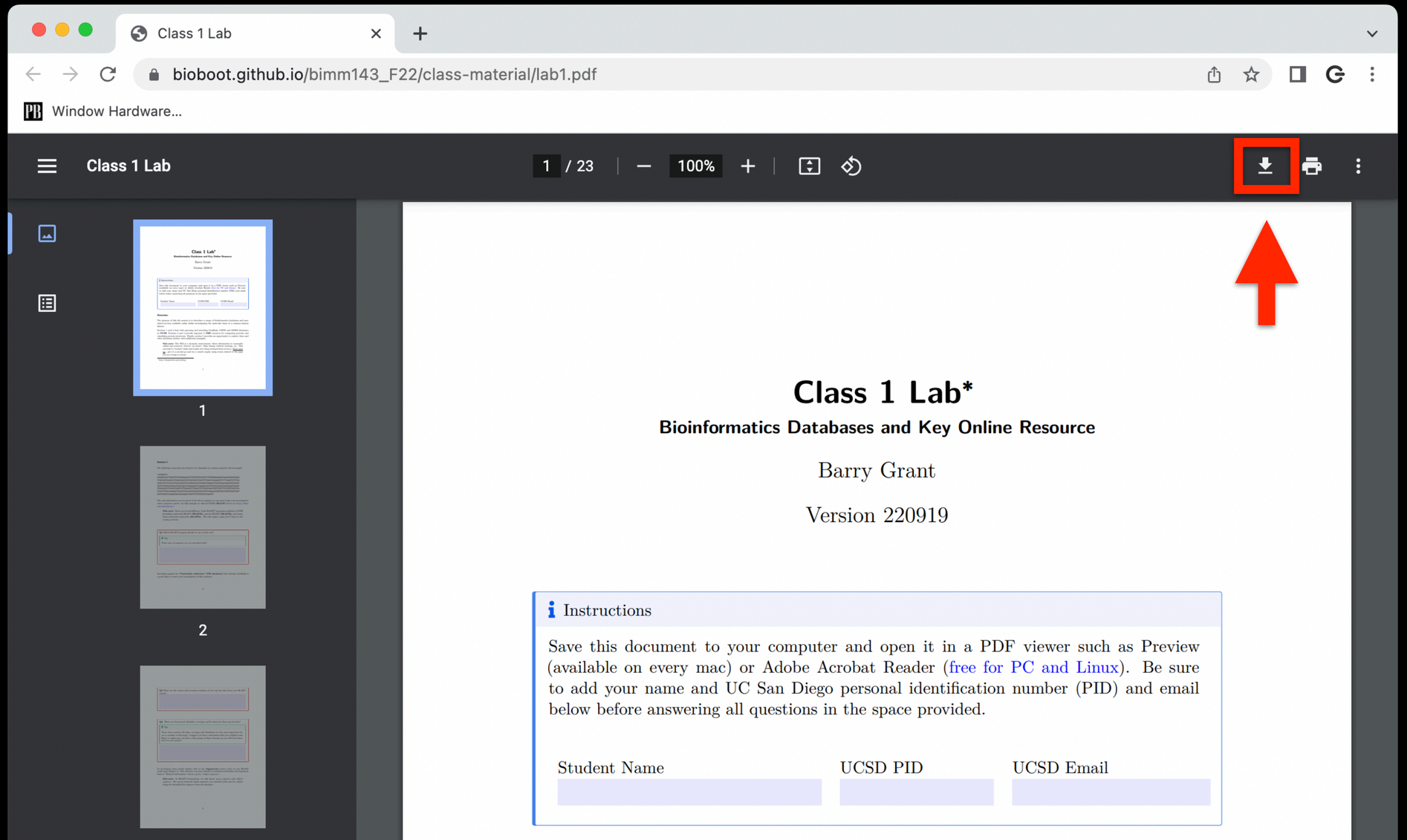
Do it Yourself!



Do it Yourself!

GUIDED WALKTHROUGH

- There are **four** major hands-on sections including:

1. BLAST, GenBank and OMIM @ **NCBI** [~25 mins]

— BREAK [10 mins]—

2. GENE database @ **NCBI** [~20 mins]

— BREAK [5 mins]—

3. UniProt & Muscle @ **EBI** [~20 mins]

— BREAK [10 mins]—

4. PFAM, PDB & NGL [~25 mins]

- Please do answer the last review question (**Q19**).
- We encourage discussion @ your Table and on **Piazza**!

Do it Yourself!

