Genome Engineering and Synthetic Biology

At the end of this course, you will be able to...

Understand important genome engineering topics

Use the human genome and other public data sets

Identify potential careers in biotech

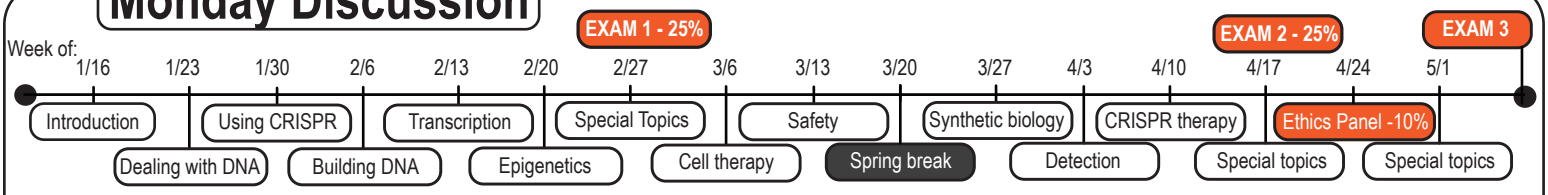
Analyze primary literature

Give insight about ethical issues in genome engineering

Use online tools to find information about genes

Use programming to automate tasks, graph data

Monday Discussion



.ppt and .pdf available on Blackboard

Participation - 5%

Wednesday Data

>Select a gene associated with a human disease
>Pick different genes from others
>Working together is encouraged

We will work on data sets together in class.
Homework is due before the next Wednesday
My goal is for Homework to be completed in about an hour

GitHub → .ipynb available on github page → colab → import, edit, save, upload → Blackboard

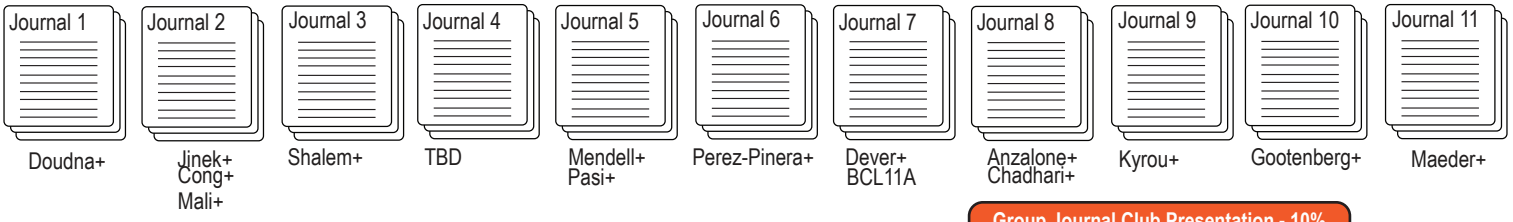
Each Homework has a guiding .ipynb file
Coding requirement: We will start at the basics

Submit Homework - 25%
Grad - 15%

Submit your .ipynb to blackboard
Use the following naming convention:
Lastname_firstname_HW#.ipynb
EX: Nelson_Chris_HW2.ipynb

Participation - 5%

Friday Journal Club



*+ Only the first author is listed. Many articles here have more than one first author

PDF files available on Blackboard

Group Journal Club Presentation - 10%

Your team will be assigned one topic.
Suggested journal articles are on blackboard.
Pick another article or topic if relevant (talk with me about your choice)

Show what you have learned!

EXAM 1
3/1-3/3
Independent
Takehome

EXAM 2
4/19-4/21
Independent
Takehome

EXAM 3
5/8
Independent
Takehome

optional
can replace one

Grad students only

Project
Thesis project
Enhancement
10%