



# VIRTUAL COLLABORATIONS TO TRANSITION REPRODUCIBILITY TRAINING ONLINE



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UC LIBRARIES FORUM - OCTOBER 28, 2021



## MEET THE TEAM



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Education & Research  
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Data Services Librarian  
UCSF Library



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# PRESENTATION OUTLINE

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Workshop Assessment

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Second Year +  
Opportunities

4  
Online learning  
strategies

6  
Reflections + Next  
Steps



1.

# BACKGROUND

Reproducibility workshop series overview



## WHAT IS THE REPRODUCIBILITY WORKSHOP SERIES?

- ✘ Collaboration between UCSF Library and Graduate Division
- ✘ Started in Fall 2019
- ✘ Eight workshops, including:
  - Rigorous Experimental Design
  - Data Publishing
  - Peer Review
  - See all: [tiny.ucsf.edu/reproducibilityworkshops](https://tiny.ucsf.edu/reproducibilityworkshops)



## WHAT IS THE REPRODUCIBILITY WORKSHOP SERIES?

### ✘ Student goals

- Define reproducibility in the context of biomedical research
- Describe the significance of practicing reproducible and open science
- Identify existing practices and behaviours that require modification in order to improve reproducibility
- Apply a range of new tools, strategies, and best practices to make their research more rigorous and reproducible

2.

# SECOND YEAR + OPPORTUNITIES

How we adjusted for 2021





## WHAT'S NEW IN 2021

- ✘ Collaboration with Danielle and the Interprofessional Informationist Program
  - Simmons University
  - January 2021 – May 2021
    - In-person collaboration moved to 100% remote





## WHAT'S NEW IN 2021

- ✘ Moved workshop format from in-person to online format (Zoom)
- ✘ More collaborative approach with students
- ✘ Incorporated different activities
  - Icebreakers/Introductions
  - Zoom breakout rooms
  - Collaborative notes
  - Activity sessions
- ✘ Collaborated with instructors from UCSF, UCLA & UC Riverside

## WORKSHOPS FOR 2021

1. Introduction to Reproducibility - Ariel (UCSF)
2. Rigorous Experimental Design - Karla (UCSF)
3. Publishing & Peer Review - Anneliese (UCSF) + Jennifer (UCLA)
4. Reproducible Data - Ariel (UCSF)
5. Reproducible Methods and Protocols - Ibraheem (UCLA) + Stephen (UCSF)
6. Reproducible Code - Ariel (UCSF) + Kat (UCR)
7. Reproducibility + Culture of Academia - Liz (UCSF)

3.

# PLANNING PROCESS

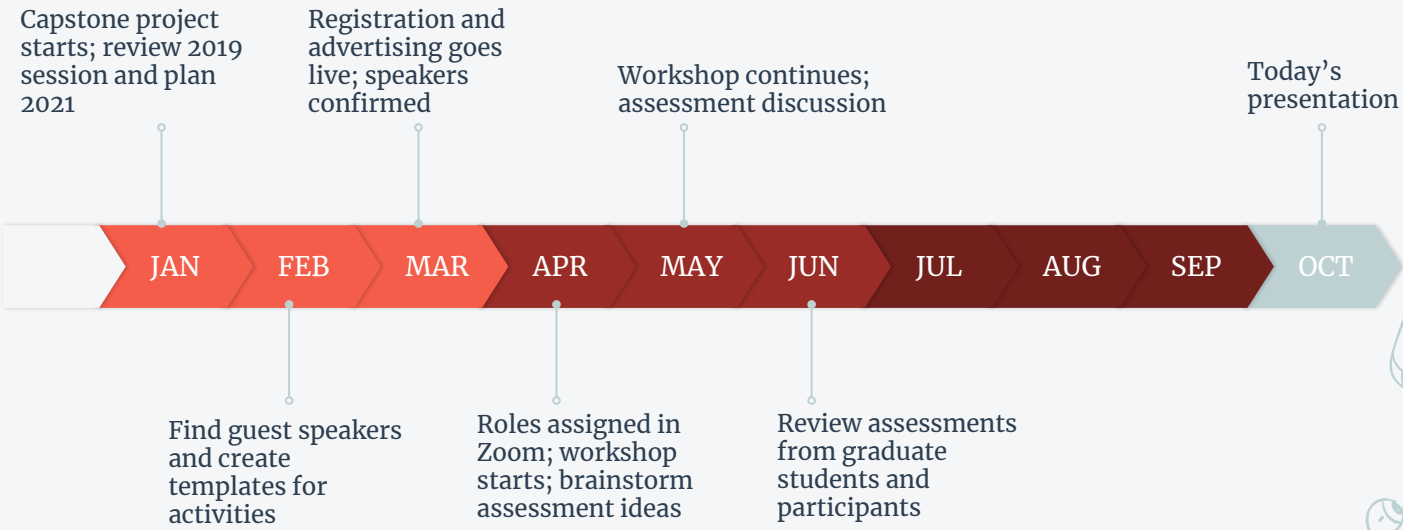
Timeline and working collaboratively



## COLLABORATING: SAN FRANCISCO, CA -> OMAHA, NE

- ✘ Meetings
  - Scheduled every other week
  - Met via Zoom ; 30 min - 1 hr
- ✘ Meeting Minutes and Working Documents
  - Box and Google Drive
- ✘ Shared tasks