GUIDED WALKTHROUGH

- There are **four** major hands-on sections including:

1. BLAST, GenBank and OMIM @ **NCBI** [9:40 - 10:05am]

— BREAK [10 mins]—

2. GENE database @ **NCBI** [10:15 - 10:35am]

— BREAK [5 mins]—

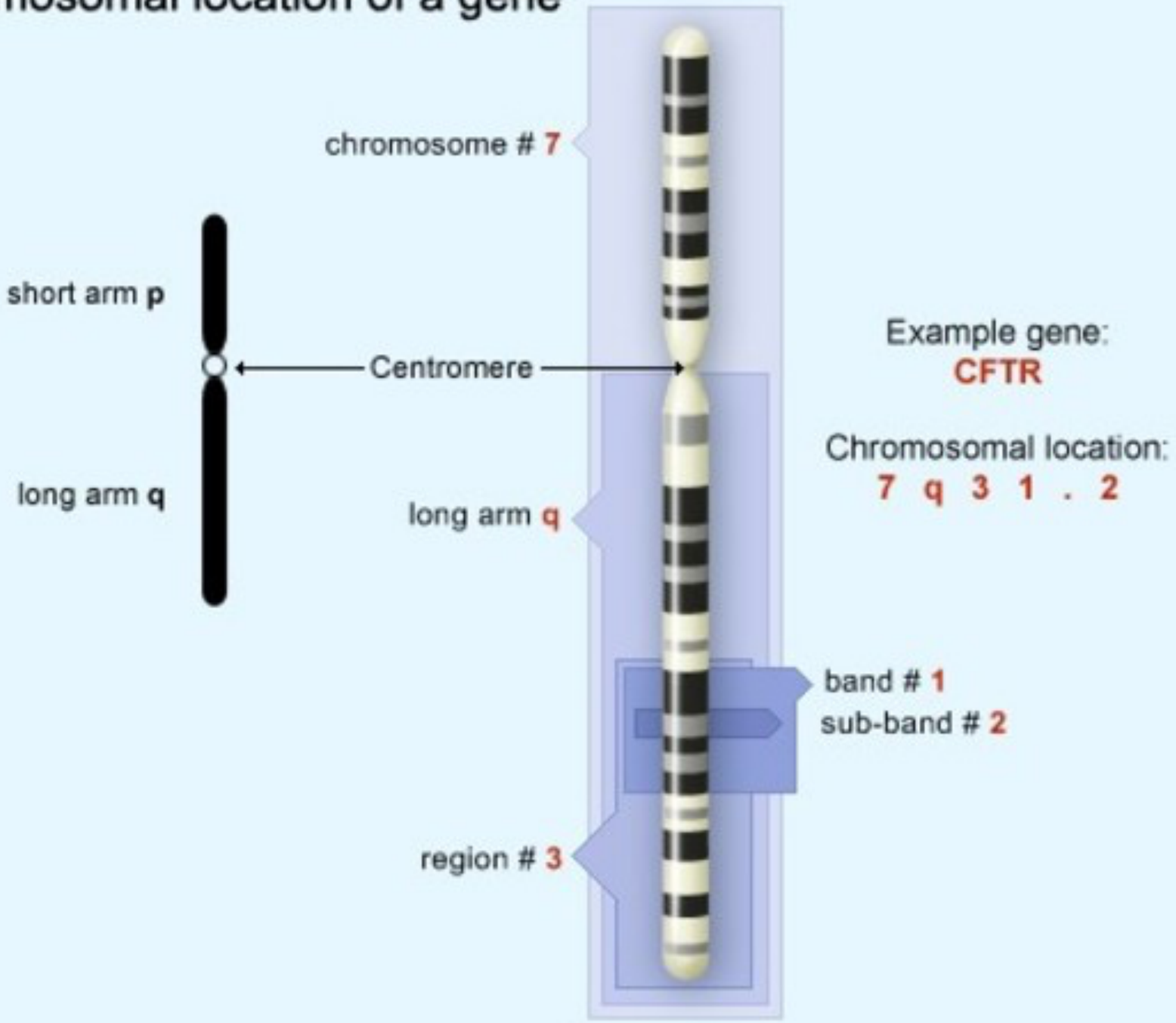
3. UniProt & Muscle @ **EBI** [10:40 - 11:00am]

— BREAK [10 mins]—

4. PFAM, PDB & NGL [11:10 - 11:35am]

- Please do answer the last review question (**Q19**).
- We encourage discussion @ your Table and on **Piazza**!

Chromosomal location of a gene



Summary

- Bioinformatics is computer aided biology.
- Bioinformatics deals with the collection, archiving, organization, and analysis of a wide range of biological data.
- The NCBI and EBI are major online bioinformatics service providers.
- Introduced Gene, UniProt, PDB databases as well as a number of ‘boutique’ databases including PFAM and OMIM.

Homework:

- Answer the `01_HW_quiz` questions on GradeScope,
- Submit your completed `01_Lab_report` (i.e. filled in PDF form) to GradeScope,
- Readings:
  - PDF1: What is bioinformatics? An introduction and overview,
  - PDF2: Advancements and Challenges in Computational Biology.

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