# 2021 TIMELINE

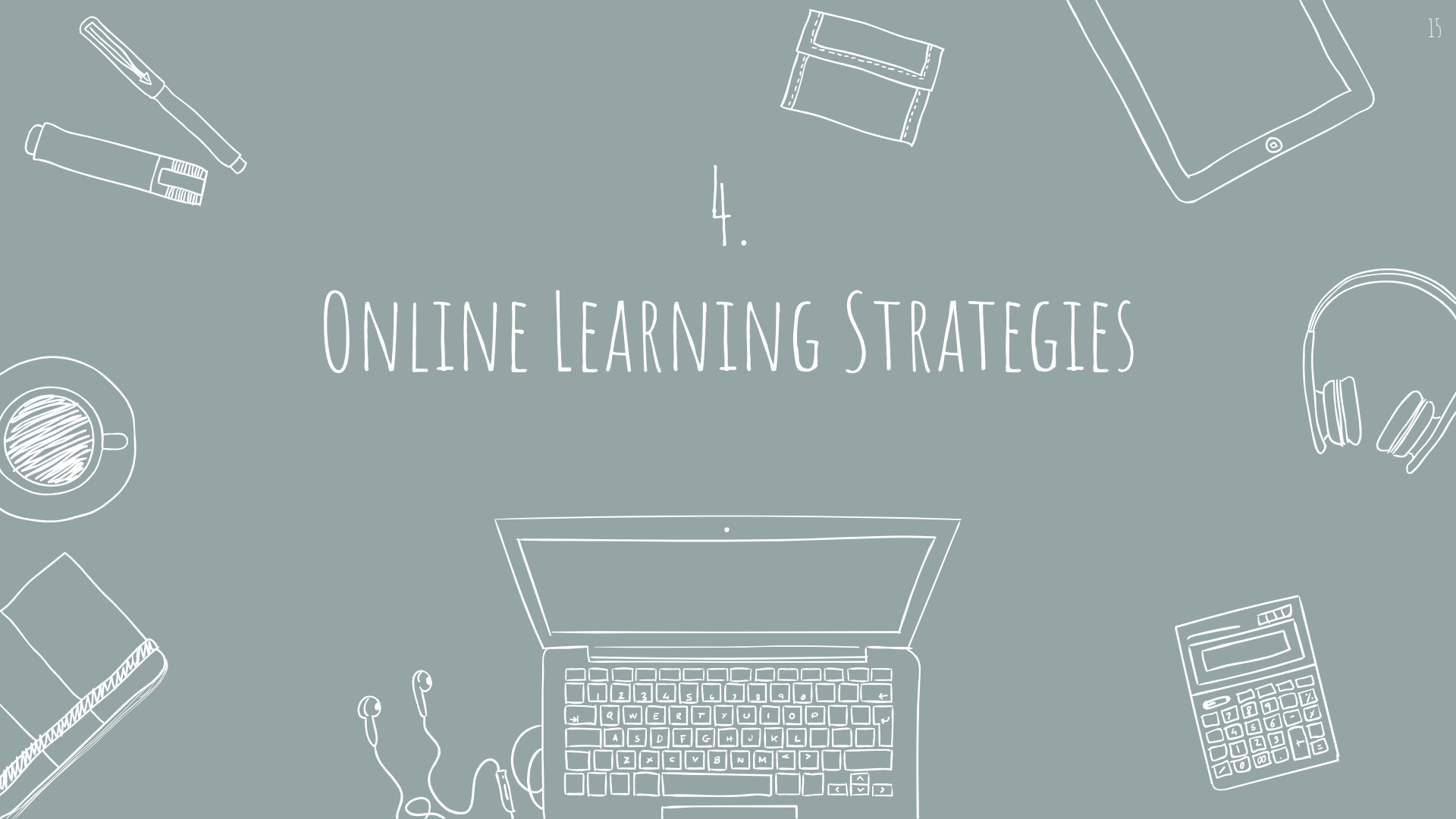


## PLANNING

- ✘ Outline topics
  - Reviewed previous years feedback, met with Graduate division
- ✘ Finding experts
  - Collaborated with librarians from other UC libraries
  - Invited faculty to come discuss their experiences
- ✘ Confirm dates and additional logistics
  - Registration created, collaborative documents set up, assessment questions, etc.

4.

# ONLINE LEARNING STRATEGIES



## LEARNING TOOLS AND STRATEGIES

- ✘ Collaborative notes (Google Docs)
- ✘ Icebreakers
- ✘ Zoom breakout rooms
- ✘ Team approach to hosting
  - “Zoom DJ” for chat monitoring and breakout rooms
  - Zoom recording or “reminder person”
- ✘ Active learning



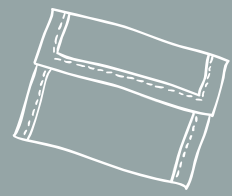
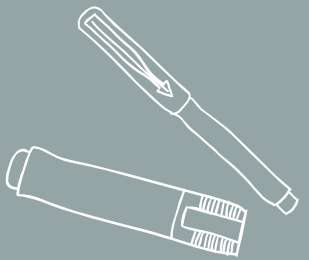
**Activity #3 - Plan Ahead**

What is one thing you will do to plan ahead for reproducible data? Take a couple minutes to reflect on your own and then write your ideas below with your name

- 1.
- 2.
3. [redacted]: Follow "coding best practices" **Anonymous Raccoon**
- 4.
5. [redacted]: Establish a protocol for naming different kinds of files and storage of those files. **Anonymous W**
6. [redacted] **Anonymous Rhino** standard version control system within my lab group, data repository for our [redacted]
7. [redacted] Or [redacted]
- 8.
9. [redacted]: Include text files in data directories **Anonymous Fox** lists of file naming, experiment conditions and analysis to cross-refer
10. [redacted]: make file making system stan **Anonymous Coyote** storage and lab notebooks. Look ahead to the datasets you k
11. [redacted]: Develop sharable stata/python or other program's code files that others can easily copy, paste and run.
12. [redacted] - Discuss establishing a standard file naming structure with my lab regarding imaging file datasets. **Anonymous Otter**
13. [redacted]: Add metadata file for data pulled from different p **Anonymous Duck**
14. [redacted]: **Anonymous Duck**
15. [redacted] link important/data used for manuscripts to currently **Anonymous Duck** data date
16. [redacted] organization
17. [redacted] I currently just use dates for all of my **Anonymous Unicorn** eption of animals being labeled with experiment IDs, so generating an [redacted] labeling files with experiment IDs is something I will incorporate
18. [redacted]: For generating new genomics datasets, assigning experiment ID numbers, and logging experiment ID numbers in google sheet with all the associated metadata.
- 19.
20. [redacted] - [redacted]
21. [redacted]: Keep track of protocols and changes in sample preparation
22. Nicho[redacted]
23. [redacted] - develop plan from beginning for **Anonymous Dolphin** includinh

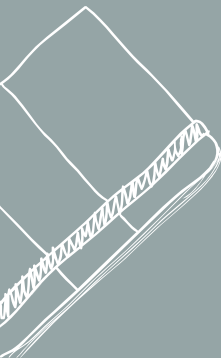
## ONLINE ACTIVITY EXAMPLE - GOOGLE DOCS

Question: What is one thing you will do to plan ahead for reproducible data?



5.

# ASSESSMENT



## ASSESSMENTS

- ✘ Survey sent to graduate student participants
- ✘ Survey sent to additional participants (faculty, library users, guests)
- ✘ Evaluated learning materials (collaborative docs)

## ASSESSMENT FINDINGS

- ❌ Learners liked the group activities, breakout room discussions, + collaborative docs
  - Most would prefer to continue online
- ❌ High level of engagement in activities and discussions
- ❌ Next time:
  - Even more interaction - polls, reactions (thumbs up/down)
  - More discussion-based activities rather than tool based (explore a database, etc)
  - Link activities more closely to learning objectives



*“I found the breadth of information covered in the series to be helpful for me in developing a more comprehensive plan to increase the reproducibility and transparency of my research”*

- graduate student feedback

6.

# REFLECTIONS + OUR NEXT STEPS

Looking to Fall 2022



## FUTURE WORK

- ✘ Revamping the series again for Fall 2022
  - Goal is to offer as a credit-bearing course through the Graduate Division
  - Opportunity to integrate more activities + self-reflection outside of class
  - Will continue to be online



# THANKS!

You can find us at:  
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2021 Course Materials: <http://tiny.ucsf.edu/reproducibility2021>



## CREDITS

Special thanks to all the people who made and released these awesome resources for free:

- ✘ Presentation template by [SlidesCarnival](#)
- ✘ Photographs by [Unsplash](#)